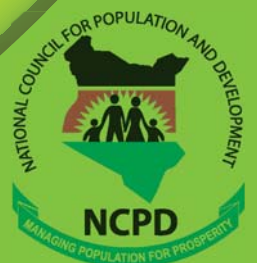




SECONDARY DATA ANALYSIS AND LITERATURE REVIEW OF
KNOWLEDGE, ATTITUDE, BELIEFS AND PRACTICES (KABP)
STUDY OF THE

10 Key Child Survival Development and Protective Behaviours

KENYA
Vision 2030



Secondary data analysis and literature review of Knowledge, Attitude, Beliefs and Practices (KABP) study of the 10 key child survival, development and protective behaviours in Kenya

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COVER PHOTO

Newborn baby at Pumwani Maternity Hospital in Nairobi, Kenya.

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SECONDARY DATA ANALYSIS AND LITERATURE REVIEW
OF KNOWLEDGE, ATTITUDE, BELIEFS AND PRACTICES
(KABP) STUDY
OF THE 10 KEY CHILD SURVIVAL, DEVELOPMENT AND
PROTECTIVE BEHAVIOURS IN KENYA



National Council for Population
and Development

APRIL 2016

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LIST OF ACRONYMS AND ABBREVIATIONS

ACRWC	African Charter on the Rights and Welfare of the Child	EPI	Expanded Programme on Immunization
ADSMKE	Anglican Development Services of Mt Kenya East	FAO	Food and Agriculture Organisation
AIDS	Acquired Immune Deficiency Syndrome	FDSE	Free Day Secondary Education
AMC	Advance Market Commitment	FGD	Focus Group Discussion
ANC	Antenatal Care	FGM/C	Female Genital Mutilation/Cut
ANPPCAN	African Network for the Prevention and Protection against Child Abuse and Neglect	FP	Family Planning
ART	Antiretroviral Therapy	FPE	Free Primary Education
ARV	Antiretroviral	GARs	Gross Attendance Ratios
AU	African Union	GER	Gross Enrolment Rate
BCG	Bacillus Calmette–Guerin	GIZ	Gesellschaft für Internationale Zusammenarbeit
BNM	Bogoria Network Ministries	GoK	Government of Kenya
C4D	Communication for Development	GPI	Gender Parity Index
CBO	Community Based Organisations	HAART	Highly active Antiretroviral Therapy
CDC	Centers for Disease Control	HIV	Human Immuno Deficiency Virus
CDF	Constituency Development Fund	HWWS	Hand Washing With Soap
CEDAW	Convention on the Elimination of Discrimination Against Women	iCCM	Integrated Community Case Management Project Endline Evaluation Survey
CHVs	Community Health Volunteers	ICESR	International Covenant on Economic, Social and Cultural Rights
CHWs	Community Health Workers	ICN2	Second International Conference on Nutrition
CLTS	Community Led Total Sanitation	IDI	In-depth Interview
CME	Continuous Medical Education	IFFIm	International Finance Facility for Immunization
CP	Country Programme	ILO	International Labour Organisations
CRC	Convention on the Rights of the Child	IMCI	Integrated Management of Childhood Illness
CRS	Civil Registration Services	IRS	Indoor Residual Spraying
CRVS	Civil Registration and Vital Statistics	ITN	Insecticide Treated Nets
CSD	Child Survival and Development	IYCF	Infant and Young Child Feeding
DCS	Department of Children's Services	IYCFP	Infant and Young Children Feeding Practices
DHS	Demographic and Indicator Survey	KABP	Knowledge, Attitude, Beliefs and Practices
DVI	Division of Vaccine and Immunization	KAIS	Kenya Aids Indicator Survey
EBF	Early Breastfeeding	KAP	knowledge, attitudes, and practices
ECDE	Early Child Development Education	KCA	Kenya Children Assemblies
EFA	Education for All	KDHS	Kenya Demographic and Health Survey
EMIS	Education Management Information System	KEMRI	Kenya Medical Research Institute
EMOC	Emergency Obstetric Care		
eMTCT	Elimination of mother-to-child transmission of HIV		

KESSP	Kenya Education Sector Support Programme	PMI	President's Malaria Initiative
KIPPRA	Kenya Institute of Public Policy Research Analysis	PMTCT	Prevention of Mother to Child Transmission
KMIS	Kenya Malaria Indicator Survey	PSRI	Population Studies and Research Institute
KNBS	Kenya National Bureau of Statistics	PWDs	Persons With Disabilities
KNDI	Kenya Nutritionists and Dieticians Institute	RBM	Roll Back Malaria
KNPP	Kenya National Pharmaceutical Policy	RH	Reproductive Health
LLIN	Long-Lasting Insecticidal Nets	ROC	Rights of the Child Clubs
MDGs	Millennium Development Goals	SBA	Skilled Birth Attendant
MHM	Menstrual Hygiene Management	SDGs	Sustainable Development Goals
MICS	Multiple Indicator Cluster Surveys	SID	Society for International Development
MIS	Malaria Indicator Surveys	STI	Sexually Transmitted Diseases
MIYCN	Maternal, Infant and Young Child Nutrition	TBA	Traditional Birth Attendants
MNCH	Maternal, Newborn and Child Health	TR	Transition Rate
MOE	Ministry of Education	TT	Tetanus
MoEST	Ministry of Education, Science and Technology	UBSUP	Up-scaling Basic Sanitation for the Urban Poor
MOH	Ministry of Health	UDHR	Universal Declaration of Human Rights
MoPHS	Ministry of Public Health and Sanitation	UN	United Nations
MTCT	Mother to Child-Transmission	UNAIDS	United Nations Programme on HIV and AIDS
MTG	Malaria Treatment Guidelines	UNCRC	United Nations Convention on the Rights of the Child
NARESA	Network of Aid Researchers in Eastern and Southern Africa	UNDAF	United Nations Development Assistance Framework
NARs	Net Attendance Ratios	UNESCO	United Nations Educational, Scientific and Cultural Organisation
NASCOP	National AIDS & STI Control Programme	UNFPA	United Nations Population Fund
NCPD	National Council for Population and Development	UNGASS	United Nations General Assembly Special Session
NER	Net Enrolment Rate	UNICEF	United Nations for Children Fund
NESP	National Education Sector Plan	UNSD	United Nations Statistical Division
NGO	Non-Governmental Organisations	USAID	United States Agency for International Development
NMCPs	National Malaria Control Programmes	WASH	Water, Sanitation and Hygiene
NMS	National Malaria Strategy	WHA	World Health Assembly
NPGD	National Policy on Gender and Development	WHO	World Health Organisation
ODF	Open Defecation Free	WRA	Women of Reproductive Age
OD	Open Defecation	WSP	Water and Sanitation Programme
ORS	Oral Rehydration Salts	WSTF	Water Services Trust Fund
PCR	Pupil Completion Rate		
PCV	Pneumococcal conjugate vaccine		
PITC	Provider-Initiated Testing and Counselling		

FOREWORD

The Government of Kenya through the National Council for Population and Development (NCPD) in collaboration with the Kenya National Bureau of Statistics (KNBS) and Population Studies and Research Institute (PSRI) of the University of Nairobi with financial support from UNICEF Kenya country office conducted a secondary data analysis and literature review on parents and caregivers' Knowledge, Attitude, Beliefs and Practices (KABP) on ten key child survival, development and protective behaviours in Kenya.

The aim of the desk review was to document the available data related to the 10 key behaviours and identify the missing information/gaps to be explored through a field study. Specifically, the study sought to: explore the prevailing knowledge, attitudes, beliefs and practices of care givers of children and adolescents around the key behaviours of focus; the gaps in behaviour/practices and dynamics of social norms that are at play around the key behaviours; identify the relevant factors required to create an enabling environment and responsive policy that address both demand and supply needs of the key behaviours; and explore the existing opportunities and mechanisms for children, adolescent and community engagement and participation; the functionality, effectiveness of these in facilitating community participation and engagement around the 10 key behaviours.

The key behaviours of focus for this study were: Hand washing at critical times; sleeping under Insecticide Treated Nets (ITN); care seeking (pregnant mothers make at least 4 ANC visits and, seek skilled delivery, HIV positive women/families seek Prevention of Mother to Child Transmission-PMTCT and ARVs, early and appropriate care seeking for pneumonia and malaria and ORS/Zinc use for diarrhoea); appropriate feeding practices (early initiation, Early Breastfeeding (EBF) and timely introduction of appropriate complimentary feeding/minimum meal frequency and minimum dietary diversity); full immunization of children by one year of age; parents enrolling their children in school and keep them in school; sanitary disposal of human waste; rejection of child harmful practices (FGM/C, child marriage); birth of children 0-1 year registered; and children and adolescent participate in decision-making.

The need to conduct the study was necessitated by the fact that, there is currently limited evidence to guide communication for social and behaviour change planning, implementation and monitoring –which has hampered initiation of appropriate interventions for the improvement of the health, nutrition and other social outcomes for the rights of children and their families.

The study utilized both qualitative and quantitative approaches to document the available information related to the 10 key behaviours. The qualitative approach examined the trends, levels and differentials in the key behaviour indicators and factors associated with them, while the quantitative approach involved identification of previous studies and carried out a comprehensive review from a holistic dimension to identify the social norms and conventions with regard to the key behaviours. The study also identified the policies and guidelines that promote the practice of the key behaviours.

This report presents the key findings of the secondary data analysis and literature review, challenges, opportunities and recommendations to improve child survival, development and protection in Kenya. It also presents the sampling frames (qualitative and quantitative) that will be used to guide the field study. It is our hope that, together with partners, we can build a world where the rights of every child are realized. Therefore, it is the responsibility of every stakeholder to go through this report and implement recommendations in their areas of service so as to ensure this hope is realized. It is our collective responsibility to ensure that this vision is achieved.

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Kenya

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The study benefited from wide consultations with individuals, institutions and organisations from which they provided information and data on the prioritized research areas to supplement the findings from the previous studies regarding the key behaviours.

I am grateful to the UNICEF Kenya Country Office for availing the financial resources to conduct this study. Special thanks go to Bridget Job-Johnson—Chief Communication for Development (UNICEF) and Roselyn Mutemi—Communication for Development Specialist (UNICEF) for their unwavering support and teamwork during the entire process. I also appreciate the role played by UNICEF subject matter specialists: Edward Kutondo, Haither Ahmed, Agnes Makanyi and Agnes Ngonyo for their input during the report validation workshop.

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EXECUTIVE SUMMARY

The Government of Kenya and UNICEF Country Programme 2014-2018 has strategically positioned and prioritized Communication for Development (C4D) as a cross-sectoral strategy that contributes mainly to the Country Programme (CP) behaviour and social change focused outcome so that, 'By 2018, children and adolescents participate in processes affecting them; and care givers, households and communities, high deprivation counties and urban locations, adopt positive child-sensitive social norms and key practices in development and emergency context'.

There is currently limited evidence to guide communication for social and behaviour change planning, implementation and monitoring—which has hampered initiation of appropriate interventions for the improvement of the health, nutrition and other social outcomes for the rights of children and their families.

The main objective of the desk review was to generate available quantitative and qualitative data related to the 10 key behaviours on child survival, development and protection issues and identify the missing information/gaps to be explored through a field study. Specifically, the study sought to:

- Explore the prevailing knowledge, attitudes, beliefs and practices of care givers of children and adolescents around the key behaviours of focus, the gaps in behaviour/practices, and dynamics of social norms that are at play around the key behaviours;
- Identify the relevant factors required to create an enabling environment and responsive policy that address both demand and supply needs of the key behaviours; and
- Explore the existing opportunities and mechanisms for children, adolescent and community engagement and participation, the functionality, effectiveness of these in facilitating community participation and engagement around the 10 key behaviours.

The process and documentation of the study findings required working with all the stakeholders to obtain information relevant to the key behaviours. The study adopted mixed-methodology (quantitative and qualitative) to conduct the secondary data analysis and literature review.

This process involved:

- i) Conducting literature review of existing studies and large scale data sets from surveys and other sources in order to explore: the prevailing knowledge, attitudes, beliefs and practices with regard to the key behaviours; factors associated with key behaviours (those that may enhance or act as barriers to positive behaviours); and current social norms and conventions, myths and misconceptions with regard to the 10 key behaviours.
- ii) Conducting desk reviews on policies and programme reports and evaluation relevant to the key behaviours in order to document: status of current policies and programmes on the 10 key behaviours including weaknesses and strengths; and policy environment regarding implementation of interventions towards positive behaviour.

Key issues/findings

Hand washing at critical times

In Kenya, the knowledge about hand washing and its importance is high; nearly all household recognise the importance of hand washing. However, most Kenyans have a poor understanding of the relationship between hand washing and diseases and how this relationship affects the day-to-day lives of children and the entire community. Similarly, there appears to be a lack of knowledge about proper hand washing. One study found the use of recycled water and almost 50 percent of primary caregivers dried their hands with the clothes they had on. There are also incidences where some people wash only one hand, instead of rubbing both hands with water and soap.

Most studies indicate that Kenyan households accord low priority to hand washing with soap; it is ranked lowly by most women/caregivers—after bathing, laundry and washing dishes and personal care (bathing). Hand washing with soap is most frequent after toilet use or potential contact with faeces but very low at other critical times and is almost non-existent in schools.

Studies show however that Kenyans have a positive attitude towards hand washing: For example, majority (82%) of caregivers believe that families would be healthier if they washed their hands with soap all the time. Several studies indicate that, most Kenyans consider hand washing at critical times as a habit learnt during childhood. Motivators for hand washing include disgust, nurture, status, affiliation, attraction, comfort and fear of contracting disease. Teaching children hand washing is considered as good manners. Among school children, the motivators for hand washing are justification (need to wash away germs and the fact that hand washing is covered in the syllabus), fun and fitting-in (conforming to accepted code of conduct in school). The presence of other children washing hands was seen as a trigger to hand washing.

There is scanty information and data on beliefs and social norms on hand washing. However, a few small scale and two nationally representative studies indicate that existence of beliefs and social norms (both positive and negative) on hand washing. For example, most people believe it is important to wash hands with soap after using the toilet and before eating but not during the other risky moments. Belief related to fear of contracting disease, such as ‘diarrhoea can kill’ and ‘hidden germs can cause diarrhoea’ are common among many communities in Kenya and these influence the likelihood of washing hands with soap. Some communities believe that toilets are for the head of the family (men) and therefore not to be shared by other members of the family. Others believe that, there should be no sharing with the mother-in-law. These beliefs make it difficult to practice hand washing when other family members have to use other alternative facilities—usually the bush. Some people believe that only dirty physical surfaces contain germs and that hands should only be washed when one gets into contact with such dirty surfaces.

Sleeping under the Insecticide Treated Nets (ITN)

Various studies conducted in Kenya show that knowledge on the transmission and prevention of malaria, including the use of ITNs, is high. These studies have also revealed both positive and negative attitudes towards the use of ITNs. For example, some communities feel that ITNs should only be used during the rainy seasons when the number of mosquitoes is high, others feel that the ITNs are uncomfortable to use during hot seasons, while others were of the opinion that the free ITNs are intended to control family sizes. One major belief brought out by the studies is that in some

communities the use of white rectangular ITNs is associated with death and therefore such nets are not used by community members. In terms of practice, the Kenya Demographic and Health Survey (KDHS) shows that 59 percent of households own at least one ITN, 54 percent of children under-5 years of age and 51 percent of pregnant women aged 15-49 years slept under an ITN the night before the survey. Generally, quantitative studies on the use of ITNs have mainly focused on knowledge and practice while the qualitative studies have mainly focused on practice. There is also need for more qualitative studies on ITN use at the county and national levels.

Care seeking behaviour

Pregnant mothers make at least 4 Antenatal Care (ANC) visits and seek skilled delivery

There are no large scale studies of knowledge and attitudes on ANC or use of skilled delivery during pregnancy. Available evidence from studies and programme reports note that, ANC coverage and Skilled Birth Attendance (SBA) is lower among women who need it the most: the poor, less educated, and those living in rural areas. There is a common belief that pregnancy is often perceived as a natural process of life. This perception may make women, families and communities underestimate the importance of ANC and even SBA. Studies suggest that lack of knowledge about danger signs in pregnancy may make women and families not know how to seek care when a complication occurs during pregnancy. The choice of place of delivery may not simply be influenced by low levels of knowledge about place of delivery but on personal, social, economic, and logistical barriers.

HIV positive women/families seek eMTCT and ARVS

Knowledge that HIV could be transmitted to the child during breastfeeding and during delivery is high but knowing that HIV could be transmitted to the child during pregnancy is low. Women who attend ANC are more likely to know of use of antiretroviral therapy for Elimination of Mother-to-Child Transmission of HIV (eMTCT) and for treatment. ANC attendance remains the cornerstone to HIV positive mothers use of appropriate services. In terms of behaviour the central factor to use of services is HIV testing. Slightly more than half of persons found to be HIV-infected in Kenya Aids Indicator Survey 2012 did not know that they were infected. This was more pronounced among men than women. HIV positive women who are pregnant should get early PMTCT interventions for the benefit of the mother and child but this is still hampered by late initiation of ANC visits. Although ANC HIV testing has increased over the years, still 1 in every 10 pregnant women attending an ANC are not tested. Studies still reveal the role that fears of HIV-related stigma and discrimination play in discouraging pregnant women's use of both HIV-related and non-HIV-related health services. Even though women who initiate use of services have increased, little is known about whether women are actually able to adhere to prescribed medications. Although HIV-positive status disclosure seems to be complex, it is still critical in the use of eMTCT and maternal health services. HIV infected pregnant women in rural settings are less likely to disclose their HIV status than urban women. Poverty which causes lack of food, or income is a key indirect barrier to ART adherence. Qualitative studies reveal that fears about HIV-related stigma may cause some women to avoid facility-based services especially use of ANC and skilled attendants during delivery.

Early and appropriate care seeking for malaria and pneumonia

Most of the studies on malaria and pneumonia are clinic based and do not focus on the community based barriers that affect care seeking for malaria and pneumonia. There is reportedly high level of knowledge about the diseases but this require county specific studies since national surveys mask

important differences that are context specific. Although national surveys report high knowledge about pneumonia, there is a lack of knowledge on the appropriate care seeking for pneumonia. Some studies have reported lack of knowledge on the appropriate care for pneumonia including the signs and symptoms of pneumonia.

Studies have found that in the cases of malaria/fever, care givers choose to take their children to seek appropriate care a few days after the fever. However, in a number of instances they often choose to self treat at home before taking children to health facilities after several days.

Oral Rehydration Solution (ORS)/Zinc use for diarrhoea

The Kenya Demographic and Health Survey of 2014 indicates that knowledge of ORS for use in the treatment of diarrhoea is high (92%) but low for use of Zinc for treatment of diarrhoea. Although knowledge is high, only 54 percent of the respondents used fluids from ORS packets for the treatment of diarrhoea while 7.2 percent used a combination of fluids from ORS and Zinc for treatment of diarrhoea according to the Kenya demographic and health survey 2014. The use of Zinc supplements for diarrhoea treatment is extremely low in Kenya with only 8 percent of children reporting use (KNBS & ICF Macro, (2015)). Trends in the use of ORS in the treatment of diarrhoea show a gradual increase over time since 1993. For Zinc supplements, data is only available from 2008/09 as Zinc was only introduced as a treatment for diarrhoea in 2004. A few studies at sub-national level reported that caregivers believe that they knew how to prepare ORS and that they believe that herbs are ineffective or harmful for treating diarrhoea. Studies on harmful practices in the management of childhood diarrhoea reports existence of varying harmful practices across cultures that include; fluid and breastfeeding curtailment, food restriction, and inappropriate medication use. Studies suggest that programmes need to target not only the behaviours of child caregivers, but the broader social network, because findings show that these practices are often informed by traditional beliefs, popular knowledge, and the instruction of authority figures, including elderly community members and health workers.

Most of these studies are concentrated in Nairobi or western Kenya with majority of the 25 UNICEF targeted counties having no studies. The variation in treatment practices by perceived type of diarrhoea highlights the importance of using local terminology in order to capture all episodes of diarrhoea as perceived by the community. Studies are also needed to help identify sub-populations that would benefit most in resource-limited settings and to ensure access to Zinc supplementation, especially for those families whose children are most at risk of diarrhoea but may not be able to afford treatments that include Zinc supplements.

Appropriate feeding practices

Studies in Kenya (KDHS 2008/9, 2014) show that breastfeeding is universal, with most mothers (97%) breastfeeding their children for up to two years. Nonetheless, this knowledge does not translate into the practice of exclusive breastfeeding. The practice of optimal breastfeeding from birth to 6 months (early initiation within one hour of birth and exclusive breastfeeding up to 6 months) though, has shown marked increase, from 32 percent in the 2008-09 KDHS to the current 61 percent in KDHS 2014 indicating rural-urban and regional differences. Urban women had a higher (3.7 months) median duration of exclusive breastfeeding compared to rural women (3.0 months). Women from Central region had a higher (4.3 months) median duration of breastfeeding compared to women from the other regions; coast (3.8 months), Nyanza and Western (3.4 months) and Eastern (2.5 months).

Studies show mixed views as to how long children should be breastfed. Duration of breastfeeding was said to be highly variable with some not breastfeeding at all, others breastfeeding for a few months, and others for a year, 2 years and beyond 2 years. The shortest duration was perceived to be among young mothers, working mothers and women participating in commercial sex.

The challenges facing early initiation of breastfeeding are cultural practices such as naming and cleansing ceremony before initiation of breastfeeding, myths revolving around colostrum which is expressed out due to incomplete knowledge on its benefits. Despite awareness about the recommendation to breastfeed exclusively for the first six months of life, most mothers introduce other foods early, on the advice of older women, mother in-law or grandmothers, particularly when babies cry often in the early months—which is regarded as an indication that breast milk is insufficient. Another motivation is that when babies are fed porridge, they sleep for long hours, enabling mothers to attend to other responsibilities. Some mothers are afraid if they breastfeed exclusively for six months, it will be taken to mean they are HIV positive. Documents also indicated that some children are not breastfed optimally due to taboos particularly if the mother gets pregnant while still breastfeeding or is involved in extra marital affairs.

Complementary feeding should start at 6 months, when breast milk is no longer sufficient to meet the nutritional needs of growing infants, with continued breastfeeding well into the second year of life. When complementary food is introduced before 6 months, children are vulnerable to malnutrition due to inappropriate diets during this transitional phase. KABP studies show that initiation of optimal complementary feeding remains the biggest challenge. There are significant gaps in the knowledge on appropriate timely introduction of solid foods, feeding frequencies, dietary diversity and provision of iron rich foods. Responses about the appropriate age at which to introduce solid foods varied. Introduction of other foods started as early as 2 weeks and intensified at 2 to 3 months. At the desired age of 6 months—when other foods should be introduced, most children were already eating soft food and liquids. In all the study areas, it was noted that before the child started eating food from the family pot, the main method of cooking the child's food was boiling followed by mashing. Barriers to initiation of optimal complementary feeding include cultural beliefs and practices that determines choice of food, lack of adequate support from husbands, low socio-economic status, poor health seeking behaviours, heavy maternal workload, poor birth spacing and influence of mother-in-laws and older women.

Immunization of children by one year of age

Available qualitative evidence show that, parental ignorance/lack of knowledge has been cited as reasons for failure to immunize children. Other studies show that, parents were willing to have their children vaccinated but needed more information on safety, efficacy and benefits of the vaccine. Negative attitude, use of abusive language, poor communication between mothers/care givers and health workers have been noted to influence full immunization of children negatively. For instance, among the Samia community, mothers reported being scolded for having given birth at close intervals, having several children to vaccinate at the same time, being pregnant while still breastfeeding and being pregnant past the age of 45. Poor perception, myths, fears and concerns about side effects of vaccines are associated with low immunization status in regions such as Busia and South Coast. Available evidence also indicate that, little belief in the ability of new vaccines to prevent diseases and religious beliefs were cited as barriers to full immunization in Busia and South Coast regions of Kenya. Suspicion that the government might have been using vaccines to sterilize young female children or to reduce the population has also been cited to affect immunization negatively.

The quantitative results indicate that 8 out of every 10 children have received full immunization in Kenya while about 9 out of every 10 children have received measles immunization. North Eastern region has lowest proportion of children fully immunized (56%) and (70%) for measles vaccination while for Rift Valley and Nyanza regions, proportion of children fully immunized is less than 80 percent. All the five top counties in the country have achieved more than 80 percent immunization coverage threshold set by WHO but the proportion of children fully immunized in Mandera and West Pokot counties is way below half. The major barriers to immunization are proximity to the health facilities, indirect cost associated with access to health facilities and lack of capacity for some health facilities to maintain quality vaccines.

Parents enrol their children in school and keep them in school

In Kenya, parental knowledge is found to be an important factor in determining whether parents enrol and keep their children in school. According to studies reviewed, parental knowledge on importance of enrolling children and keeping them in school has an effect on enrolment and keeping in school. The reasons why many Kenyan children of school going age do not enrol in school at all and why some of those in schools drop out before completion are many and varied. Parental knowledge is linked to a range of factors including –when children start school, how often they attend, whether they have to temporarily withdraw and also when and if they drop out.

Many attitudinal and belief issues emerged from the reviews as to why parents and guardians enrol, fail to enrol, retain the children or withdraw the children from schools. Majority of the studies reviewed showed that, some parents had negative attitude towards enrolling their children, some parents saw the girl-child as a worker. On the beliefs, the study revealed that, enrolling and keeping children in school is affected by cultural aspects in some communities. Moreover, different cultural practices influence enrolment and continuation rates in schools, these include practices such as early marriage and female genital cutting that affect the older girls in the 6 to 13 age group, and lead to dropping out of school. In a patriarchal society, and in poor households, sons' education is at times supported at the expense of their sisters' education, because of a perception that boys will contribute to the future wealth of the family. Early marriage has also been seen to influence school enrolment and completion in most communities.

Sanitary disposal of human waste

There are no large scale quantitative studies in Kenya that have documented levels of knowledge, attitudes and beliefs on sanitary disposal of human waste. Studies using quantitative and qualitative approaches carried out in various parts of Kenya indicate that cultural beliefs, restrictions and taboos have a strong influence on knowledge of sanitary disposal of human waste. Similarly, cultural beliefs, restrictions and taboos together with socio-economic lifestyle and prestige were found to have a strong influence on attitude towards sanitary disposal of human waste. The studies also indicate that there exist various negative beliefs and taboos regarding the use of latrines for sanitary disposal of human waste among the Kenyan communities. Although the knowledge on sanitary disposal of human waste was found to be very high, this appears to have not translated into practice since majority of the Kenyan households do not use improved sanitation facilities. The motivation for those who use latrines is mostly inclined towards the health benefits of prevention of diseases, privacy, convenience, status/prestige, health education and influence from neighbours while those who do not use latrines mentioned taboos, cultural beliefs, lack of money and tools as their main barriers. Moreover, Water Sanitation and Hygiene (WASH) conditions in the majority of rural Kenyan primary schools where

studies have been carried out were found to be insufficient for the Menstrual Health Management (MHM) needs of menstruating girls.

Harmful traditional practices

In Africa, as elsewhere harmful practices exist, generally with some cultural, social or religious underpinnings. Common for most harmful practices is that they have devastating consequences on the child's life, development, health, education and protection. UNICEF country programme works to raise awareness of harmful traditional practices as a means of child protection; these particularly include Female Genital Mutilation/Cutting (FGM/C), early or forced marriage and violence against children. The objective is to contribute towards reduction of or outright eradication of the prevalence of FGM/C and the rate of child marriage and make programmes and services available to women and girls to manage and mitigate health complications related to FGM/C and early marriage as well as violence against children.

In many of the countries where child marriage is prevalent, other harmful practices such as FGM/C are also practised. Studies have further revealed that early marriage increases the risk of being subjected to sexual and physical violence in the home.

Birth of children 0-1 years registered

A civil registration system has been in existence in Kenya since 1904. Although the civil registration system in Kenya has been in operation for a long time, little progress has been made over the years in establishing a satisfactory civil registration system in spite of the various attempts to improve the system. It is yet to attain the minimum threshold of 90 percent registration coverage as recommended by the United Nations.

A number of factors influence birth registration. For example, it is evident that there are counties where public awareness is high and yet registration remains incomplete. This is caused by lack of motivation for one to register a birth. In present day Kenya, there are no incentives to motivate the public to register. Rural populations are most affected as benefits of birth records are not immediately self-evident since the prevailing socio-economic environment has virtually very few, if any, use of such records. The utility of the civil registration system to the people of Kenya has not been enhanced by specific policies which would enforce the production of documents on births. Other bottlenecks to birth registration in Kenya include: low priority accorded to the registration; the current structural arrangement of the system; poverty levels; a weak monitoring and evaluation system and no demand for vital statistics generated from the civil registration system.

Children and adolescent participation in decision-making

Children and adolescent participation provides an opportunity to be involved in decision-making on matters affecting their lives and influence change. Through increasingly meaningful and active participation in decision-making children can develop their own identity, a sense of belonging and usefulness. Ideally, children can begin to experience participation at a very early age. It can begin within their own families and in the community, if they are listened to and their opinions are valued.

Studies indicate that children including adolescents, are in most cases not afforded an opportunity to participate in decision-making. In most cases it is contrary to African culture for children to participate

in this way. In most traditional communities, it is not culturally acceptable for children to discuss in the presence of elders. They are expected to listen to and learn from their elders. Fundamental change in culture is essential for children participation but this takes time.

Negative attitudes about child participation in Kenya are due to rigid cultural norms. New ideas introduced to encourage behaviour change, are viewed with suspicion and in most cases considered alien or neo-colonialism. Negative attitudes affect efforts to encourage children and youth participation at the family, community level, or school.

On the other hand, resistance to children participation usually comes from genuine concern for their well-being especially where children are too young and inexperienced to participate.

Data and information gaps

- a) Lack of focused studies that document knowledge, beliefs/norms and practices relating to the key behaviours either at county or national level.
- b) Lack of common measures (indicators)/concepts to be applied for the 10 key behaviours to aid data collection, analysis and comparison.
- c) Inexistence of a research database to serve as repository for organisations/individuals conducting research in the key behaviours to deposit their research findings to guide future researches on the same.
- d) Most of the qualitative studies on the key behaviours are mostly on small scale and cannot be generalized to the country or even counties themselves. A few studies which were carried out in the country focused more on the practice rather than of knowledge, attitudes and beliefs/norms.
- e) Most of the qualitative studies focus on communities and therefore may not be applicable to county-specific, especially in those counties that are cosmopolitan in their ethnic distribution.

The general recommendations

- a) Conduct more qualitative and quantitative studies in the area of knowledge, attitude, and beliefs and practices especially at county and national levels. This will help to accurately inform policies and programmes at both levels. *The frameworks for conducting qualitative and quantitative study of the 10 key behaviours are provided in annex I and II.*
- b) Undertake study(ies) on social determinants of the key behaviours in Kenya using a mixed methods approaches. An effort should be made to focus more comprehensively on identifying various beliefs and social norms and how they influence behaviours.
- c) There is need to agree on common measures (indicators)/concepts to be applied in the 10 key behaviours to aid data collection, analysis and for comparison purposes.
- d) Sensitize community leaders and members of the public about the importance of observance of the key behaviours.
- e) Programmes on advocacy and behaviour change communication should be designed to address socio-cultural barriers to improvement of the key behaviours.

- f) Government should work towards equity in geographical distribution of facilities –especially for underserved counties– to provide services related to the key behaviours.
- g) There is need to unify the source of data for the 10 key behaviours so that there is no variation of the data.
- h) Undertake further analysis of the existing data-sets such as Kenya Demographic and Health Surveys among others in order to provide much needed data and information on the key behaviours.
- i) There is need for departments and institutions implementing and programmes touching on the 10 key behaviours to have some coordinating mechanisms to enhance synergies in service provision.
- j) Develop a research database to serve as repository for organisations/individuals conducting research in the key behaviours to deposit their research findings to guide future researches on the same.

CHAPTER ONE: INTRODUCTION

1.1 Background

The Government of Kenya and UNICEF Country Programme 2014-2018 has strategically positioned and prioritized Communication for Development (C4D) as a cross-sectoral strategy that contributes mainly to the Country Programme (CP) Behaviour and Social Change focused outcome so that, 'By 2018 children and adolescents participate in processes affecting them; and care givers, households and communities, high deprivation counties and urban locations, adopt positive child-sensitive social norms and key practices in development and emergency context'.

This outcome is expected to support the achievement of the Health, Education, Nutrition, WASH and Child Protection Outcomes of the Country Programme (2014-2018) that is aligned and intended to contribute to the guiding frameworks of the Constitution of Kenya 2010, Jubilee Government Manifesto, the United Nations Development Assistance Framework (UNDAF) strategic results and Kenya's Vision 2030.

The situation of children and women relies on the effectiveness of behaviour and social change approaches and interventions employed in facilitating correct knowledge, attitude change and practices around key child survival, development and protection issues. These processes enable children and women to participate in and influence policy/decision-making dialogue and demand for services. The strength of C4D lies in its participatory process that are very engaging with communities, that fosters ownership, with use of key strategies like social mobilization, advocacy, participation, community dialogue/engagement, aimed at addressing social norms to realize social change. C4D addresses itself to working with communities at their local context; which makes it easy to drive change from within the community.

1.2 Rationale for undertaking the study

There is currently limited evidence to guide communication for social and behaviour change planning, implementation and monitoring which has hampered initiation of appropriate interventions for the improvement of the health, nutrition and other social outcomes for the rights of children and their families.

Previous desk review studies conducted by UNICEF in 2013 on care givers Knowledge, Attitude and Practices on six key Child Survival and Development (CSD) behaviours (hand washing, use of ITN, infant and young child feeding, seeking for antenatal care, childhood diarrhoea, pneumonia and malaria) revealed that, most studies either consider barriers on Knowledge, Attitude and Practice for Child Survival and Development behaviours in relation to specific contexts, or interventions, or consider issues at macro-level, regional and with limited or no data at the County level.

This review also noted that, data in these levels of analysis were inherently unreliable given the many factors that can impact on the quality of study design, implementation and data analysis, lack of research relating to how community based approaches to behaviour change are designed, implemented and evaluated and in relation to how they participate in the whole process.

This comprehensive review of previous studies was therefore conducted to generate quantitative and qualitative data related to the 10 key behaviours on child survival, development and protection issues and identifies the missing information/gaps to be explored through a field study.

I.3 Study objectives

The main objective of the desk review was to generate quantitative and qualitative information related to the 10 key behaviours on child survival, development and protection issues and identify the missing information/gaps to be explored through a field study.

Specifically, the study sought to:

- Explore the prevailing knowledge, attitudes, beliefs and practices of care givers of children and adolescents around the key behaviours of focus, the gaps in behaviour/practices, and dynamics of social norms that are at play at around the key behaviours;
- Identify the relevant factors required to create an enabling environment and responsive policy that address both demand and supply needs of the key behaviours; and
- Explore the existing opportunities and mechanisms for children, adolescent and community engagement and participation, the functionality, effectiveness of these in facilitating community participation and engagement around the 10 key behaviours.

I.4 Methodology

The study adopted mixed-methodology (quantitative and qualitative) to conduct the secondary data analysis and literature review.

I.4.1 Quantitative analysis

The quantitative part of the secondary analysis and literature review involved the following:

I. Review of existing studies and large scale data sets

The first step involved:

- a) Conducting literature review of existing studies and large scale data sets from surveys and other sources in order to explore:
 - The prevailing knowledge, attitudes, beliefs and practices with regard to the key behaviours;
 - Factors associated with key behaviours (those that may enhance or act as barriers to positive behaviours);
 - Current social norms and conventions, myths and misconceptions with regard to the 10 key behaviours.
- b) Conducting desk reviews on policies and programme reports and evaluation relevant to the key behaviours in order to document:
 - Status of current policies and programmes on the 10 key behaviours including weaknesses and strengths; and
 - Policy environment regarding implementation of interventions towards positive behaviour.

The second step involved:

- c) Reviewing and identifying existing large data sets (national and sub-national) that have variables relevant to the 10 key behaviours. Where necessary the team shall conduct further analysis using the data to generate information that may not be available in the public domain. A summary of existing data and information and information gaps that may require further data collection and analysis has been prepared. The data sources included; Kenya Demographic and Health Surveys (KDHS) reports, Multiple Indicator Cluster Surveys (MICS), Kenya AIDS Indicator Surveys (KAIS) reports, Malaria Indicator Surveys (MIS), UNICEF reports, relevant Ministry reports and published reports.

II. Review of international databases, studies and policies

To supplement the information from activities in I and II, exploration of available databases and reports, including statistics from international and development organisations that are relevant. Identify and analyse the studies and reports as they relate to individual and collective behaviours was also carried out.

I.4.2 Qualitative analysis

The qualitative analysis involved identification of previous studies and carry out a comprehensive review from a holistic dimension and generate qualitative data related to the 10 key behaviours. The review also identified the missing information/gaps in explaining the observed patterns and differentials. Upon completion of the desk review, a sampling frame for conducting the field study based on the identified gaps is developed. The review involved review of qualitative studies conducted in Kenya related to socio-cultural practices, actors of influence and behaviour, beliefs, social norms, knowledge and attitude relating to the 10 key behaviours of study.

I.4.3 Selection criteria

The secondary data analysis and literature review adopted a content validity criteria which ensures that, the review only covers areas within the KABP study domain. This criteria ensures that not everything can be covered, so items that need to be reported only falls within the domain.

In view of the specificity of the 10 behaviours, the reviewers needed to have considered the face validity of the questionnaire that were used to collect the previous data. However this was one of the limitations faced during the review process. This study therefore, concentrated on reviewing the studies that contain contents that only fall within the study domain (10 KABP study behaviours).

I.5 Focus of the study

The 10 key behaviours of focus for this study were:

1. Hand washing at critical times
2. Sleeping under Insecticide Treated Nets
3. Care Seeking:
 - pregnant mothers make at least 4 ANC visits,
 - seek skilled delivery,

- HIV positive women/families seek PMTCT and ARVs,
 - Early and appropriate care seeking for pneumonia and malaria,
 - ORS/Zinc use for diarrhoea.
4. **Appropriate feeding practices**—early initiation, EBF and timely introduction of appropriate complimentary feeding/minimum meal frequency and minimum dietary diversity.
 5. **Full immunization** of children by 1 year of age.
 6. **Parents enrolling their children in school** and keep them in school.
 7. **Sanitary disposal of human waste.**
 8. **Rejection of child harmful practices** (FGM/C, child marriage)
 9. **Birth of children 0-1 year registered**
 10. **Children and adolescent participate in decision-making**

For each of the 10 key behaviours, the study covered the following broad areas.

1. **Knowledge:** Explored the prevailing knowledge of caregivers of children, and adolescents around the 10 key behaviours of focus, and gaps in knowledge;
2. **Attitude:** Identified existing attitudes of caregivers of children, and adolescents around the key behaviours of focus;
3. **Beliefs:** Explored the prevailing social norms and their dynamics that are at play around the key behaviours;
4. **Behaviours/practice:** Explored the prevailing practice of, caregivers of children, children and adolescents around the key behaviours of focus, and gaps in practice that creates demand for and utilization of services by communities;
5. **Assessed the existing policy/policy gaps** in support of the promotion of and practice of the key behaviours; and
6. **Identified the existing opportunities and mechanisms** for children, adolescent and communities to engage and participate around the 10 key behaviours.

I.6 Implementation of the study

The secondary analysis and literature review was undertaken by KNBS and NCPD. The KNBS in collaboration with Population Studies and Research Institute (PSRI) conducted the quantitative part of the study while NCPD undertook the qualitative part. The three institutions worked in close collaboration and produced one report. Ten research assistants (5 for qualitative and 5 for quantitative) were recruited to carry out initial secondary data analysis and literature review before reviewed by the subject matter specialist and research investigators.

CHAPTER TWO: STUDY RESULTS

This section presents the results of the secondary data analysis and literature review of the 10 key behaviours on child survival, development and protection issues in Kenya. It provides a description of the Knowledge, Attitudes, Beliefs and Practices related to the key behaviours under study. It also presents information on the policies and programme reports and evaluation relevant to the key behaviours on the status of current policies and programmes on the key behaviours including weaknesses and strengths; and policy environment regarding implantation of interventions towards positive behaviour. Finally, the section gives a summary of documents/reports reviewed per behaviour.

2.1 Hand washing at critical times



A young boy washes his hands with soap and water after using a sanitary latrine in Kangalita Primary school in Turkana County in northern Kenya.

2.1.1 Overview

Hand washing is one of the most effective ways to prevent the spread of germs, and it is used as an indicator of personal and household hygiene. Over 1.5 million children under-5 die each year as a result of diarrhoea (Black *et al.*, 1999; Prüss-Üstün, *et al.*, 2008). It is the second most common cause of child deaths worldwide

(UNICEF, 2008). In Kenya, diarrhoea and respiratory diseases are the main killers of children under-5 years (MOPHS and UNICEF, undated). Hand washing with soap at critical times –including before eating or preparing food and after using the toilet– can reduce diarrhoea rates by more than 40 percent (Curtis and Cairncross 2003), Hand washing with soap can reduce the incidence of acute respiratory infections (ARI's) by around 23 percent (Rabie and Curtis, 2006; Aiello *et al.*, 2008). Worldwide, pneumonia is the number one cause of mortality among children under-5 years of age, taking the lives of an estimated 1.8 million children per year (UNICEF 2008; Liu *et al.*, 2012). Hand washing can be a critical measure in controlling pandemic outbreaks of respiratory infections. Several studies suggest that washing hands more than 10 times a day can cut the spread of the respiratory virus (that causes respiratory infections) by 55 percent (Tom *et al.*, 2009; Luby *et al.*, 2005; Aiello *et al.*, 2008; Bhutta *et al.*, 1999).

A review of several studies shows that hand washing in institutions such as primary schools and day care centers reduce the incidence of diarrhoea by an average of 30 percent (Cochrane 2008). Some studies suggest that hand washing in schools can reduce absenteeism among primary school children (Bowen *et al.*, 2007). In China, for example, promotion and distribution of soap in primary schools resulted in 54 percent fewer days of absence among students compared to schools without such an intervention (Bowen *et al.*, 2007). Further, a study shows that hand washing with soap by birth attendants and mothers significantly increased newborn survival rates by up to 44 percent (Rhee *et al.*, 2008)) and skin infections (Luby *et al.*, 2005). Furthermore, hand washing is essential for disease prevention and control in commercial food preparation as well as in health care and work places (Reborts *et al.*, 2000; Ejemot *et al.*, 2012). In consideration of the importance of hand washing in disease prevention, several studies have suggested that promoting hand washing (hygiene) may be the most effective means of reducing the global burden of disease (Cairncross and Valdmanis, 2006).

Despite the many positive health benefits, hand washing around the world is poorly practiced (Scott and Rabie, 2003). Observed rates of hand washing with soap, at critical times, range from zero percent to 34 percent (Scott and Rabie, 2003; Freeman *et al.*, 2014). In Kenya, hand washing with soap is rarely practiced regularly and at critical times such as before eating or after visiting the toilet despite existence of policies and programmes on hand washing (Freeman *et al.*, 2014; Curtis *et al.*, 2009; Aunger *et al.*, 2009, MOPHS and UNICEF, undated).

2.1.2 Policies/Programmes/Guidelines

The Kenya Government has been promoting hand washing both as a measure of preventing diseases and ensuring individual person's and households hygiene. To this end, several policies and programmes on hand washing have been established and implemented in the country for several years. The key policies on hand washing are found in:

- National Environmental and Sanitation and Hygiene Strategy 2010-2015
- National School Health Policy and National School Health Guidelines 2009

The overall aim of the National Environmental and Sanitation and Hygiene Strategy 2010-2015 is sanitation for all by 2015 and has six (6) key objectives which are:

- To eradicate open defecation (OD) in Kenya by 2015;
- To significantly improve hand washing practice to over 90 percent by 2015;
- To significantly improve the safe water chain for all households in Kenya by 2015;
- To ensure that all solid and liquid waste is properly managed by 2020;

- To have an effective emergency preparedness and response mechanism for sanitation by 2015;
- To strengthen coordination of sanitation hygiene systems and enabling framework on a ongoing basis.

The National School Health Policy and National School Health Guidelines 2009 was developed by the Ministry of Education (MOE) in collaboration with the Ministry of Public Health and Sanitation (MoPHS) and other partners. The guidelines operationalize the National School Health Policy by providing specific guidelines which ensures that school age children, teachers, support staff and community members access quality and equitable services for improved health.

Several hand washing programmes are being implemented in the country. The two national programmes are: the WASHplus project and Wash in School Programme. The WASHplus project in Kenya supports the Ministry of Health and its partners to integrate improved Water, Sanitation, and Hygiene (WASH) practices into HIV policies and activities. The project works closely with communities, encouraging households to identify small doable actions they can take to improve health and prevent diarrhoea. The programme works with the Ministry of Health, the National AIDS and STI Control Programme, the Division of Community Health Services, the APHIAplus projects and partners, and Centers for Disease Control and Prevention (CDC) partners.

The WASH in Schools Programme was started in 2008 by the Ministry of Education in conjunction with the Ministry of Public Health and Sanitation (MoPHS) and with several development partners with UNICEF being the major partner. The programme covers over 780 schools across the country.

2.1.3 Sources of data and indicators

a) Data sources:

- KDHS 2014
- MICS 4, MICS 5
- Published peer referred articles
- Research Reports

b) Indicators of hand washing:

- Percent of households with a place for hand washing;
- Percent of caregivers who wash (self reported/observed) with water without soap/and with soap at risky junctures;
- Percent of school pupils/children who wash hands without soap/with soap at risky junctures;
- Percent of care givers who consistently wash hands at all risk junctures.

2.1.4 Knowledge, Attitude, Beliefs and Practices on hand washing at critical times

Knowledge

Knowledge on hand washing, is indicated as any hand washing, is high in Kenya (92% without soap, 60% with soap (MOPHS and UNICEF, undated). The review shows that most Kenyans know the importance of washing their hands at critical times especially after using the toilets. For example, one study in low income urban areas of Kenya shows 90 percent of all households consider it to be important to wash hands before eating or after using the toilet (WSTF/GIZ/UBSUP, 2013). However, most Kenyans have a poor understanding of

the relationship between hand washing and diseases and how this relationship affects the day-to-day lives of children and the entire community (MOPHS and UNICEF, undated). Similarly, there appears to be a lack of knowledge about proper hand washing. One study found the use of recycled water and almost 50 percent of primary caregivers dried their hands with the clothes they had on (MOPHS and UNICEF, undated).

Most studies in Kenya indicate that the importance of hand washing with soap is accorded low priority at household level: ranked lower by most women/caregivers –after bathing, laundry and washing dishes and personal care (bathing) (MOPHS and UNICEF, undated). Washing with soap is most frequent after toilet use or potential contact with faeces but very low at other critical times (Aunger *et al.*, 2009). And hand washing with soap is almost non-existent in schools (GoK and UNICEF, undated).

Attitudes

Studies show that Kenyans have a positive attitude towards hand washing: For example, the majority (82%) of caregivers believe that families would be healthier if they washed their hand with soap all the time (MOPHS and UNICEF, undated). Almost 72 percent of all respondents in low income urban households in Kenya wash their hands with water and soap after using the toilet and 27 percent use water only (WSTF/GIZ/UBSUP, 2012) These results show many residents of low income urban areas of Kenya seem to have the right attitude and have adopted the right practices. Several studies indicate that most Kenyans consider hand washing at critical time as a habit, learnt during childhood (Aunger, *et al.*, 2009, Curtis, *et al.*, 2009, MOPHS and UNICEF, undated).

In Kenya studies indicate that motivators for hand washing amongst care givers include disgust, nurture, status, affiliation, attraction, comfort and fear of contracting disease (Aunger *et al.*, 2009; MOPHS and UNICEF, undated). For example, with regard to disgust some primary caregivers say: ‘seeing dirt in my hands makes me to wash them automatically, and sometimes start washing my hands without even realizing it’ (Aunger *et al.*, 2009). ‘I feel very bad if I come out of the toilet and I do not wash my hands. I feel I am smelling like the toilet’ (GoK and UNICEF, undated). Teaching children hand washing is considered as good manners. It is important to teach children to wash hands with soap (Aunger *et al.*, 2009). Among school children, the motivators for hand washing are justification (need to wash away germs and the fact that hand washing is covered in the syllabus), fun and fitting-in (conforming to accepted code of conduct in school). The presence of other children washing hands was seen as a trigger to hand washing (MOPHS and UNICEF, undated).

Beliefs/Social norms

Information and data are very scarce on beliefs and social norms on hand washing. However, a few small scale and two nationally representative studies, covering over 802 households was conducted in 2007 and the findings are summarized below:

Most people believe it is important to wash hands with soap after using the toilet and before eating but not during the other risky moments (MOPHS and UNICEF, undated). Belief related to fear of contracting disease such as ‘Diarrhoea can kill’ and ‘Hidden germs can cause diarrhoea’ are common in among many communities in Kenya (Aunger *et al.*, 2009) and these affect the likelihood of washing hands with soap.

Some people are ashamed if they do not wash their hands after visiting a toilet and someone sees them leaving the toilet without washing their hands. ‘I would be ashamed if someone saw me not washing my hands after visiting the toilet’ (Aunger *et al.*), ‘I would be ashamed if people say I am dirty’. ‘Clean people are admired and respected in the community’. ‘You should always be clean... when you are clean you will appeal to everyone but when you are dirty people will avoid you’ (MOPHS and UNICEF, undated).

Most people believe it is important to wash hands with soap after using the toilet and before eating but not during the other risky moments' (Aunger *et al.*, 2009).

While other people wash their hands with soap for fear of disapproval. 'I am likely to wash my hands with soap if someone is watching' (Aunger *et al.*, 2009). 'People will notice/comment if you do not have clean hands and finger nails' (Aunger *et al.*, 2009).

Washing hands is associated with beliefs about respect. 'Visitors will respect me if they find a place to wash hands in my place' (Aunger *et al.*, 2009).

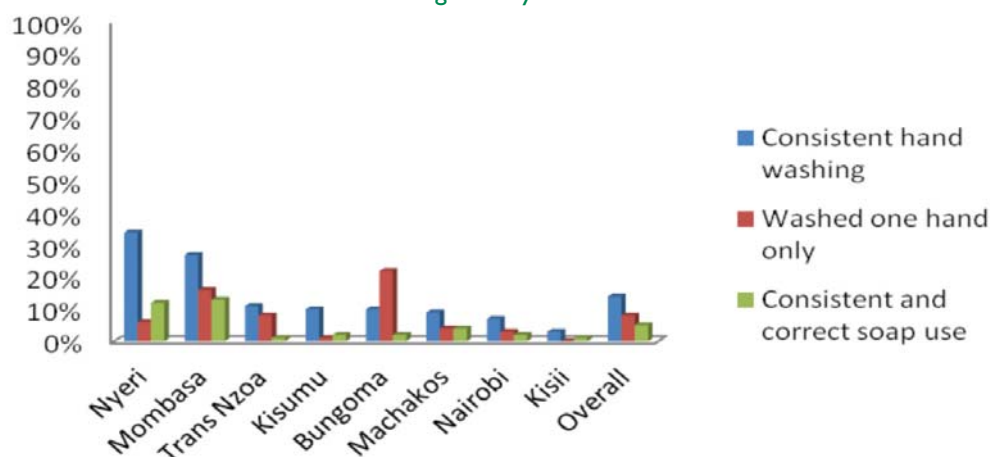
Some communities have beliefs relating to toilet facilities. Some communities believe that toilets are for the head of the family (men) and therefore should not be shared by other members of the family. Others believe that there should be no sharing with the mother-in-law. These beliefs make it difficult to practice hand washing when other family members have to use other alternative facilities—usually the bush.

Beliefs on germs: some people believe that only dirty physical surfaces contain germs. Hands should only be washed when one gets into contact with such dirty surfaces.

Practice

Consistent hand washing, which involves washing hands at any risky juncture—is relatively low in Kenya. For example, only 14 percent of Kenyan primary caregivers wash their hands with or without soap at all risky junctures. Nyeri has the highest percentage (34%) of the caregivers who consistently wash their hands at all critical times and Kisii has the least at 1 percent. However, only 5 percent of the primary caregivers wash with soap at all risky junctures (MOPHS and UNICEF, undated) (See Figure 2.1 below). One interesting thing is that there are quite a handful (8%) of Kenyans who wash just one hand against the recommended practice of rubbing both hands with water and soap.

FIGURE 2.1: Prevalence of hand washing in Kenya



Source: MOPHS and UNICEF (Undated)

It is worth noting that the prevalence of any hand washing (washing hands at least once at any critical time) is very high in Kenya: 92 percent of caregivers report any hand washing with or without soap, and 60 percent hand washing with soap (MOPHS and UNICEF, undated). Use of recycled water for hand washing and drying hands with one's own clothes are also reported to be fairly common in Kenya. This indicates risk of contamination after washing hands (MOPHS and UNICEF, undated). Although nearly all households (97%)

have soap (bar soaps, the majority prefer to put it to other uses other than hand washing. And the use of soap for hand washing is almost non-existent in schools—only one percent washed hands with soap and 28 percent wash hands in some way (MOPHS and UNICEF, undated).

Nearly 34 percent of households in Kenya have designated places for hand washing (KNBS *et al.*, 2014). A place for hand washing was observed in about 4 in 10 urban households (43%) and fewer than 3 in 10 rural households (27%). A place for hand washing varied substantially across regions as was observed by the interviewers, from a low of 17 percent in Nyanza to a high of 56 percent in Central. It is especially interesting to note that the percentage households with a place for hand washing steadily increased with household wealth index, from a low of only 18 percent among households in the lowest quintile to a high of 53 percent observed among households in the highest quintile. Soap or any other cleansing agent was available in a half of the households (49.7%) where a place for hand washing was observed (60.3% of urban households and 37.7% of rural households). The presence of soap and any other cleansing agent increased steadily with increasing wealth, from 19.1 percent in the lowest quintile to 67.4 percent in the highest quintile. Soap includes soap or detergent in bar, liquid, powder or paste form and cleansing agents other than soap include locally available materials such as ash, mud or sand.

TABLE 2.1: Percentage of households in which the place most often used for washing hands was observed, and among households in which the place for washing hands was observed, percent distribution by availability of soap and other cleansing agents, Kenya 2014

Background characteristics	Percentage of households where place for washing hands was observed	Among households where place for washing hands was observed, percentage with Soap or any Cleansing agent
Residence		
Urban	42.7	60.3
Rural	27.1	37.6
Region		
Coast	30.3	24.6
North Eastern	23.6	28.9
Eastern	39.1	37.5
Central	55.7	45.7
Rift Valley	29.5	62.5
Western	25.6	38.2
Nyanza	16.5	51.8
Nairobi	39.3	73.4
Wealth Quintile		
Lowest	18.0	19.1
Second	24.8	33.3
Middle	27.9	40.7
Fourth	36.6	48.5
Highest	53.3	67.4
Total	33.6	49.7

Source: Modified table from KDHS 2014 report page 20

2.1.5 Opportunities

- Existence of various National strategic plans and guidelines on hand washing in the country;
- The 2010 Constitution article 42 states: Every person has the right to a clean and healthy environment and article 43 states that: Every person has the right to clean and safe water in adequate quantities;
- Devolution: Each of the 47 Counties has a full-fledged Department of Public Health that deals with Sanitation and hand washing issues;
- Existence of various wash interventions/programmes;
- Inclusion of hand washing in the syllabus at schools;
- International support—from various partners;
- Research findings—solid knowledge base;
- Vibrant mass media;
- Existence of positive attitudes and beliefs on hand washing;
- Global hand washing day.

2.1.6 Challenges/Barriers

Hand washing in schools

- Lack of WASH infrastructure, particularly in poor sub-counties and informal urban settlements;
- Low prioritization of WASH in schools—poor enforcement and inadequate maintenance;
- Overcrowded schools and huge regional discrepancies;
- Lack of water and soap in most rural schools;
- Inappropriate placement of hand washing facilities in some schools—particularly those with pit latrines;
- Poor or lack of, water drainage of hand washing facilities. This lead to accumulation of dirty water in the trough and spilling around the hand washing site;
- Soap disappearance and wastage in some schools;
- Lack of support from teachers. In some schools such an intervention is perceived as an addition to the workload for teachers who feel they are already overworked.

Community and household levels

- Lack of soap for hand washing; soap is usually reserved for high priority usage (washing clothes, bathing, washing dishes);
- Poor socialization at tender age into practice of hand washing at critical times;
- Understanding the changing behaviour of hand washing in the intervention;
- Gaps between knowledge and practice of hand washing persist and long-term motivation activities are needed to improve hand washing at critical time with soap;

- The community people are still not conscious about the necessity of hand washing;
- Inconvenient location of soap in the household. In most households, soap is usually kept in places such as the kitchen or inside the living room which is not convenient for hand washing after risky events –say visiting a pit latrine;
- Lack of water and latrines in certain households;
- Certain beliefs (e.g. presence of soap in the household);
- Long distance between the toilet and source of water. This may lead to forgetfulness about washing hands after visiting the toilet;
- Lack of designated places for hand washing in the communities. Most communities lack a specific place for hand washing.

2.1.7 Information gaps

1. Lack of studies that document beliefs/norms that affect hand washing in most of the communities in Kenya.
2. Lack of common measures of knowledge and correct practice of hand washing in nationally representative studies/surveys.
3. No recent Nationally representative studies on beliefs and social norms on hand washing in the country. The 2007 study by Curtis and team covered only two locations in one district in each of the seven provinces and it excluded the entire North Eastern Province. Similarly, the MOPHS and UNICEF study (Are your hands clean enough?), covered only eight districts and 802 households selected from Nairobi, Nyeri, Trans Nzoia, Kisii, Kisumu, Mombasa, Bungoma, Machakos). Both studies used a mixed methods approach but did not give a lot of emphasis (coverage) to beliefs and social norms.
4. Lack of data for trend analysis of hand washing prevalence and differentials in the country. This is compounded by the different indicators that is being used in the various studies. For instance, KDHS 2014 used the percentage of households with designed places for hand washing while many other studies use measures such as percentage of caregivers who consistently hand washing or hand washing with or without soap. Some studies do analysis at the household levels, others at the individual caregiver level.

2.1.8 Recommendations

1. Undertake study(ies) on social determinants of hand washing in the country (Kenya) using a mixed methods approaches. An effort should be made to focus more comprehensively on identifying various beliefs and social norms and how they influence hand washing.
2. There is need to agree on common measures (indicators) of hand washing (Self reported versus observed, place of washing hands versus actual washing hand with soap).
3. For hand washing campaigns, there is need to emphasize the correct hand washing practice and the relationship between hand washing and diseases.
4. Long term and extensive initiatives should be undertaken to make people aware of the effectiveness.

2.1.9 Summarized studies in Kenya on hand washing

Author date and country	Area studied	Design, sample size	Dependent variable(s)	Analysis	Key findings	Gaps
John Migele et al. 2009.	Diarrhoea Prevention in a Kenyan School: Through the Use of a Simple Safe Water and Hygiene Intervention in Rural Kenya	Implementation of the Safe Water system (water treatment with bleach, safe storage, and behaviour-change communications) in 2000 in order to reduce diarrhoea in schools. Daily student care logs at the local clinic were reviewed.	Clinic visits at the hospital/clinic for checkups	Simple tabulations/calculation Frequencies to check the number visiting the clinics Medical testing of the diarrhoea infection among students	Low number of diarrhoea cases among students was observed and this observation of a decrease in diarrhoea rates was consistent with the results found in household studies of SWS use and hand washing Clinic visits for diarrhoea peaked during the January through March period in 2002 at 130 and in 2003 at 71, but in 2004, after project implementation, only 13 diarrhoea episodes were recorded.	Determine other factors that might have contributed to the reduced risk of diarrhoea especially among students who were not boarding in the school. Surveys of students' households to determine the transfer of hygiene knowledge and practices from students to parents; to assess the relative contribution of the home environment to the risk of disease in students and other household members needed to be done. The approach to improving water quality in schools and hand hygiene among students is promising and deserves further study in the public sector.
Rufus, Chris Etenyi Eshuchi (2013)	Promoting Hand washing with soap behaviour in Kenyan schools: Learning from Puppetry Trials among Primary School Children in Kenya. The conditions needed to be in place if hand washing with soap (HWWWS) initiatives are to be successful in primary schools in Kenya.	A case study of an HWWWS in three schools was comprehensively done by ethnographic research Interviews, observations, focused group discussions, Puppetry Teams Selection and Training. Ethnographic interviews, ethnographic participant observation, photography were used too	Motivators/promoters of hand washing among the school going children	After a series of puppet shows in three Nairobi schools, the children's hand washing behaviour was observed at break times and their hand washing with soap behaviour changes after puppet shows recorded for analysis.	Hand washing rates during the trials improved to about 50 percent The Facilitators, Motivators and Barriers to HWWWS included: Teachers, recognition in schools and community, Convenient location of facilities, Condition and type of facilities, number of HW facilities, availability and amount of water at site, role models in the society and change agents. The study indicated that puppetry was effective as a means of promoting health messages in schools, because children prefer approaches that are interactive, provoking, fun and innovative. The research showed that for initiatives to succeed and be sustainable, communities and leaders should be willing to impress change. Implementers need to involve all stakeholders in planning processes, invest in strengthening capacity of teachers and develop structures to support implementation. Involvement of school management and the community, less reliance on donors and the government in favour of increased resolution and contribution from the communities, partnership backed by appropriate policies may promote sustainability of HWWWS initiatives.	Evaluate how much of the information they learn in school is actually shared at home, how and when, and if not, what are the obstacles? Does the type of soap provided to pupils for hand washing motivate them to wash hands? Find out the role of home culture and other community practices in motivating children to wash hands with soap What channels or sources of information are ideal for disseminating hand washing messages in schools? A study to analyse quality of tippy taps and leaky tins which are on rise in schools. Further study of puppetry as a complementary medium to promoting hygiene messages.

Author date and country	Area studied	Design, sample size	Dependent variable(s)	Analysis	Key findings	Gaps
Blanton, Elizabeth et. Al. (2010)	Evaluation of the Role of School Children in the Promotion of Point-of-Use Water Treatment and Hand washing in Schools and Households—Nyanza province, Western Kenya, 2007	A baseline water handling survey of pupils' parents from 17 schools was done and tested stored water for chlorine. We trained teachers and students about hygiene, installed water stations, and distributed instructional comic books to students. Conducted follow-up surveys and chlorine testing at 3 and 13 months. We gave schools flocculent-disinfectant powder and hypochlorite solution for water treatment	Use of water treatment and hand washing behaviour among schools and households	All data were entered into MS Access databases and analyzed in SAS Enterprise Guide 4.0. Frequencies were reported from both the student and household interviews. Changes in knowledge and practices were examined in a matched analysis using McNemar's test.	Parental awareness of the flocculent-disinfectant increased from 49.91%, awareness of hypochlorite remained high (93–92%), and household use of flocculent-disinfectant (1–7%), and hypochlorite (6–13%) increased. At baseline, 22percent of students could demonstrate proper hand washing. This percentage increased to 53percent at first follow-up (P < 0.0001) and was 47percent (P = 0.3046) at second follow-up. The percent of students reported hand washing practices increased (Washed hands after the toilet; 70.89%) (Before cooking; 6.23%). Similarly, to the caregivers' hand washing behaviour increased by 10percent who washed hands after the toilet from 67%-77%; after eating 57-73% (Before cooking; 34.44%). Pupil absentee rates decreased after implementation by 26%. The absentee rate for the second school term in 2007 was 26percent lower than the rates during the corresponding terms in 2005 and 2006. At the second follow-up evaluation in 2008, a 24percent decrease in absentee rates during the second school term was maintained. This school-based programme resulted in pupil-to-parent knowledge transfer and significant increases in household water treatment practices that were sustained over 1 year.	Sustainability over a longer period remains to be documented. Further research into factors associated with sustained impact is warranted
Patel, Minal K. et al 2012	Impact of a Hygiene Curriculum and the Installation of Simple Hand washing and Drinking Water Stations in Rural Kenyan Primary Schools on Student Health and Hygiene Practices, Nyando Division	A randomized quasi experiment was used as design Baseline survey was done (students in grades 4–8 interviewed about their water treatment knowledge and behaviours and asked to demonstrate their hand washing technique). Implementation: intervention group. Training of teachers about hand washing and water treatment. Provision of instructional materials for their students. Active surveillance that is biweekly home visits. Follow up surveys	Student Health and Hygiene Practices	All data were collected using personal digital assistant devices. Data were analyzed with SAS 9.2 (SAS Institute Inc., Cary, NC). Frequencies, cross tabulations were tabulated	The median percentages of students (aggregated by schools) in intervention and comparison schools that reported washing their hands at school was higher in the intervention group at baseline (76percent versus 56%, estimated difference in medians (EDM) 23%, 90percent CI 3–39%), significantly higher in intervention than comparison schools at first follow-up (100percent versus 40%, EDM 60%, 90percent CI 53–73%), and 100percent in both groups at second follow-up (EDM 0%, 90percent CI 0–0%). The median percentage of students in intervention schools that could demonstrate proper hand washing technique was similar to comparison schools at baseline (31 percent versus 32%, EDM 4%, 90percent CI –11–19%), was significantly higher in intervention schools at first follow-up (46percent versus 14%, EDM 32%, 90percent CI 10–46%). Although the Proper hand washing among caregivers showed little differences between the intervention and comparison groups at any of the cross-sectional studies	Although we observed gains in knowledge among students about water treatment and increased access to safe drinking water in schools, these changes did not translate to reduced diarrhoea rates. Thus, there is need to conduct studies to establish the other associated factors with diarrhoea.

Author date and country	Area studied	Design, sample size	Dependent variable(s)	Analysis	Key findings	Gaps
Saboori, Shadi et al. 2013	Impact of Regular Soap Provision to Primary Schools on Hand Washing and E. coli Hand Contamination among Pupils in Nyanza Province, Kenya.	Between 2007 and 2009, a cluster-randomized trial assessing the health and educational impacts of various school-based WASH interventions was carried out by the SWASH+ programme in 185 schools in three geographic strata in Nyanza Province, Kenya. Multiple rounds of structured observations of hand washing events after latrine use were conducted in 60 Kenyan schools, and hand rinse samples were collected one time in a subset of schools. Baseline and follow up surveys were conducted.	Hand Washing and E. coli Hand Contamination among Pupils.	Frequencies, linear regression models were conducted using SAS 9.2 (Cary, NC). Laboratory analysis was done for testing E. coli Hand Contamination among Pupils	The proportion of pupils observed practicing hand washing with soap (HWWs) events was significantly higher in schools that received a soap provision intervention (32%) and schools that received soap and latrine cleaning materials (38%) compared with controls (3%). Girls and boys had similar hand washing rates. There were non-significant reductions in E. coli contamination among intervention school pupils compared with controls. The provision of soap increased the overall proportion of pupils observed practicing hand washing events after latrine use with only water or soap and water in both intervention arms. Therefore, supplying soap to the schools with a limited degree of hand washing promotion improved hand washing practice overall. Reasons for lack of hand washing water and soap provision include water accessibility difficulties, prevailing social norms among teachers themselves, and lack of institutional incentives and accountability. Within the schools that provided hand washing water and soap, not all pupils observed using the latrine practiced HWWs. Potential reasons may include insufficient or ineffective hand washing promotion or prevailing social norms in the household.	Future research should focus on the interface of school hand washing improvements with wider prevailing social norms around hand washing behaviour also needs additional examination. Researchers and programme implementers working in resource-challenged settings will need to get beyond direct delivery of hand washing services and should use learning to address relevant concerns in the enabling environment.
C. E. O'REILLY et al 2007	The impact of a school-based safe water and hygiene Programme on knowledge and practices of students and their parents: Nyanza Province, western Kenya, 2006	Survey design was used in 9 schools. A random sample of nine out of 45 project schools (three from each of three districts) was selected	knowledge and practices of students and their parents	Data from the baseline and final evaluation were entered into an Microsoft Access database. Statistical analysis was performed using SAS software version 9.1 (SAS Institute, Cary, NC, USA). Frequencies and Univariate analysis was carried out using the Rao-Scott χ^2 test of association using the F distribution as a reference.	Students' knowledge of correct water treatment procedure improved from 21-65 percent knowing when to wash their hands. At final evaluation, 14percent of parents reported currently treating their water, compared with 6percent at baseline (P<0.01). From 2004 to 2005, school absenteeism in the September-November term decreased in nine project schools by 35percent and increased in nine neighbouring comparison schools by 5%. At baseline, 73percent of parents/guardians reported washing their hands before eating, 45percent after defecating, and 29percent before preparing food but at final evaluation 90percent of parents/guardians reported washing their hands before eating, 68percent after defecating, and 53percent before preparing food.	Future studies should include observations of hand washing at baseline and follow-up. Need to determine whether school characteristics and activities are predictors of changes in students' and parents' knowledge and practices. Focus more on beliefs and social norms and cover more communities

Author date and country	Area studied	Design, sample size	Dependent variable(s)	Analysis	Key findings	Gaps
MOPH&a and UNICEF	Are your hands clean enough? Study Findings on Hand washing With Soap Behaviour in Kenya (Carried out in Nyeri, Nairobi, Kisumu, Bungoma, Mombasa).	Survey design was applied. Both quantitative and qualitative data collection methods were used. Structured observations and school and household interviews, Behavioural trials, Focus group discussions and in-depth interviews. (A sample of 80% in the community was sampled)	Hand washing With Soap Behaviour among primary and secondary caregivers and school going children	Qualitative data were analyzed using interpretative analysis through inductive and deductive logic. In addition, quantitative data were analyzed through SPSS computer analysis package using descriptive statistics.	<p>14 percent of primary caregivers consistently washed hands at any risky juncture but only 5 percent consistently used soap at all the risky junctures.</p> <p>Hand washing culture is relatively higher in Mombasa and Nyeri (13 percent and 12 percent consistent hand washing with soap) while other regions recorded 1-2 percent, except Machakos which recorded 4 percent.</p> <p>Unlike other regions, Nyeri had good access to water round the year. Mombasa is predominantly Muslim; hence religion may be a strong driver of hand washing.</p> <p>Based on the events observed, caregivers are more likely to wash hands with soap when in contact with stool than when handling food. After suspected self defecation, 31 percent washed hands with soap. After other contact with stool, 37 percent washed hands with soap. After cleaning a child's bottom, 36 percent washed hands with soap. Before serving or handling food, 15 percent washed hands with soap. Before feeding or serving under five-child who was selected under the study, 11 percent washed hands with soap.</p> <p>Primary caregivers recorded hand washing with or without soap at 92 percent, and hand washing with soap at 60 percent. Secondary caregivers recorded any hand washing with or without soap at 65 percent and 16 percent with soap. The importance of hand washing was emphasized by 94 percent of caregivers who believe that their family can be healthier if they washed their hands with soap.</p> <p>Hand washing with soap in school is almost nonexistent—only 1 percent washed hands with soap and 28 percent washed hands in some way. Children are more likely to wash hands at home compared to school. Twenty-three percent of 515 defecation events observed at the community level washed their hands with soap.</p> <p>Out of the 635 events observed among school children at the household level before they ate, 56 percent washed hands but only 18 percent used soap.</p> <p>Hand washing with soap takes low priority at the household level. It is ranked fourth after bathing, laundry and washing dishes are higher priority. Bar soaps have high usage in Kenyan households because of their multiple applications. Overall, 97 percent of the households have accessibility to soap.</p>	

Author date and country	Area studied	Design, sample size	Dependent variable(s)	Analysis	Key findings	Gaps
Aunger <i>et al.</i> , 2009	Three kinds of psychological determinants of hand washing behaviour in Kenya	A mixed methods approach with observation of actual behaviour. Two location in on district in each of the seven provinces except North Eastern	Hand washing at critical moments, after stool contact and before food preparation/ eating/feeding	Descriptive statistics, factor analysis	Hand washing with soap was found to be more widely practised than in similar countries and in Sub Saharan Africa. The study found habit, need to be clean, attractiveness and economic concerns to be the key determinants of hand washing in Kenya.	Two locations are not really representative of a province, And North Eastern province was excluded from the study The data is now dated
Curtis <i>et al.</i> , 2009	Planned, motivated and habitual hygiene behaviour: an eleven country review	This study included Kenya A mixed methods approach with observation of actual behaviour. Two location in on district in each of the seven provinces except North Eastern	Hand washing at critical moments, after stool contact and before food preparation/ eating/feeding	Qualitative data analysed using NUDIST and quantitative data using descriptive statistics	Found that explanations gave for hand washing were habit, motivation and plans for hand washing. Among the key motivators were: disgust, nurture, status, affiliation, attraction, comfort and fear of contract disease. The study found that mothers planned to introduce hand washing to their children as part of the plan to teach them good manners, to socialize them as well accepted members of the community	Two locations are not really representative of a province, And North Eastern province was excluded from the study The data is now dated. The analysis was purely qualitative.

2.2 Sleeping under Insecticide Treated Nets (ITNs)

2.2.1 Overview

Malaria is a leading cause of morbidity and mortality in the World. Some 3.2 billion people worldwide still live in areas at risk of malaria and according to the 2015 World Malaria Report, there were at least 214 million new cases of the disease resulting in nearly 438,000 deaths, in the year 2015. The geographical distribution of malaria and its impacts on public health systems around the world, especially in low income tropical countries make it the most significant human infection besides the human immunodeficiency virus (HIV), diarrhoeal diseases, pulmonary tuberculosis (TB) and other respiratory tract infections. Moreover, the disease has an inexplicably complex



Jenipha Atieno holds 9 month old baby Shadrack in Jina Village, western Kenya

relationship with poverty in most endemic communities in Africa. While poverty sustains conditions where malaria thrives, malaria also impedes economic growth and keeps communities in poverty. Today, nearly 90 percent of all malaria cases and about 75 percent of all deaths occur in sub-Saharan Africa, where other than the high morbidity and mortality, economic burden of the disease is also enormous –including up to 1.3 percent reduction on economic growth, (Okumu, 2012).

The use of insecticide treated nets is mainly advocated for vulnerable groups namely; pregnant women and children under-5 in zones with high risk of malaria. Pregnancy leads to depression of the immune system, and thus pregnant women, especially those in their first pregnancy, have a higher risk of malaria. Moreover, these infections may be asymptomatic, may lead to malaria-induced anaemia, and may interfere with the mother-foetus exchange, resulting in low birth weight. During pregnancy, women can reduce their risk of adverse malaria effects by sleeping under ITNs. Young children under-5 are especially vulnerable to malaria. For about six months following birth, antibodies acquired from the mother during pregnancy protect children born in areas of endemic malaria. This immunity is gradually lost, and children start to develop their own immunity to malaria. The pace at which immunity is developed depends on their exposure to malaria infection, and, in highly malaria endemic areas, children are thought to have attained a high level of immunity by their fifth birthday. Such children may experience episodes of malaria illness but usually do not suffer from severe, life-threatening malaria. Immunity in areas of low malaria transmission is acquired more slowly, and malaria illness affects all age groups of the population.

According to the World Health Organisation (WHO, 2009), some 50 million pregnant women are exposed to malaria each year, with malaria pregnancy contributing to nearly 20 percent of low birth weight babies in endemic areas. Malaria in pregnancy can also lead to stillbirth and maternal deaths. In Africa, families spend approximately 20 percent of their income on malaria treatment. Also, at least 24 million pregnancies are threatened by malaria each year and less than 5 percent of pregnant women receive effective interventions. Malaria in Africa is estimated to cause 15 percent of maternal anaemia and 35 percent of preventable low birth weight (NetMark, 2008). To address these and other challenges, WHO has developed a *Global Technical Strategy for Malaria 2016-2030*. The strategy sets ambitious but achievable targets for 2030, including a reduction in global malaria incidence and mortality to at least 90 percent. Vector control is one of the key interventions recommended by the strategy. The main objective of this intervention is to have at least 80 percent of people living in malaria risk areas using appropriate malaria prevention interventions.

Malaria is recognised as a health and socio-economic burden by the Government of Kenya, thus malaria control is a priority investment and reducing malaria morbidity and mortality is one of the country's major public health objectives (KMIS, 2010). Close to 70 percent (30 million) of Kenya's population is at risk of infection. It affects people of all age groups. Children under-5 years of age and pregnant women living in malaria endemic regions are the most vulnerable. Approximately 6,000 pregnant women suffer from severe anaemia and about 4,000 children are delivered with low birth weight annually (DOMC, 2009). Malaria is responsible for 30-50 percent outpatient treatments, 19 percent admissions and accounts for 8-10 million treatments per year in Kenya. Studies have estimated that 26,000 children in the country die annually, a loss of 72 children per day from malaria related causes. In fact children suffer 2-5 attacks of malaria whereas adults suffer 10-20 days of disability annually. This ultimately reduces the household incomes by 9-13 percent and the production losses amount to 2-6 percent of the GDP annually (MOH, 2006).

Kenya has four malaria epidemiological zones (KMIS, 2010). These are the highland epidemic prone areas located in the Rift Valley where malaria transmission is seasonal; the endemic areas around Lake Victoria in western Kenya and in the coastal regions; seasonal malaria transmission areas which comprises arid and semi-arid areas of northern and south-eastern parts of the country that experience short periods of intense malaria transmission during the rainy seasons; and low risk malaria areas which are mainly located in the central highlands of Kenya including Nairobi. The primary malaria vector control methods used in Kenya are Insecticide Treated Nets (ITN), Long-Lasting Insecticidal Nets (LLIN), and Indoor Residual Spraying (IRS) against mosquitoes. Because of the variations in malaria risk across the country, these methods are used in different epidemiological zones. Although ITNs are being made available to the vulnerable groups (pregnant women and children under-5) in the malaria endemic areas, and advocacy efforts are on the increase, there is still a problem in curbing malaria in Kenya.

Over the years, the definition of ITN has been changing. According to the World Health Organisation (WHO), ITN is defined as a mosquito net that repels, disables and kills mosquitoes which come into contact with the insecticide on the netting material. An ITN can either be a conventionally treated net which should be retreated after three washes or at least once a year by use of pyrethroid insecticides or a LLIN which can stay without being retreated for at least 20 washes or three years. In Kenya, an ITN refers to a factory treated mosquito net made with netting material that has insecticide incorporated within. The net must retain its effective biological activity without retreatment within six months (ITN) or three to five years for an LLIN (KMIS 2010 and KDHS 2014).

According to the 2015 World Malaria Report, the proportion of the population sleeping under an ITN has increased dramatically in Sub-Saharan Africa since 2000. Most malaria endemic countries have adopted policies promoting universal access to ITNs. ITNs have been most widely deployed in Africa which has the highest proportion of the population at risk of malaria and has malaria vectors most amenable to control with ITNs. Based on data from household surveys and reports from manufacturers and National Malaria Control Programmes (NMCPs), the proportion of the population sleeping under an ITN has increased markedly in Sub-Saharan Africa, from less than 2 percent in 2000 to an estimated 46 percent in 2014 and 55 percent in 2015. The proportion of children aged under 5 years in Sub-Saharan Africa sleeping under an ITN increased to an estimated 68 percent in 2015. Although these results represent a substantial increase since 2000, they fall short of universal (100%) coverage of this preventive measure. The continent-wide estimates of those sleeping under an ITN obscure variations in progress among and within countries. For example, in 2015, the median proportion of the population sleeping under an ITN was 74 percent among the five countries with the highest estimates and 20 percent among the five countries with the lowest estimates.

2.2.2 Policies, declarations and programmes

Several conventions, policies, declarations and programmes on malaria control and prevention have been developed and implemented over the years. Kenya has subscribed to the aspirations of these guiding instruments. These have guided the implementation of activities to combat malaria in the country. Below is a summary of the said conventions, policies, declarations and programmes:

- **Roll Back Malaria programme;**The Roll Back Malaria Partnership was launched in 1998 by the World Health Organisation, the United Nations Children’s Fund, the United Nations Development Programme and the World Bank to galvanize global support, mobilize resources and build partnerships to reduce the malaria burden. The partnership is now focusing its efforts at country and community levels to make cost-effective interventions more readily available to those at risk. Its target was to eliminate malaria by 2015. The Programme worked alongside the Division of Malaria Control in Kenya by providing financial support and programme guidance for preventive and curative services.
- **The United Nations Millennium Declaration of 2000;** the Millennium Summit in September 2000, the largest gathering of world leaders in history adopted the UN Millennium Declaration, committing their nations to a new global partnership, where Millennium Development Goals were conceived in recognition of a global agenda to address the inequity of living conditions. Goal 6 of the eight MDGs, specifically target 6C sought to “halted by 2015 and begin to reverse the incidence of malaria and other major diseases”, and indicators 6.6–6.8 were selected to track progress in reducing morbidity and mortality and the implementation of malaria interventions.
- **The Abuja Declaration and Plan of Action 2000;** Heads of State and Government of 53 countries in Africa met on 25th April 2000 in Abuja, Nigeria, as a follow-up to the Harare Declaration of 2nd–4th June 1997 on Malaria Prevention and Control in the context of African Economic Recovery and Development, and the subsequent African Initiative for Malaria Control in the 21st century which in 1998 became the Roll Back Malaria (RBM) in Africa initiative. The main call of action was to have the malaria mortality for Africa’s people reduced by 60 percent by 2010 through implementing the strategies and actions for RBM agreed at the summit and initiate actions at country level to provide resources to facilitate realization of RBM objectives.
- **World Health Assembly Resolution;** In 2005, the World Health Assembly set a target to reduce malaria cases and deaths by 75 percent by 2015. No baseline year was set, but it is assumed to be 2000 (as for other targets) and that progress would be tracked using incidence and death rates as for MDG 6. Since then there have been several programmes that have been put in place in Kenya to enhance access of ITNs by households with the most pronounced one being the 2006 free mass distribution campaign.
- Several programmes have been put in place like the **President’s Malaria Initiative (PMI)** launched in June 2005 by President George W. Bush. **The President’s Malaria Initiative (PMI)** represented a major 5-year plan. PMI’s goal was to reduce malaria-related mortality by 50 percent across 15 high-burden countries in sub-Saharan Africa including Kenya, through a rapid scale-up of four proven and highly effective malaria prevention and treatment measures: Insecticide Treated Nets; Indoor Residual Spray; accurate diagnosis, and prompt treatment with ACTs; and IPTp (intermittent preventive treatment, ACT-artemisinin based combination).
- **The Global Malaria Action Plan of 2008;** the RBM Partnership updated the objectives and targets, it shared the World Health Assembly’s objective of reducing malaria cases by 75 percent

by 2015, but had a new and more ambitious objective to reduce malaria deaths to near zero by 2015. A further RBM objective was to eliminate malaria by the end of 2015.

- **Kenya National Malaria Strategy (NMS)** covering the period 2009–2017 was developed in line with the Government’s first Medium-Term Plan of Kenya Vision 2030 and the Millennium Development Goals, as well as Roll Back Malaria partnership goals and targets for malaria control. The NMS is based on, and carries forward, an inclusive partnership between the Ministry of Health, Government line ministries, and development and implementing partners in malaria control. Its main mission is to promote and participate in the provision of integrated and high quality promotive, preventive, curative and rehabilitative health care services to all Kenyans. It provides a guideline on prevention and curative measures such as use of ITNs by communities at-risk (in endemic areas) and it targets to have 80 percent of people living in endemic and epidemic prone areas to use a form of malaria prevention.
- **UN Sustainable Development Summit of 2015**; The UN system plays an essential role in implementing the new sustainable development agenda, it has already played an important role in helping to achieve the Millennium Development Goal (MDG) agenda on many levels, e.g. by contributing directly with its operational activities, building capacity, gathering and assessing data, and by advocating for the agenda. Universal sustainable development agendas were set up and it included 17 agendas. Agenda number three seeks to ensure healthy lives and promoting wellbeing for all by, among other things, reducing incidences of malaria through increased use of ITNs.

The above frameworks for the implementation of malaria activities have guided Kenya’s actions in contributing to the reduction of new malaria cases and deaths.

2.2.3 Knowledge, Attitude, Beliefs and Practices on the use of ITNs

Available statistics from various sources show that though ownership of ITNs has improved, the utilization is not as high as would be expected (KMIS 2010, KDHS 2014). If this situation persists, it will not be possible for the country to achieve the national and international targets for ITN use. It is therefore necessary to identify the factors that hinder utilization so that appropriate policy and programme solutions are found. This section therefore presents information from the literature review of both quantitative and qualitative studies that have looked at Knowledge, Attitude, Beliefs and Practices (KABP) related to the use of ITNs. The aim is to identify KABPs that need to be addressed so as to improve the use of ITNs and reduce incidences of malaria.

Knowledge

A study in Kilifi County by Kimwana (2013) noted that knowledge on malaria illness (transmission, symptoms, complications and prevention) and utilization of ITNs among pregnant women in Kilifi County was high with majority (86.9%) of pregnant women having adequate level of knowledge. Adequate knowledge was also high among the young age groups, married, Christians, low parity, unsalaried and the educated pregnant women.

Another study in Kwale County showed that over half of the pregnant women in Msambweni district were knowledgeable on malaria signs and symptoms. This study found that there was a significant association between knowledge on signs and symptoms of malaria and malaria incidence. About 88.6 percent of these women had knowledge of use of ITNs. Reasons given for preference of ITN as a preventive measure were said to be ‘availability’ (39.7%), ‘cost’ (20.7%), ‘effectiveness’ (20.2%), ‘absence of side effects’ (16.6%) and ‘ignorance’ (2.8%).

Other key factors which explain the use of ITNs for malaria prevention relate to perceptions, attitude and retention level of ITNs. Documented evidence show that knowledge and misconception on causes and prevention of malaria, awareness on malaria prevention, and the retention period of ITNs have a significant effect on use of ITNs (Arogundade *et al.*, 2011, Gobena, Berhane, and Worku, 2012).

In areas where ownership of ITNs has been enhanced, factors such as region of residence, knowledge on malaria transmission, presence of fever in a child two weeks prior to the survey, age, gender and occupational status of the head of household and the household size were identified as significant determinants of use of ITNs (Astatkie *et al.*, 2009, Biadgilign *et al.*, 2012). Bennett *et al.*, (2012) by use of logistic regression to assess household possession and use of insecticide treated mosquito nets in Sierra Leone six months after a national mass-distribution campaign found that those households' whose heads had malaria knowledge on transmission and had at least one ITN hanging were more likely to use ITN for malaria prevention.

A study conducted in Nyamira district reported, there was very low usage of mosquito nets (33.8%) with the proportion of children under-5 using bed nets and ITNs being 33.3 percent and 23.8 percent respectively. The possibility of a mother having an insecticide treated net was significantly related with the level of education of the mother ($p=0.003$), occupation ($p=0.001$) and knowledge ($p=0.000$). Among the reasons given by mothers regarding non usage of insecticide treated nets included lack of money, they were expensive, ignorance (lack of knowledge) and carelessness, (Osero, 2011).

MPHS & DOMC (2010) found in an assessment, that knowledge of malaria illness (transmission, symptoms, and complications) and use of bed-nets as a prevention measure has been consistently high in different parts of the country. For instance, majority (86.9%) of pregnant women attending antenatal clinics in Kilifi had adequate level of knowledge around malaria transmission and prevention. They also found that 96 percent of respondents in a study conducted in Rusinga Island knew that young children were at highest risk from severe malaria; 76 percent also knew pregnant women were also at high risk. In the same study, 95 percent of respondents correctly identified common symptoms of malaria onset. A similar proportion knew what caused malaria (mosquito bites). However, knowledge of malaria transmission and acquisition is commonly not matched with corresponding protective behaviour even in high malaria risk zones. For example, although in several studies bed-nets were often mentioned, use was generally found to be modest. The Kenya Demographic and Health Survey 2008/2009 indicates that while 61 percent of households in the nationwide survey had at least one net, only 47 percent of children and 49 percent of pregnant women who slept under a bed-net used an ITN. Also it was found that though 58 percent of respondents in the Rusinga Island study used bed-nets, only 37 percent had slept under one the night before the survey, (MPOH&DOMC, 2010).

Arogundade *et al.*, (2011), while investigating the relationship between care-givers misconceptions and non-use of ITNs by under-5 Nigerian children using a logistic regression model and Gobena *et al.*, in a study seeking to understand the cause of low use of LLINs among household members for protection against mosquito bite in Kersa, Eastern Ethiopia, reported a positive relationship between those with knowledge on causes of malaria and use of ITNs. In addition, use of ITNs was found to be low among people with little knowledge on malaria prevention methods.

From the literature that was reviewed, there are very few qualitative studies that have looked at the issue of knowledge in relation to ITN use in Kenya. One such study which was conducted among the poor in Kwale, Bondo, Gucha, and Makueni districts showed that most of the poor were aware that pregnant women and children below the age of 5 are vulnerable to malaria and therefore need to use ITNs (Chuma *et al.*, 2010).

Attitude

A quantitative study conducted in Bungoma on use of ITN among pregnant women showed that there was no association between good attitude and any of the socio-demographic variables (age, parity, marital status, religion, occupation and education). Although adequate level of knowledge on malaria and protective role of ITN was high among the pregnant women, there was no association between knowledge with practice and attitude. According to the study, practice and attitude towards use of ITNs were influenced by the cultural beliefs and traditional practices (Osero, 2011).

In a qualitative study conducted among the Mijikenda in Kilifi district, it was found that community members generally considered malaria to be a disease whose spread could be curbed by the use of ITNs. The community were also of the opinion that the ITNs should mainly be used during the rainy season because of the high number of mosquitoes. One negative attitude that was noted by the study was the feeling by community members that the use of ITNs was meant to control the family size. Another negative attitude was the feeling by some community members that the use of ITNs is unnecessary because their parents never used them (Njoroge *et al.*, 2009)

Chuma *et al.*, (2010) in a qualitative study conducted in Kwale, Bondo, Gucha, and Makueni it was found that some of the community members feared that the free ITNs would destroy the future generations. Other attitudes expressed by the communities towards ITN use were that white nets get dirty quickly, round nets are easy to hang but uncomfortable to use during hot seasons, and rectangular nets are cumbersome to hang though they are spacious with better air circulation. Women who participated in the study felt that it is important to involve men in health education since they are the ones who control resources at the household level. It was noted that men are not comfortable using the ITNs.

Beliefs

From the studies that were reviewed, only one was found to have brought out the issue of beliefs around the use of ITNs. This was a qualitative study conducted in Kilifi County on the use of ITNs by pregnant women in Kilifi district. The study noted that the Miji Kenda community believe that the use of white rectangular ITNs would attract bad dreams, including the ITNs talking to the users, and was reminiscent to one's funeral. This was attributed to the fact that coffins are rectangular in shape and white sheets are used to cover coffins during funerals. This therefore hampers the use of white rectangular ITNs. Non-white and non-rectangular nets are therefore preferred (Njoroge *et al.*, 2009). No quantitative study brought out the issue of beliefs in relation to ITN use.

Practice on the use of ITNs

Ownership and use of ITNs

In Kenya, according to the 2014 Demographic Health Survey (KDHS 2014), 65 percent of households own at least one mosquito net of any type, 59 percent own at least one ITN, and 57 percent own at least one LLIN. Thirty-four percent of households have reached universal coverage; that is, these households have at least one ITN for every two persons who stayed in the household the night before the survey. Household ownership of at least one ITN improved marginally from 56 percent in 2009 to 59 percent in 2014.

According to the 2014 KDHS, 54 percent of children under-5 years of age slept under an ITN the night before the survey. According to Kenya Malaria Indicator Survey (KMIS, 2007), only 39 percent of children under-5 slept under an ITN. The data showed that the younger the child, the more likely they are to have

slept under an ITN. In all epidemiological zone, however, ITN use by children under-5 was below the 60 percent 2006 Abuja target. In 2010, (KMIS, 2010), reported that 42 percent of children under-5 in households with an ITN slept under an ITN the night before the survey. Use of any type of mosquito net is highest in the coast endemic zone (65%), followed by the lake endemic zone (56%) and the highland epidemic zone (51%). Use of ITNs increased since 2007 in all epidemiological zones.

Table 2.2 shows the trends in ownership and use of ITNs in Kenya from 2007 to 2014. According to the 2014 KDHS, 51 percent of pregnant women age 15-49 slept under an ITN the night before the survey. According to the 2007 KMIS, 40 percent of pregnant women slept under an ITN on the night preceding the survey, while in 2010, the figure was 41 percent thereby reflecting a minimal change (KMIS, 2010). Among households that own at least one ITN, the proportion of pregnant women who slept under an ITN the night before the survey was 72 percent showing that ownership of an ITN is closely linked to use.

TABLE 2.2: Trends in ownership and use of ITNs in Kenya

Survey	HHs with at least 1 ITN	Children U5 Slept under ITN	Pregnant Women Slept Under ITN
KDHS 2003	5.9	4.6	4.4
KMIS 2007	48	39	40
KDHS2009	56	47	49
KMIS 2010	48	42	41
KDHS 2014	59	54	51

Source: KDHS and KMIS

According to 2014 KDHS, although there is almost no urban-rural difference, there are variations in ITN ownership and use by region. The proportion of pregnant women who used an ITN in the malaria prone zones was highest in Nyanza (71%), Western (67%), and Coast (63%) compared to other regions in the country where the proportions were less than 50 percent. Pregnant women with no education and those in the lowest wealth quintile were substantially less likely to have slept under an ITN than their more educated or wealthier counterparts. Not surprisingly, pregnant women in households that own at least one ITN are 1.5 times more likely than pregnant women in the general population to have used an ITN (77% compared with 51%). There are insufficient cases in the 2014 KDHS to evaluate the use of ITNs by pregnant women at the County level.

Children under-5 in urban areas are more likely to sleep under an ITN (59%) than those in rural areas (52%). Overall, sixty nine percent of children in Nyanza and Western regions, are more likely to sleep under an ITN than children in other regions. However, in households that own at least one ITN, the proportion of children who slept under an ITN the night before the survey was higher in Nairobi, Coast, and Central regions (81-86%) when compared to the at-risk areas of Western and Nyanza at 79 and 81 percent respectively. The percentage of children who slept under an ITN the night before the survey increases with increasing wealth. Use of mosquito nets among children under-5 by County shows that the percentage of children who slept under an ITN the night before the survey ranges from 12 percent in Marsabit and Nyandarau to 82 percent in Taita Taveta and Kisumu. As expected, more children sleep under an ITN in the counties in the lakeside, western and coastal endemic zones.

TABLE 2.3: Proportion of children under five years of age sleeping under an ITN in UNICEF counties

County	Percent of Under-5 Using an ITN	County	Percent of Under-5 Using an ITN
Baringo	49%	Kitui	40%
Garissa	48%	Kwale	72%
Homa Bay	56%	Marsabit	12%
Isiolo	58%	Mombasa	62%
Kajiado	43%	Nakuru	31%
Kakamega	63%	Nandi	55%
Kericho	53%	Narok	31%
Kilifi	64%	Nyeri	17%
Turkana	21%	Samburu	17%
Wajir	43%	Siaya	68%
West Pokot	43%	Taita Taveta	82%
Kisumu	82%	Tana River	57%
Transzoia	59%		

Source: KDHS 2014

According to Table 2.3, the proportion of children under age 5 in the GoK/UNICEF target counties who slept under an ITN the night before the survey ranges from a low of 12 and 17 percent in Marsabit to a high of 82 percent in Taita Taveta and Kisumu Counties. As expected, more children sleep under an ITN in the counties in the lakeside and coastal endemic zones, compared to counties of low malaria transmission. This implies counties that are malaria endemic have a higher usage of ITN by children under-5 (Kisumu 82%, Taita Taveta 82%) compared to counties in other epidemiological zones. This practice could be high in the endemic areas because of interventions such as mass distribution of ITNs.

TABLE 2.4: Proportion of vulnerable population sleeping under an ITN in UNICEF counties

Use Of ITN	Kakamega	Turkana
Children Under-5	71%	25%
Pregnant Women	80%	34%

Source: MICS 5 2014

Also, according to Table 2.4, use of nets among children under-5 was high (71%) in Kakamega County compared to Turkana County (25%), while for pregnant women, ITN use was also high (80%) in Kakamega County compared to Turkana County (34%). This also implies that the use of ITNs is higher in regions where malaria is endemic. Also, the high uptake of ITNs in Kakamega could be due to an intensified provision of free ITNs.

TABLE 2.5: Proportion of vulnerable population sleeping under an ITN in UNICEF counties

Use of ITN	Siaya	Kisumu	Homa Bay
Children under-5	83%	84%	82%
Pregnant Women	85%	87%	84%

Source: MICS 4 2011

Table 2.5 shows use of ITN among children under-5 and pregnant women. Generally the practice is very high ranging from 82 percent to 84 percent for ITN use among children under-5, while use of ITN among pregnant women ranges from 84 percent to 87 percent. These counties have among the highest intensity of malaria transmission thus high levels of practice.

TABLE 2.6: Comparison by proportion of use of ITN by children under-5 in MICS&KDHS 2014

Use Of ITN	Kakamega MIC 2014	Kakamega KDHS 2014	Turkana MICS 2014	Turkana KDHS 2014
Under 5	71%	63%	25%	21%
Pregnant Women	80%	****	34%	****

Source: MICS 2014 & KDHS 2014

Table 2.6 shows a comparison of ITN use among children under-5 in Kakamega and Turkana counties using the 2014 MICS and 2014 KDHS data. For both the counties, the KDHS figures for use of ITNs by children under-5 are much lower than the MICS figures despite the fact that both surveys were done in 2014. For Turkana, the KDHS figure is lower than the MICS figure possibly because data collection for the 2014 KDHS was done during the period of low malaria intensity.

Factors associated with use of ITNs

Several studies have been done on ownership and use of ITNs. Most of these studies have shown that use of ITNs is high in the endemic regions of the country with high risk of malaria especially in counties located in Nyanza, Western and Coast. Pregnant women and children under-5 are the most vulnerable population and are at high risk of getting malaria because their immunity is weak.

One of the methods used to increase ownership of ITNs in Kenya is the free distribution of ITN/LLIN to expectant mothers and children under-5 years of age through the antenatal and post-natal clinics and mass campaigns (Republic of Kenya, 2009). Studies show that high coverage levels were achieved in Kenya after the mass distribution campaigns. In an effort to identify and address barriers to access and use of ITNs among the poorest populations in Kenya, Chuma *et al.*, (2010) found that coverage among the under-5s at the national level was at 39 percent. In some regions such as the highlands of Western Kenya, ownership of ITNs was reported at 71 percent according to a study on ITNs ownership, usage and transmission in the highlands of Western Kenya (Atieli *et al.*, 2011).

Epidemic areas of high malaria risk is in Nyanza, Western and Coast –intensity of malaria transmission is high during the long rains. Malaria zones determine who is at high risk of malaria infection and priority is given to the high risk zones when it comes to distribution of ITNs and this could be the reason ownership is high in these regions. According to Atieli *et al.*, (2011), socio-economic factors such as education level of head of household, where the head determines who uses the net –were a significant determinant of ITN

use. Other factors reported to be significant is presence of high numbers of nuisance mosquitoes and low indoor temperatures which were reported to increase use of ITNs.

By using a logistic regression model in Ethiopia it was found that a unit increase in the size of households increased the odds of ownership of a net more than twice. More importantly, the study showed that households which had at least one under-5 child, the odds of owning any net was about 60 percent higher than those with no under-5 children. According to Garcia-Basteiro *et al.*, (2011), he applied a logistic model to identify determinants of bed net use in children under-5 and household bed net ownership in Bioko Island, Equatorial Guinea and found that a child being sick 2 weeks prior to the survey and residing in an urban area had a strong positive association with use of ITNs while education level of the head of household was not strongly associated with use of ITNs.

Similar studies in Kenya show that individual ITN use more than doubled from 43 percent prior to distribution to 92 percent one year later. Within households, the mean percentage of household members reported to have slept under an ITN the previous night increased from 40 percent to 75 percent. The median number of nets per household increased from one to two, one year post-distribution. Likewise, the number of nets per person present within each household also doubled. The spatial distribution of the percentage of household members reporting ITN use the previous night differed between the two periods.

Before mass distribution, use of ITN was low, though apparently slightly elevated in areas closer to water bodies (Nyanza and Coast). One year following distribution, overall use increased, with some areas showing close to 100 percent compliance among household members. These results demonstrate that high levels of ITN coverage can be obtained through mass distribution of free nets, and that use compliance can be rapidly increased and maintained at least one year post-distribution. Inequities in coverage among socio-economic, educational and occupational groups can be erased through comprehensive no-payment provision of ITNs. This implies that the practice is increasing due to free distribution of insecticide treated nets.

Usage of bed nets by young children below 5 years of age was often as high as or higher than that of persons aged 15 years and above. Children between ages of 5-14 years have a significantly lower usage during the dry and rainy seasons. This phenomenon has also been found in studies undertaken in Uganda, Ghana and Gambia, but in contrast with earlier findings from, Kenya, Rwanda, Zimbabwe and Burkina Faso, where the pattern was inverse, with adult ITN use being higher than that for children under-5 years of age. Another contrasting finding was observed in rural south central Somalia, where net use in younger children, older children, and adults was not different. Education level and knowledge about malaria transmission were some of the significant reasons affecting ownership and usage of ITNs. When compared to households with no education, households with at least a member having primary or secondary education level had significant higher ($p < 0.05$) percentage of ITN ownership. When asked about malaria transmission knowledge, those houses with at least a member having primary or secondary level of education had knowledge about malaria and with significant high level ($p < 0.05$) of ITN ownership than those with no knowledge (Atieli *et al.*, 2011).

Cross-sectional surveys of ITN coverage were undertaken in Kenya, coincidentally with the incremental availability of commercial sector nets (2004), the introduction of heavily subsidized nets through clinics (2005), and the introduction of free mass distributed ITNs (2006). The changing prevalence of ITN coverage was examined with special reference to the degree of equity in each delivery approach. ITN coverage was only 7.1 percent in 2004 when the predominant source of nets was the commercial retail sector. By the end of 2005, following the expansion of heavily subsidized clinic distribution system, ITN coverage rose to 23.5 percent. In 2006 a large-scale mass distribution of ITNs was mounted providing nets free of charge to children under-5, resulting in a dramatic increase in ITN coverage to 67.3 percent.

According to Atieli *et al.*, (2011), despite ITN ownership reaching more than 71 percent in Western highlands of Kenya, compliance was low at 56.3 percent. The compliance rate was significantly higher during the rainy season compared with the dry season (62% vs. 49.6%). Both malaria parasite prevalence (11.8% vs. 5.1%) and vector densities (1.0 vs. 0.4 female/house/night) were significantly higher during the rainy season than during the dry season. Other important factors affecting the use of ITNs include: a household education level of at least primary school level, significantly high numbers of nuisance mosquitoes, and low indoor temperatures. Malaria prevalence in the rainy season was about 30 percent lower in ITN users than in non-ITN users, but this percentage was not significantly different during the dry season.

According to Oresanya *et al.*, (2008), in the study on utilization of insecticide treated nets by under-5 children in Nigeria using a logistic regression, found that factors such as religion and presence of a health facility predicted use of ITNs by under-5s. Specifically, having a health facility in the community where a child lived, had a strong impact on the use of ITN the night prior to the survey with odds three times higher than where the facilities were absent. Again, the odds among Christian caregivers for under-5's to sleep under an ITN was three times higher than for Muslim caregivers. It was also reported that for educated caregivers, a unit rise in wealth index increased the odds of utilization of ITNs by 43 percent.

In Ghana for instance, a study on mothers demand for preventive healthcare for children aged under-5 by use of a logistic regression revealed that factors such as low-income among households, age of the child, area of residence, distance to the nearest health facility and distance to nearest food market predict mothers adoption and utilization of ITNs (Nketiah-Amponsah, 2010). It was found that the probability of a child sleeping under a net was inversely related with age. Similar findings were reported by Kenya Malaria Indicator Survey which showed that use of ITNs decreases as the age of child increases (Republic of Kenya, 2009). Although the 2010 Kenya Malaria Indicator Survey highlights the fact that use of ITN is low at 42 percent by the under-5s and use decreases as the age of child increases, it has not identified the intra-household factors that affect use of ITNs.

Approximately 1.5 million women become pregnant each year in Kenya, and up to 70 percent live in areas of moderate to intense transmission of malaria. The disease contributes about 2-15 percent of severe anaemia and 8-14 percent of low birth weight in Kenya, whereas studies in malaria endemic areas estimated that 19 percent of low birth weight and 6 percent of neonatal deaths are due to malaria (DOMC, 2009). Kenya's ITN coverage after the 2006 mass campaign indicated that 52 percent of children under-5 years and 58 percent of pregnant women had ITNs. However, findings by Malaria Indicator Survey (MIS) show that there is a gap between ownership and utilization of ITNs (DOMC, 2009).

A study conducted in Bungoma on use of ITN among pregnant women showed that 60.5 percent of the respondents owned nets. There was a significant association between net ownership and malaria infection ($\chi^2=20.62$; $p < 0.05$). The study recorded 73.2 percent of those who owned nets testing negative for malaria parasitemia while 26.8 percent were positive for malaria parasitaemia whereas 31.2 percent of respondents who did not own nets tested positive for malaria parasitaemia. Respondents who owned nets were less likely to get malaria infection (Makokha, 2014). There was significant association between level of education and adequate knowledge ($p=0.010$). Good attitude on ITN use was low. The majority of pregnant women attending ANC owned an ITN (75.4%). ITN usage was high (70.5%). Good practice on use of ITN was high among the young age groups, married, Christians, low parity, unsalaried and the educated pregnant women. There was significant association between religion and good practice ($p=0.050$).

A study conducted in Nyamira district reported that there was very low usage of mosquito nets (33.8%) with the proportion of under 5 using bed nets and insecticide treated nets being 33.3 percent and 23.8 percent respectively. The possibility of a mother having an ITN was significantly related with the level of education of the mother ($p=0.003$), occupation ($p=0.001$) and knowledge ($p=0.000$). (Osero, 2011).

According to Mutemi (2013), of the 368 pregnant women in the study, the population whose malaria preventive measures had no side effects, 258 (70.1%) used ITNs. Among 46 pregnant women whose preventive measures had side effects 26 (56.5%) used ITNs and 20 (43.5%) were not using ITNs. Among 12 pregnant women who did not know if their preventive measures had side effects 2 (16.7%) used ITNs. This shows that the use of ITNs is the preferred malaria prevention method.

Findings from a comparative qualitative study conducted in Ghana, Kenya (Siaya County), and Malawi showed that one of the reasons why ITNs are not used by some pregnant mothers is because they are not provided during ANC visits. The study also found that communities had competing uses for ITNs such as gardening, fishing, curtains, bed covers, and decoration. It was noted in the study that in most homes with ITNs, young children are given priority when it comes to sleeping under the nets. Sleeping arrangements, climatic conditions and prioritizing infants led to inconsistent ITN use during pregnancy (Pell *et al.*, 2013).

A qualitative study on barriers to ITN use conducted in Kwale, Bondo, Gucha, and Makueni districts in 2010, Chuma *et al.*, identified cost related factors that limit the use of ITNs. These factors include cost of purchase and transport expenses that may have to be incurred in acquiring an ITN. It was also found that access to ITNs is an issue for some households because retailers for the ITNs are mainly located in urban centres. On the other hand, lack of transport and poor infrastructure makes it difficult for health workers to distribute ITNs to households in remote locations. This study also established that community members did not always use the ITNs provided through campaigns or through public health services for the intended purposes.

Another qualitative study by Harrysone *et al.*, (2011) conducted in Iguhu, Kakamega district and Emutete, Emuhaya district indicated that quite a number of households use the ITNs seasonally.

2.2.4 Challenges

The literature review of studies on the use of ITNs identified a number of issues which have posed a challenge to the scaling up of ownership and use of ITNs. From the studies it is evident that there are still many new cases of malaria disease and deaths every year, and the country target to increase the use of ITNs in malaria endemic areas to 80 percent of the population is yet to be achieved. Some of the key challenges to the scaling up of ITN use are:

- Incorrect knowledge and misconceptions as reflected in the knowledge, attitudes, beliefs and practices with regard to use of ITNs will continue to hamper the country's achievement of malaria control goals and targets.
- Lack of adequate information on malaria prevention status at both the national and sub-national levels hinders the proper planning and implementation of interventions.
- Knowledge on malaria transmission and prevention methods has not been matched with appropriate behaviour in the use of ITNs. The use of ITNs is much lower than the level of knowledge.
- The use of ITNs is to a good extent seasonal in quite a number of households. This has contributed to the inconsistent use of ITNs thereby creating an avenue for new malaria disease cases and deaths.

Given the impact of malaria on individuals, households, communities and the country, it is imperative that actions be undertaken to overcome the above mentioned challenges.

2.2.5 Opportunities

Despite the challenges faced by Kenya's malaria control programme in scaling up the ownership and use of ITNs, there are several opportunities that exist which can be used to enhance the programme. Among these opportunities are:

- **National Malaria Control Strategy (2009 – 2017):** This strategy provides a framework for the planning, implementation, monitoring, and evaluation of malaria control activities. The aspirations of this strategy are in tandem with international frameworks for the management and elimination of malaria through effective control measures.
- **Free and subsidized distribution of ITNs** is another opportunity to improve the uptake of ITNs. Studies have shown that such distribution of ITNs increases household ownership and use of the same. Free mass distribution of insecticide treated nets that was started in 2006 and facilitated by the President Malaria Initiative, USAID and World Health Organisation and Division of Malaria Control. PMI supports the provision of free nets to those at highest risk from malaria-pregnant women and children under-5, particularly infants –and to those who cannot afford to purchase a mosquito net. It also provides low-cost ITNs where they are needed most and sells subsidized nets to increase demand, availability, and affordability among vulnerable populations. The free and subsidized distribution of ITNs should therefore be encouraged.
- **Mass social marketing of ITN** is an opportunity for the population especially vulnerable population to access nets, this is always carried out by Population Service International (PSI), through mass campaigns on radios, televisions and road shows. The objectives of the communications strategy was to increase demand and consumer willingness to pay for ITNs and retreatment kits by increasing awareness among parents with young children and pregnant women that ITNs are the most effective protection from malaria, increasing knowledge about the importance of treating nets with insecticide and increasing consumer awareness of which household members are most vulnerable to malaria (pregnant women and children under-5 years) so that they receive preferential access to nets.
- **Annual celebration of World Malaria Day** which brings stakeholders and partners working in malaria programmes to come together to discuss progress and celebrate achievements and milestones.
- **Free re-treatment campaign of insecticide treated nets** undertaken by the Division of Malaria Control in Kenya can be used to improve on ITN coverage and use.

The above opportunities provide an avenue for enhancing the country's malaria control programme.

2.2.6 Gaps identified from the literature review

The review of literature on the use of ITNs in Kenya has identified a number of gaps that need to be addressed in order to enhance the availability of information for purposes of policy and programmes on malaria control. Below are the key gaps that were identified from the literature review:

- There are very few quantitative studies on attitudes and beliefs on ITN use. At the same time, very few qualitative studies exist on knowledge, attitude and beliefs on the same subject. Most of the qualitative studies on ITN use have focused on knowledge and practice while the qualitative studies have mainly focused on practice.

- Qualitative studies are mainly small and localized to specific areas. These studies are therefore limited in terms of generalizing the findings to counties and at national level. Policies and programmes at county and national levels cannot therefore be designed accurately using the findings of these studies.
- While quantitative data on ITN use by pregnant mothers exists at national level from both the KDHS and KMIS, this information is not available for all counties. Only about six counties, where the GoK/UNICEF Country Programme is operational, have this information.
- Data from DHS, MICS, and MIS are not easily comparable. For instance figures on ITN use among children under-5 years of age at county level are not the same when you compare the 2014 KDHS and 2014 MICS. Given this scenario it may be difficult to know the true situation.
- Given that ITNs are used seasonally by some households, it is difficult to measure usage because ITN use data from the various surveys is not collected during the same period of the year. This may partly account for variations in the survey findings.
- Information on ITN use only reflects usage during the night before the survey. Information on consistent daily use of ITN is not usually captured.
- The National Malaria Strategy (2009-2017) does not have clear guidelines on malaria prevention measures for pregnant women and children under-five years of age in zones where malaria transmission is low. The strategy mainly focuses on areas where transmission is high.

2.2.7 Recommendations

Based on the key gaps that were identified in connection with ITN use in Kenya, the following actions are recommended:

- Conduct more qualitative and quantitative studies in the area of knowledge, attitude, and beliefs especially at county and national levels. This will help to accurately inform policies and programmes on malaria control at both levels.
- Conduct qualitative studies on ITNs at the national and county levels on a regular basis as is the case with national quantitative surveys. This will help to provide information, on a timely basis, that will help to explain the findings from the quantitative researches.
- An effort needs to be made to find a way of availing county representative data on the use of ITNs by pregnant women in each of the 47 counties.
- There is need to have a consensus on how to measure ITN use in the country. This should be done across the different surveys so that comparable data can be collected. The key issue that requires consensus is the timing of data collection.
- In addition to collecting information on ITN use the night before the survey, there is need to come up with ways of collecting data on daily consistent use of ITNs.

2.2.8 Summary of reviewed studies – Sleeping Under Insecticide Treated Net

No.	Title	Author(s)	Geographic Coverage	Target Group & Sample Size	Key Gaps
	Kenya Demographic and Health Survey (KDHS)	Kenya National Bureau of Statistics (KNBS) and ICF, Kenya, 2014	Kenya (National and County)	Pregnant women n=1,278 Children under 5 n=13,913	<ul style="list-style-type: none"> -missing indicators, e.g. use of ITNs among pregnant women at county level -limited understanding on utilization of ITNs, information on drivers on ITNs use are not asked -cannot establish cause and effect between observed behaviour and psychosocial beliefs on ITNs use -Information on impact level indicators with increase or reduction in ITNs coverage is not available -no information of use of ITNs by care givers most often care givers sleep with under five -cannot study trends of ITNs using this data because KDHS is not collected during peak malaria periods -There is assumption that use of ITNs, among respondents the night previous to survey to be equal to the usage of ITNs during the pregnancy period, information on the periods before and after the survey cannot be captured
2	Multiple Indicator Cluster Survey (MICS)	Kenya National Bureau of Statistics (KNBS) and Unicef 2011	Nyanza Province	Nyanza n=7,500	<ul style="list-style-type: none"> -Information on drivers of net use are not asked this limits understanding of utilization of ITNs -Information to establish cause and effect between observed behaviour and psychosocial beliefs on net use is not available -assumption that use of ITNs, among respondents the night previous to survey to be equal to the usage of ITNs during the pregnancy, information on the periods before and after the survey cannot be captured -Information of care givers use of ITNs is not documented, since in most instances, ITNs by children under five is dependent with use of care givers
3	Multiple Indicator Cluster Survey (MICS)	Kenya National Bureau of Statistics (KNBS) and Unicef, 2015	Turkana & Kakamega Counties	Turkana n= 1,680 Kakamega n=1,500	<ul style="list-style-type: none"> -Information on drivers of net use are not asked this limits understanding of utilization of ITNs -information on association with socio-demographic factors is missing -Information to establish cause and effect between observed behaviour and psychosocial beliefs on net use is not available -assumption that use of ITNs, among respondents the night previous to survey to be equal to the usage of ITNs during the pregnancy, information on the periods before and after the survey cannot be captured -Information of care givers use of ITNs is not documented, since in most instances, ITNs by children under five is dependent with use of care givers
4	Knowledge and Practice on the Use of ITNs by Pregnant Women in Kwale County	Phyllis Muli, 2011 (Unpublished Thesis Kenyatta University)	Kwale County	Pregnant Women n=426	<ul style="list-style-type: none"> -limited information on intra- household factors that influence use of ITNs in pregnant women and children under age 5 -information on barriers is limited -barriers cannot be measured

No.	Title	Author(s)	Geographic Coverage	Target Group & Sample Size	Key Gaps
5	Malaria Indicator Survey	Kenya National Bureau of Statistics, ICF Macro, Division of Malaria Control, 2011	Kenya (National)	Pregnant women and Children under 5 years n=7,200	<ul style="list-style-type: none"> -No information on extent of retention of ITNs -No information on perception and attitude on ITNs use -no information on use of ITNs by care givers -it is possible that the use of non-recommended preventive measures may have been over- or understated. -not possible to establish a cause and effect relationship between observed behaviours such as ITNs use and use of anti-malaria medicines, on one hand, and explanatory variables such as distance to service points, psycho-social beliefs about ITNs use and treatment, on the other -limited information on what else might explain the decline in under-five mortality or other impact Level indicators with increasing intervention Coverage as ITNs. -Information on impact level indicators with increase or reduction in ITNs coverage is not available
6	Insecticide-treated net (ITN) ownership, usage, and malaria transmission in the highlands of western Kenya	Aieli et al. 2011	Iguhu (Kakamega district) and Mutete (Emuhaya district)	n=300 households in each district	<ul style="list-style-type: none"> study did not document levels on gaps between ownership and compliance - knowledge in disparities in net use across age groups, significant population is not indicate -level of change in ownership and actual use Indicators of ITNs is not indicated
7	Knowledge, attitudes and practices regarding malaria and mosquito net use among women seeking antenatal care in Nyamira County	Osero J. et al. 2011	Nyamira County	Pregnant women n=400	<ul style="list-style-type: none"> -Study limited to one region -Study did not have information on behaviour change and use of ITNs -Study did not document any barriers on use of ITNs
8	Use of ITNs among pregnant women in Bungoma County	Makholka Martin, Unpublished MSc Thesis, School of Medicine, Kenyatta University, 2014	Bungoma County	Pregnant women n=228	<ul style="list-style-type: none"> -Reports on changing disease risk has been limited to observation from selective sites thus limiting information on generalization -study did not document barriers to use of ITNs
9	Use of ITNs among children under five in Kenya	Kyalo Geraldine, Unpublished MA thesis, School of Economics, University of Nairobi, 2013	Kenya (National)	Children under 5 years n=2182	<ul style="list-style-type: none"> -no information to determine extent of ITNs retention -no information on perception and attitude on use of ITNs- -No information on sleeping arrangement to show extent in use of ITNs -Limited studies on information on intra - household factors that influence use of ITNs in pregnant and children under age 5 -study did not document barriers of ITNs use
10	World Malaria Report	World Health Organization, 2015	Global	N/A	

No.	Title	Author(s)	Geographic Coverage	Target Group & Sample Size	Key Gaps
11	Social and Cultural Factors Affecting Uptake of Interventions for Malaria in Pregnancy in Africa: A Systematic Review of the Qualitative Research.	Pell C. et al, 2011	Kenya	Meta-Analysis of 37 qualitative studies from Africa. 12 of them were from East Africa	-Findings from this analysis cannot be generalized for Kenya
12	An exploratory study of community factors relevant for participatory malaria control	Opiyo et al , 2007	Rusinga Island in Homabay County	FGDs and semi-structured individual interviews were carried out in 1,451 HH	-Covered Rusinga Island of Homabay County -Results cannot be generalized for Homabay county
13	Prevention and management of malaria during pregnancy	Pell C. et al, 2013	Comparative qualitative study in Ghana, Kenya and Malawi (Nyanza, Siaya)	Pregnant women, their relatives, community members, opinion leaders and healthcare providers.	-Covered a small part of Siaya County - Results cannot be generalised for Siaya county and for Kenya
14	Access and Use of Interventions to Prevent and Treat Malaria among Pregnant Women	Hill J et al, 2015	Kenya and Mali (Nyando, Muhoroni, and Nyakach sub-counties in Kenya)	FGDs with pregnant women, adolescent women, and men	-Covered a small part of Kenya and therefore the results cannot be generalized for the country
15	Use of insecticide treated bed nets among pregnant women	Njoroge et al, 2009	Kilifi, Kenya	Pregnant women attending ANC in the district hospital and the 5 health centres.	-Study was health facility based and only covered a few health facilities -Results cannot be generalized for Kilifi County
16	Towards achieving Abuja targets: identifying and addressing barriers to access and use of insecticides treated nets among the poorest populations in Kenya	Chuma J. et al, 2010	Kenya: Kwale, Bondo, Gucha, and Makuani	Cross Sectional Study n = 708 households 24 FGDs and semi-structured interviews with 70 ITN suppliers	-Covered parts of 4 districts only -Results cannot be generalized for the counties and the country -Focused only on barriers to ITN use

2.3 Care seeking

2.3.1 Overview

The care seeking behaviour covers: pregnant mothers making at least 4 ANC visits and seeking skilled delivery; HIV positive women/families seeking PMTCT and use of ARVs; early and appropriate care seeking for pneumonia and malaria; and ORS/Zinc use for diarrhoea.

The health status of mothers and children is an important indicator of the economic wellbeing of a nation (UNFPA, 1994). During the United Nations General Assembly 2015, in New York, UN Secretary-General Ban Ki-moon launched the Global Strategy for Women's, Children's and Adolescents' Health, 2016-2030. This strategy has provided a road map for the post-2015 agenda as described by the Sustainable Development Goals and seeks to end all preventable deaths of women, children and adolescents and create an environment in which these groups not only survive, but thrive, and see their environments, health and wellbeing transformed. As part of the Global Strategy, WHO is working with partners towards:

- Addressing inequalities in access to and quality of reproductive, maternal, and newborn health care services;
- Ensuring universal health coverage for comprehensive reproductive, maternal, and newborn health care;
- Addressing all causes of maternal mortality, reproductive and maternal morbidities, and related disabilities;
- Strengthening health systems to respond to the needs and priorities of women and girls; and
- Ensuring accountability in order to improve quality of care and equity.

The key behaviours explored are: first, care seeking with specific reference to the extent to which pregnant mothers make at least 4 ANC visits and seek skilled delivery; HIV positive women/families seek PMTCT and ARVs; care givers of children provide early and appropriate care for pneumonia and malaria; and care givers of children are able to use ORS/Zinc to treat incidence of diarrhoea in children.

2.3.2 Pregnant mothers make at least 4 ANC visits and seek skilled delivery

Globally, the number of women who die from complications of pregnancy and child birth has declined by 44 percent (WHO, December 2015) but it is still estimated that about 830 women die daily as a result of complications during pregnancy and child birth with 99 percent of these births occurring in developing countries. The major complications that account for 75 percent of all maternal deaths include: severe bleeding (mostly bleeding after childbirth); infections (usually after childbirth); high blood pressure during pregnancy (pre-eclampsia and eclampsia); complications from delivery and unsafe abortion (WHO, 2015). The highest incidence of maternal and perinatal mortality occurs around the time of birth with the majority of deaths occurring within the first 24 hours after birth. However, most of these complications develop during pregnancy and most are preventable or treatable and most of these deaths could be avoided if the already known medical interventions are available and accessible to the population in need. Globally, 2.7 million neonatal deaths (deaths within the first 28 days of life) occurred in 2015 which represents 45 percent of all deaths among children under five years of age (WHO, 2015). The vast majority of these newborn deaths is preventable, with 73 percent occurring within seven days of birth, and require many of the same investments in health systems that are needed to improve maternal health outcomes (WHO, 2015).



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Nurse Julia Wenani monitors the pregnancy of Hazena Khadija and explains the use of vitamins and medicines at the Antenatal Care Unit of Navakholo Sub-County Hospital near Kakamega County, Kenya.

Access to and use of adequate maternal care services, including both ANC and skilled attendance at birth is essential to reduce both maternal and neonatal mortality (Berg *et al.*, 2001 and Thaddeus 1994). There is a strong positive correlation between skilled attendance at birth, and lower maternal and neonatal death (Ram *et al.*, 2006; Thaddeus 1994). Skilled attendance at birth has been identified as the single most important factor in preventing maternal deaths (Onah 2006) and as an important element in reducing neonatal deaths (AbouZahr 2000; Ram 2006).

Antenatal care is recognised as a key maternal service in improving a wide range of health outcomes for women and children (McDonagh 1996; Carroli, Rooney, and Villar 2001; Chen *et al.*, 2007) because it offers opportunity for women to prepare physically, mentally and logistically for childbirth. Antenatal care also presents an opportunity to deliver interventions for improving maternal nutrition, providing health education, and encouraging skilled attendance at birth and use of facilities for emergency obstetric care (EMOC). Antenatal care also serves as an important conduit for HIV testing and counselling and thus has potential for the prevention of HIV transmission from mother to child as well as the prevention and treatment of malaria among pregnant mothers. Thus ANC serves as a vehicle for multiple interventions and programmes (Ornella *et al.*; 2006).

WHO therefore recommends that a woman have at least 4 antenatal care visits on confirmation of a pregnancy (first visit), after 20-28 weeks (second visit), after 34-36 weeks (third visit) and the fourth visit before the expected date of delivery or when the pregnant woman feels the need to consult a health worker (USAID/Population Council, 2006). Each antenatal care visit should include appropriate services to the overall condition and stage of pregnancy and includes four main categories: identification of pre-existing health conditions (i.e. check for the weight and nutrition status, anaemia, syphilis, HIV status, hypertension); early detection of complications arising during pregnancy (e.g. check for pre-eclampsia, gestational diabetes); health promotion and disease prevention (e.g. tetanus toxoid vaccine, prevention and treatment of malaria, nutrition counselling, micronutrient supplement, family planning counselling); birth preparedness and complication planning (e.g. birth and emergency plan, breastfeeding counselling, Antiretroviral for HIV

positive women and reducing mother to child transmission of HIV). Antenatal care is also an opportunity for the promotion of skilled attendance at birth and healthy behaviours such as breastfeeding, early post natal care and planning for optimal pregnancy spacing.

Proper medical attention and hygienic conditions during delivery can reduce the risks of complications and infection that can cause morbidity and mortality to either the mother or the baby. For this reason the policy guidelines recommend that obstetric care from a health professional during delivery is critical in reducing maternal and neonatal mortality.

Data and information availability

a) Antenatal Care (ANC)

The national data on antenatal care in the country mainly comes from the various Kenya Demographic and Health Surveys (KDHS). The main information sought are the details on the type of service provided, the provider, the number of antenatal visits made, the stage of pregnancy at the time of the first and last visits, and the services and information provided during antenatal care. The other data sources are the Multi-Cluster Indicators Surveys (MICS) conducted by government with support from UNICEF. Although there have been five rounds of MICS surveys, the most recent surveys only captures information at sub-national levels. Currently, information from MICS 5 and 4 are comparable to DHS surveys.

The utility of the information from these surveys is to identify subgroups of women who do not utilize such services and in planning improvements to these services. The main questions in both DHS and MICS are similar in design except for the period of recall. For DHS, the mothers are asked about children born in the last five years but only information pertaining to the last live birth is recorded. These are framed as follows:

Now I would like to ask some questions about your children born in the last five years.

- *Did you see anyone for antenatal care for this pregnancy?*
- *What are the reasons for not receiving antenatal care for this pregnancy? (only asked in KDHS 2014)*
- *How many times did you receive antenatal care during this pregnancy?*

In addition, the mothers are asked to recall the kind of services they were provided with during the visits:

As part of your antenatal care during this pregnancy, were any of the following done at least once?

[Response is YES (1) or NO (2)]

- *Were you weighed? WEIGHT ... 1 2*
- *Was your height measured? HEIGHT ... 1 2*
- *Was your blood pressure taken? BP 1 2*
- *Did you give a urine sample? URINE 1 2*
- *Did you give a blood sample?*

MICS asks similar questions but births restricted to the last 2 years. In addition it does not ask about height and weight.

In both MICS and DHS, the respondents are neither asked questions on knowledge nor on attitudes with regard to the behaviour. The only questions that are asked pertain to the practice. The 2014 KDHS in addition asked for information on reasons for not seeking ANC but the data was not tabulated in the basic

report. In terms of coverage, the 2014 KDHS for the first time provided information on adequacy of visits at county level. Table 2.7 below summarizes the most important sources of data and information with respect to ANC and skilled delivery. The observed differences in utilization of ANC services cannot be attributed on the extent of knowledge or awareness of the practice.

b) Skilled Birth Attendance (SBA) during delivery

A key indicator for the uptake of this care is the proportion of mothers who deliver under skilled care. Both DHS and MICS asked similar questions. In the 2008/9 KDHS, women were further asked reasons why they did not seek care in a health facility. However, in 2014 KDHS, this question was not asked but women age 15-49 were asked whether or not each of the following factors would be a significant problem for them in seeking medical care: getting permission to go for treatment; getting money for treatment; distance to a health facility; and not wanting to go alone. As in the case of ANC, this information is now available at county level but was not tabulated in the basic report.

TABLE 2.7: Data availability for ANC and SBA

Care Seeking	Indicator(s)	Data source(s)	Information on			Information available At sub-national level (Yes/No)
			Knowledge	Attitude	Practice	
ANC visits	Pregnant mothers make at least 4 ANC visits	2014 DHS	None	None	Yes	Yes
		MICS (5)	None	None	Yes	Kakamega, Bungoma, Turkana
		MICS (4)	None	None	Yes	Homa Bay, Kisumu, Kisii, MigoriNyamira, and Siaya
Delivery at birth	Pregnant mothers deliver using skilled attendant	2014 DHS	None	None	Yes	Yes
		MICS (5)	None	None	Yes	Kakamega, Bungoma, Turkana
		MICS (4)	None	None	Yes	Homa Bay, Kisumu, Kisii, MigoriNyamira, and Siaya

2.3.3 Knowledge, Attitudes, Beliefs and Practices — ANC and SBA

Knowledge and Attitudes on ANC and SBA

As stated in data availability, large scale surveys do not solicit information on knowledge and attitudes data sources. However, a few qualitative studies often ask information that pertains to knowledge and attitudes. A study in Homa Bay and Kilifi revealed very high awareness of ANC and SBA among women in rural communities (PSRI, 2014; 2015). The preference for SBA was the fact that facilities were clean, good records of attending to their patients well and in cases of any complications, the service providers (doctors/nurses) attend to it immediately and give timely referrals whenever need be. Furthermore, the community health volunteers under the community strategy often encourage mothers to make timely visits and deliver in facilities (PSRI, 2015).

A study commissioned by UNICEF in Turkana reveals strong cultural restrictions that are imposed on pregnant women. When the pregnancy is at an advanced stage, women's movement is restricted (UNICEF,

2015). During this time, most pregnant women are urged to observe several cultural norms in order to have a successful pregnancy and a healthy baby (UNICEF 2015). In addition to restricted movement which could impinge on utilization of services, women are obliged to observe certain food taboos, which could eventually affect their health and that of the unborn child or acceptance of injections which are thought to be harmful. Studies done elsewhere do show that often respondents have limited understanding of the specific ANC interventions done during health facility visits which contributes to decreased importance placed on attendance (Erin, V. et al., 2014).

In terms of attitudes some mothers still think that the services they get from the Traditional Birth Attendants (TBAs) and Community Health Volunteers (CHVs) are better than what they got from providers in a facility (PSRI, 2015). While others think that younger providers are less knowledgeable (PSRI 2015). In addition, reports from studies in Kilifi (PSRI 2014; 2015), Turkana (UNICEF 2015) and Mandera (UNICEF 2014b) seem to suggest that the gender of a provider is a problem. Most providers in remote areas are men and traditions have limitations on other males seeing the nakedness of women who are not their spouses. However, studies from Kilifi, Homa Bay and to some extent Turkana reveal that sometimes providers are rude and uncaring (PSRI 2015; UNICEF 2014a). Sometimes use of modern technology could be counter-productive in making mothers visit facilities to deliver. Fear of the long process and repeated use of observational equipment keep some mothers away during delivery (PSRI 2015). In Turkana both men and women report fear of being 'cut' (episiotomy) during delivery (UNICEF 2015).

Beliefs

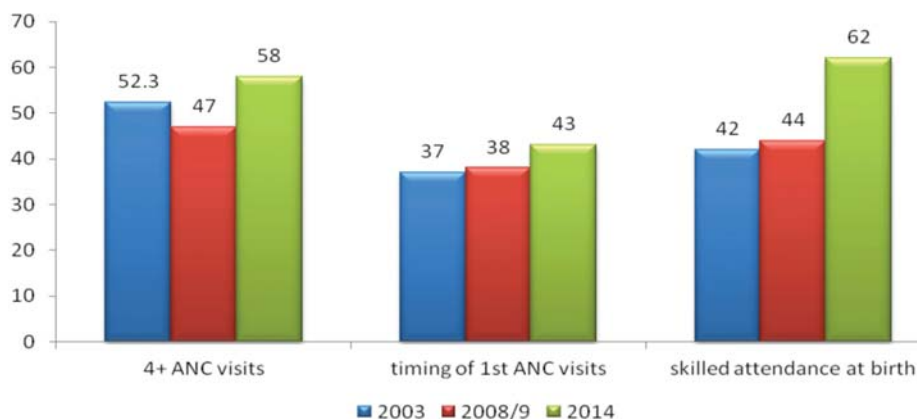
Some women are discouraged from facility delivery due to gender and age of provider (PSRI, 2015, UNICEF 2014). However, this belief is more pronounced in Kilifi, Turkana but not in Homa Bay. There still exist myths and misconceptions about ANC services mainly in Turkana. *'Traditions discourage expectant mothers from seeking antenatal care that they could miscarry'* (UNICEF 2015). Home deliveries influenced by cultural beliefs and rituals around childbirth as well as the fear of being 'cut' (episiotomy) during delivery as reflected by the subsequent observations (UNICEF 2015). There still exist strong cultural beliefs around the disposal of placenta in selection of place of delivery where there is belief that this has linkages with good health of the mother and newborn (gender). Fear of delivery couch- providers report difficulties they encounter while trying to convince women who deliver in health facilities to climb on the couch (Ibid). Some believe that they would fall or lose babies through falls therefore insist on squatting. Women who deliver at health facilities are mocked and ridiculed as cowards while those who deliver at home are celebrated/honoured considered brave (Ibid). Studies reveal that failure to go for ANC mostly in the 1st trimester is due to fear of the local belief that the early pregnancy period was most vulnerable to witchcraft and the fact that there is always the need to use traditional herbs (at home) during labour for protection (PSRI 2015).

Practice – utilization of ANC and SBA

Timing of antenatal care is crucial for a pregnant woman and in Kenya 43 percent of pregnant women made their first antenatal care visit between the fourth and fifth month of their pregnancy and this is an increase from 38 percent in 2008/9 and 37 percent in 2003.

According to the 2014 KDHS, 58 percent of pregnant women made the recommended 4 ANC visits which represent an increase from 47 percent in 2008/9 and 52 percent in 2003 respectively. There are still wide rural-urban differentials whereby urban women are more likely to have had the 4 ANC visits (68% in urban and 51% rural respectively).

FIGURE 2.2: Trends in 4+ ANC visits, timing of first ANC visit and skilled attendance during delivery



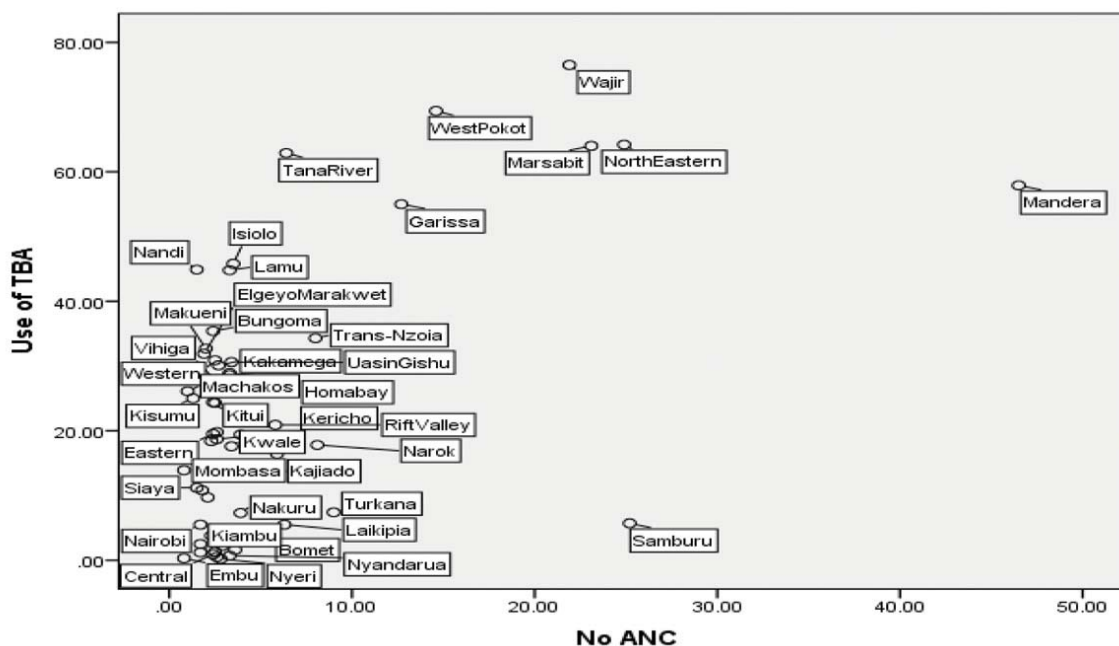
Source KNBS and ICF Macro 2015

By region, there exists large regional variations with Nairobi having the highest proportion at 73 percent, followed by Central (63.4%), Coast (62.2%), Nyanza (58.7%), Eastern (56.3%), Rift Valley (51.7%), Western (51.3%) and North Eastern having the lowest proportion at (36.8%).

According to 2014 KDHS, counties with the highest proportion without any ANC visits are: Mandera (47%); Samburu (25%); Marsabit (23%); Wajir (21%); West Pokot (15%); Garissa (13%). While counties with the lowest proportion without any ANC visit are: Embu and Mombasa (0.8%); Machakos (1%); Kisumu (1.3%); Siaya (1.5%). The basic report however did not tabulate number of visits by county, which can be generated from available data.

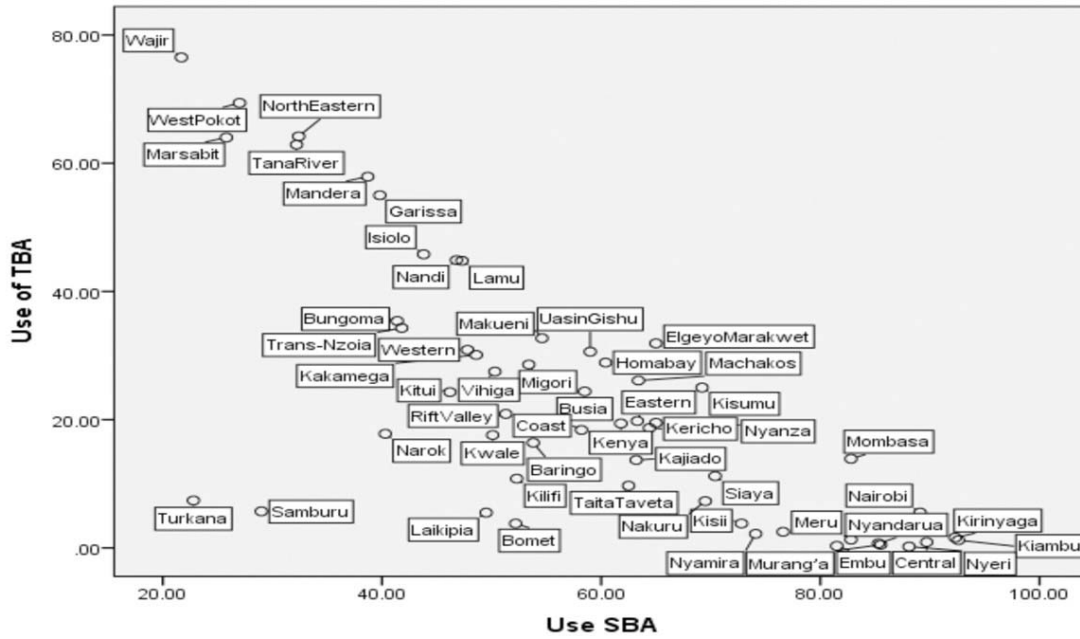
A scatter diagram of the use of traditional birth attendants and use of skilled delivery at birth is presented in Figure 2.3. Wajir, West Pokot, Marsabit and Tana River are the counties with highest use of TBA and also among the counties with lowest use of SBA. Implying that use of TBA is highly correlated with non use of ANC.

FIGURE 2.3: Use of traditional birth attendants and use of skilled delivery at birth



Source: Computed from KNBS and ICF macro 2015

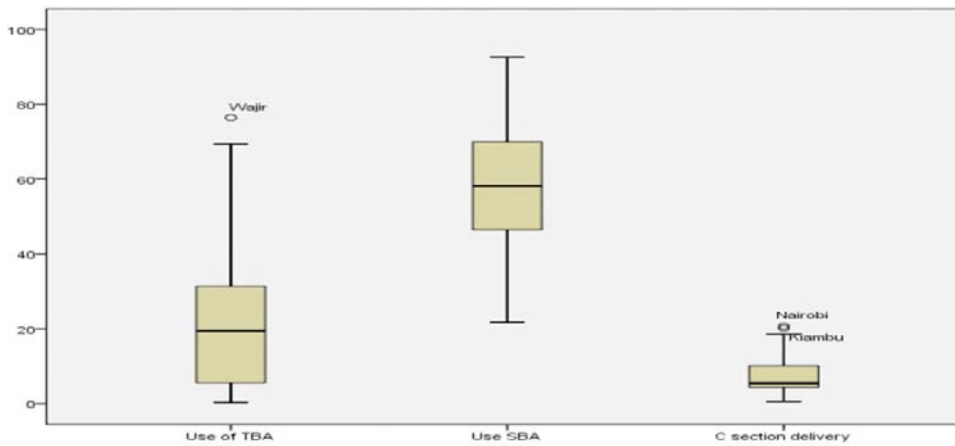
FIGURE 2.4: Scatter diagram of use of TBA and use of SBA



Source: Computed from KNBS and ICF macro 2015

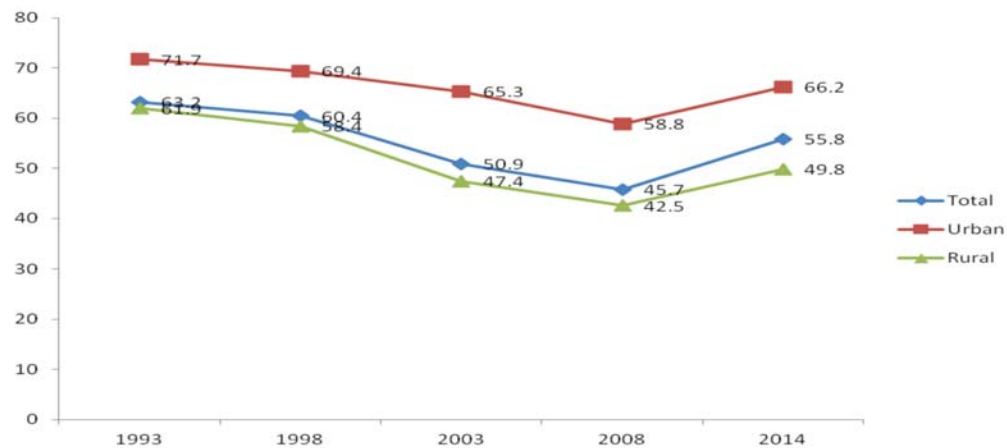
Figure 2.5 below shows distribution of counties by key indicators on utilization delivery care. Wajir stands as an outlier in use of TBAs while high use of caesarean section delivery is in Nairobi and Kiambu. There exists large variation in SBA and TBA use. The use of TBA is highly skewed and only concentrated in few counties.

FIGURE 2.5: Box plots on indicators on SBA



Between 1998 and 2008, the country experienced declines in use of recommended visits (Figure 2.6). The 2014 KDHS use levels are still much lower than in 1993, although there has been an improvement since 2008.

FIGURE 2.6: Trends in proportion of mothers using 4+ ANC visits by place of residence (births in last 3 years)



Source: STATcompiler

In a study largely confined to Nyanza, Nairobi, Rift Valley and Coast provinces, adolescents made four or more prenatal care visits in only 45 percent of pregnancies (Birungi *et al.*, 2011). As in the DHS results, this study also confirmed the decline in use of services by number of pregnancies (KNBS and ICF macro, 2015). How there are no studies that explains reasons for decline in use with increasing parity.

Sixty-two percent of births in Kenya were attended to by a skilled provider which is an increase from 44 percent in 2008/9 and 42 percent in 2003 (see figure 2.2). Assistance during delivery declines with age whereby 62 percent of women less than 20 years of age had a birth attended to by a skilled provider while 63 percent of women were between 20-34 years and the lowest proportion of births attended to by a skilled provider were women between 35-49 years (KNBS and ICF macro 2015). Generally, younger women were more likely to deliver at a health facility (KNBS and ICF macro 2010; Mwakayongwe *et al.*, 2007). The proportion of births attended to by skilled providers decline with increase in the birth order whereby a higher proportion of births attended to by a skilled attendant were births of birth order one –79 percent compared with 37 percent for births of birth order 6 and above.

Although the use of skilled birth attendants has increased in the last half decade, Kenya has been among the countries with the lowest skilled birth attendance and the highest inequality in skilled birth attendance (Van Malderen *et al.*, 2013). The proportion of births assisted by a skilled provider increases with increase in education whereby women with secondary education and above had the highest proportion of births attended to by a skilled provider (85.1%) compared to women with no education (26.4%). Use of skilled care during or after abortion or miscarriage was low (20%) (Birungi *et al.*, 2011). Table 2.8 shows distribution of counties with high and lowest use of SBA which indicates greater spatial inequality in coverage of SBA.

TABLE 2.8: Counties with highest and lowest use of SBA

Highest USE of SBA		Lowest use of SBA	
County	SBA (%)	County	SBA (%)
Embu	81.5	Wajir*	21.7
Mombasa*	82.8	Turkana*	22.8
Meru	82.8	Marsabit*	25.8
Nyandarua	85.3	WestPokot*	27.0
Murang'a	85.5	Samburu*	29.0
Nyeri	88.1	TanaRiver*	32.2
Nairobi	89.1	Mandera	38.7
Kirinyaga	92.3	Garissa*	39.8
Kiambu	92.6	Narok*	40.3

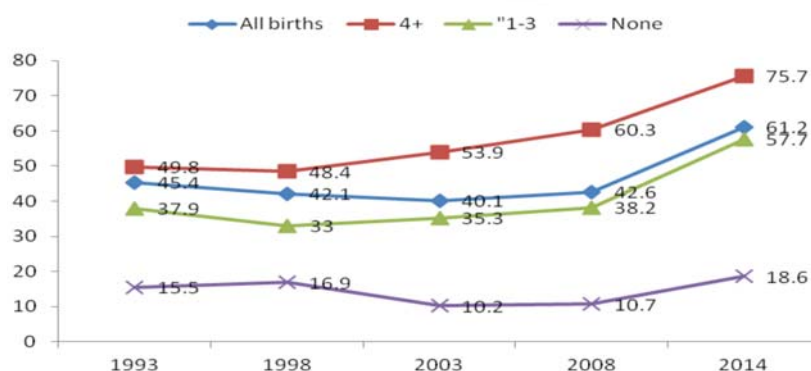
*Means UNICEF focus counties:
Source KNBS and ICF macro 2015

Mokua (2014) reports that despite awareness campaigns on skilled birth attendance in the country; other factors determine delivery practices among pregnant women. These include; women's level of education, income levels, marital status and physical access of health facilities. Trends from Kenya Demographic and Health Surveys over the past two decades, report that poor women, women residing in rural areas especially in Arid and semiarid areas are the least likely to receive adequate health care despite reduced cost to access (KNBS and ICF Macro, 2015). Use of skilled delivery is related to low socio-economic status (Kitui et al., 2013; Mokua 2014; KNBS and ICF Macro, 2015).

Linkage between use of ANC and Skilled Birth Attendance (SBA)

Women who attend ANC are usually encouraged to deliver in a health facility and a number of studies have linked higher likelihood of skilled attendance at birth with receipt of recommended ANC visits (Agwanda et al., 2014; Kitui et al., 2013; Mokua 2014). Delivery in a facility is linked with utilization of ANC services (see figure 2.7). Women who do not have any ANC visit are less likely to deliver in a health facility and the trend has not changed much over the last two decades. Those who have four or more visits are more likely to deliver in a facility and the proportion of women who utilize ANC and deliver in facilities has been increasing over the last decade (Agwanda et al., 2014). The relationship occurs in several other sub-Saharan countries (Wang et al., 2011). This result is consistent with literature which shows that use of ANC increases use of delivery care services (Bloom et al., 1999).

FIGURE 2.7: Trends in facility deliveries by number of ANC visits



Source: computed from various KDHS

Barriers to ANC and SBA

Studies show the following as key barriers to use of either ANC appropriately or use of SBA (PSRI 2014; 2015; UNICEF 2015; 2014b):

- Cost, means of transportation and poor road network
- Some ailments cannot be managed in hospitals
- Duration of ANC visits, which could be a full day's investment, particularly for those who live far away
- Preference for TBAs because they are culturally sensitive and compassionate.

Connected to the HIV and AIDS test, is the fear of being given an injection or vaccinated against tetanus (UNICEF 2015). The fear of HIV and AIDS tests emerges as an issue that discourages use of health facilities (UNICEF 2015, PSRI, 2014; 2015). Ignorance and lack of information or even appreciation of ANC benefits (UNICEF 2014) acted as a key barrier. TBAs have been mentioned as having a greater influence on health seeking behaviour of pregnant women (UNICEF 2014, PSRI 2014; 2015). Being in possession of a clinic card has been cited as a factor in deciding the place of delivery. Due to non-attendance of ANC, most women feared they could be reprimanded by health providers if they appeared at health facilities seeking assistance without the requisite documents (UNICEF, 2014; PSRI 2014; 2015)

2.3.4 Information gaps

There are no national or large scale studies on knowledge and attitudes on ANC visits or use of skilled delivery during pregnancy. Some studies have shown that there is linkage between awareness and maternal health service utilization, especially among the uneducated (Kenthongkham, 2007); Erlindawati *et al.*, 2008). But some studies report that the choice of place of delivery is not simply influenced by low levels of knowledge about place of delivery; but on personal, social, economic, and logistical barriers (Naanyu *et al.*, 2011). Evidence from micro studies in Western Kenya (Busia and UasinGishu) suggest that, some women because of their preferences or the preferences of significant others, consciously make the decision to go against the advice of the providers (Naanyu *et al.*, 2011). Magadi *et al.*, (2000) found no relationship between the education of women and service utilization using a multivariate analysis of data from women of different communities in Kenya; however, such a study needs to be replicated to determine whether the situation has changed.

No studies in Kenya that have mentioned religion, spirituality, and traditional beliefs as barriers to utilization of prenatal and delivery care services. Some studies have mentioned that both supply and demand-related interventions may be responsible for non-use or use of skilled delivery but there are complexities influencing childbirth practices (Mwakayongwe *et al.*, 2007).

Despite existence of several large scale surveys, further analysis of the behaviours has been limited and many studies on these key behaviours appear in comparative studies or are published in international journals that are unavailable to local programme and policy makers. There is need to tabulate the number of visits by county which was not done in the basic report.

One main conclusion on evidence from studies and programme reports is that:

**“ANC coverage is lower among women who need it the most:
the poor, less educated, and living in rural areas”**

(Ornella *et al.*, 2006: 59).

Pregnancy is often perceived as a natural process of life –women, families and communities may therefore underestimate the importance of ANC. Lack of knowledge about danger signs in pregnancy may make women and families not know how to seek care when a complication occurs during pregnancy.

On the supply side, it is possible that attitudes and behaviours of health care providers in ANC clinics may compound this problem by failing to respect the privacy, confidentiality, and traditional beliefs of the women which may negatively influence the use of ANC as well as other Maternal, Newborn and Child Health (MNCH) services at large.

Moving towards universal health coverage is not only a matter of improving average levels but also about reducing disparities and improving equity. Therefore, indicator disaggregation should be possible by; sex, age, household wealth/income, residence (urban/rural, province, district), and other stratifiers (Hosseinpoor et al., 2014) to assess the extent to which disparities have reduced (Vega and Frenz, 2013). In Kenya, Demographic and Health Surveys and Multiple Cluster Indicator Surveys have been the prime sources of information which usually include a range of stratifies, that can permit multiple disaggregations but their main drawback is that sample sizes are often too small for detailed sub-national disaggregation (Boerma et al., 2014). Data collected from health facilities or administrative reports can allow sub-national disaggregation by geographic area, and can be collected on a continuous basis but the level of disaggregation by age and sex is limited, unless there is an individual level electronic medical records system in place (Boerma et al., 2014). This often limits the extent of analysis of determinants of disparity in coverage of interventions on ANC and SBA at sub-national levels.



Bridget Atieno, a trainer and coordinator of Mothers to Mothers (M2M) mentor programme conducts a session on prevention of mother to child transmission of HIV at Kakamega General Hospital in western Kenya.

2.3.5 HIV positive women/families seek eMTCT and ARVS

HIV prevalence and people living with HIV and AIDS

Recent data show that HIV prevalence rate in Kenya has been on the decline in the last few years, but the number of people living with HIV and AIDS has been on the increase, and is currently estimated at 1.6 million with women constituting about 57 percent (GoK, 2014). This number is projected to increase due to improved survival (reduced mortality due to HIV) attributed to the Antiretroviral Therapy (ART) programme. One of the core concerns of the programme is to reduce new infections particularly due to mother to child transmission. In the last decade, it was estimated that on average about 80,000 mothers require PMTCT services annually (GoK, 2014). Child HIV infection from mothers who are HIV positive is estimated at about 14 percent in the last three years while only 56 percent of HIV positive pregnant women receive antiretrovirals to reduce the risk of mother-to-child transmission (GoK, 2014). About 7 in 10 women living with HIV receive antiretroviral medicines for themselves or their infants during breastfeeding (GoK, 2014). This trend needs to be reversed if Kenya is to achieve the global target of eliminating mother to child transmission of HIV. To reverse the trends requires information on why there is low intake of services despite availability of drugs at low cost.

Policies and programmes

Kenyan national policy has largely mirrored WHO guidelines on PMTCT, although in the past decade WHO PMTCT guidelines have rapidly changed (Kohler 2012; NASCOP 2014). The challenge of these changes, in turn, requires extensive retraining and adaptations for implementation. HIV testing and counselling services provided to couples holds significant potential for reducing new HIV infections (NASCOP, 2014) because benefit from lifesaving care and treatment services such as; daily drugs that can prevent many common opportunistic infections that affect people with advanced HIV, antiretroviral therapy (ART), and other HIV-related primary care services can be provided. In addition, HIV-infected persons who know they are infected are less likely to engage risky behaviours. Therefore, the key policy with regard to HIV and AIDS has been the implementation of the revised national guidelines on HIV testing and counselling in 2008 which focused on bringing testing services to the client rather than relying on the client to initiate services (NASCOP 2012). The government also brought additional strategies that have helped to increase access to and acceptance of testing. These include; Provider-Initiated Testing and Counselling (PITC) in health facilities, routine testing in PMTCT of HIV programmes, home-based testing and counselling in the community, mobile testing, and annual testing campaigns (NASCOP 2012).

The Government of Kenya has been implementing the UNAIDS four-pronged strategy for the elimination of MTCT of HIV and strategy to help keep mothers alive. This strategy is anchored on:

1. Primary prevention of HIV infection among women of reproductive age;
2. Prevention of unwanted pregnancies among HIV-infected women;
3. Prevention of HIV transmission from mother to infant; and
4. Care and treatment for HIV-infected women and their families.

Elimination of mother-to-child transmission of HIV (eMTCT) strategic plan of 2012-2015 is the main programme for PMTCT, whose goal is to eliminate new HIV infections among children and to keep mothers alive through universal access to comprehensive PMTCT services. The main targets being reduction of

mother-to-child transmission rate to less than 5 percent by 2015; and to reduce the number of HIV-related maternal deaths by 50 percent. These targets may not have been reached because of slow pace in the increase in utilization of services.

Sources of data and information

The national data on utilization of eMTCT and ARVs mainly comes from the various Kenya Aids Indicator Surveys (KAIS). The 2012 KAIS had modules on knowledge and attitudes and a module on use of services. For the first time, information was obtained from households about children under 14 years. The first household based information on HIV however, came from 2003 KDHS.

Knowledge about eMTCT and ARVs

Scientific research has shown that Mother-to-Child transmission (MTCT) of HIV may occur at any stage during; pregnancy (5-10%), labour and delivery (10-15%), or breastfeeding (5-20%). Interventions to reduce MTCT include; use of ART, appropriate infant feeding practices, and safer obstetrical practices. According to KAIS 2012, majority of women (88.9%) knew that HIV could be transmitted to the child during breastfeeding, while slightly lower percentage of women reported knowing that HIV could be transmitted to the child during pregnancy (59.4%) and during delivery (81.4%) (NASCO, 2014). Furthermore, women who had attended ANC were more likely to know of use of antiretroviral therapy for PMTCT and for treatment (71.7% and 87.3%, respectively) compared with women who had not attended ANC (49.3% and 70.5%, respectively) (NASCO 2014).

Factors associated with use of eMTCT and ARVs among HIV positive pregnant women

A key factor in use of services is HIV testing. KAIS (2012) reported that nearly 1 in 3 men age 15 to 64 years had never been tested for HIV and thus it is desirable to develop strategies to increase HIV testing among men especially in rural areas, where only 56 percent of men have ever tested for HIV (NASCO 2014). Only one-third of sexually active adults had ever tested for HIV with a sexual partner (NASCO 2014). Slightly more than half (53%) of persons found to be HIV-infected in KAIS 2012 did not know that they were infected. This was more pronounced among men than women (NASCO 2014).

ANC attendance remains the cornerstone to HIV-positive mothers use of appropriate services. Recent data from KAIS 2012 report shows improvements in attendance of ANC. Among women aged 15 to 54 years who reported the last live birth in the five years before the survey, 95 percent reported attending ANC at least once during pregnancy –an improvement from 93 percent in 2008 (NASCO 2014).

Early initiation of ANC is important for timely detection and treatment of problems, prevention of complications, health promotion, and birth preparedness (Kohler 2012, NASCO 2014). It is recommended that HIV-positive women who are pregnant should get early PMTCT interventions for the benefit of the mother and child. Early PMTCT ARV initiation is consistent with WHO guidelines that PMTCT should start by 14 weeks gestation (Kohler, 2012). According to 2014 KDHS, only 1 in 5 pregnant women attended antenatal care in the first three months of pregnancy (KNBS and ICF Macro, 2015). This is only a slight improvement from about 19 percent according to KAIS 2012. Late initiation of ANC leads to late identification of HIV-infected pregnant women, and therefore late interventions.

“Hence systems to encourage earlier first ANC visits, or HIV testing outside clinic settings with referral to care, will be important to fully realize benefits of PMTCT”

(Kohler 2012).

Among those who do not attend an antenatal clinic, distance from the clinic is cited as the most common reason for not attending ANC (NASCOP 2014). ANC HIV testing has increased over the years and nearly 1 in 10 pregnant women attending an ANC are not tested (NASCOP 2014). Among HIV-uninfected pregnant or breastfeeding women, almost half reported that majority of their sexual relationships were with men whose HIV status was unknown to them (NASCOP 2014). Awareness of partner HIV test is often associated with uptake of maternal HIV testing and ARVs (Kohler 2012). Studies have further indicated that access to facility-based healthcare during childbirth was associated with higher uptake of PMTCT ARVs (Kohler 2012). Efforts to enhance skilled birth attendance to improve maternal and child health should result in improvements in delivering peri-partum ARVs for PMTCT (Kohler 2012).

Use of PMTCT services has been found to be less common than use of prenatal care services among HIV-positive female adolescents (Birungi *et al.*, 2011). In addition, HIV-positive adolescents were less likely to use maternal health care services for higher-order pregnancies than for lower-order pregnancies (Birungi *et al.*, 2011). However, younger women are more likely to receive prenatal care and PMTCT services when their husband –rather than someone else, was responsible for the pregnancy (Birungi *et al.*, 2011). HIV-positive female adolescents who used PMTCT services was lower than the proportion who obtained prenatal care, despite national and international guidelines emphasizing the provision of such services to HIV-positive mothers as an integral component of prenatal care. HIV programmes are organized around pediatric or adult care but there is little attention that is paid to meeting the reproductive health needs of those making the transition from childhood to adulthood (Birungi *et al.*, 2011). The low use of certain maternal health care services, especially skilled attendance and postnatal/postabortion care for pregnancies that end in miscarriage, stillbirth or abortion among HIV-positive female adolescents (Birungi *et al.*, 2011) is a factor yet to be further examined.

As a result of expansion of services, great strides in antenatal HIV testing have been achieved (WHO, UNAIDS *et al.*, 2011, NASCOP 2014). The introduction of rapid testing in many settings has virtually eliminated the gap between those pregnant women accepting testing for HIV and those receiving their HIV test results (UNAIDS *et al.*, 2011; NASCOP 2014). But use of known, effective interventions for PMTCT in many settings has not reached the optimal level (NASCOP 2014). Data from various countries (Kenya included) show large drop-offs in uptake and retention in PMTCT services at each step in the complex PMTCT cascade (World Health Organisation, UNAIDS *et al.*, 2009; Torpey, Kabaso *et al.*, 2010). The new challenge is that the largest drop-offs in PMTCT cascade now come after an HIV-positive test result (Ferguson *et al.*, 2012; Turan *et al.*, 2012).

Studies have explored pregnant women's experiences from their own perspectives and those of their family members. These studies reveal the important role that fears of HIV-related stigma and discrimination still play in discouraging pregnant women's use of both HIV-related and non-HIV-related health services (Otieno, *et al.*, 2010; Turan *et al.*, 2012). Although many ANC clinics provide women with all the ART drugs needed for both mother and infant for PMTCT prophylaxis at the time of the initial HIV-positive test result, little is known about whether women are actually able to adhere to those medications (Turan *et al.*, 2012).

Critical to PMTCT programmes or HIV care, are the fears of unwanted disclosure, stigma, and discrimination which may make it difficult for women to adhere to ART prophylaxis or HAART during pregnancy (Turan *et al.*, 2012). Kunihiro *et al.*, (2010) reported that adherence becomes difficult if women need to hide HIV clinic visits or medications from others. Spangler *et al.*, (2014) study in Migori County concluded that HIV-positive status disclosure seems to be a complex yet critical factor for the use of PMTCT and maternal health services.

Hodgson *et al.*, (2014) systematic review of studies, reports that individual-level enablers and barriers to pregnant or postpartum women's ART initiation, adherence, and retention can be grouped into two: those within a woman's awareness and control such as commitment to a child's health, and those that may be outside of her awareness or control such as where she lives or her level of knowledge about HIV, ART, or PMTCT.

Studies on age related factors are rather inconclusive. Some studies have found that younger women were less likely than older women to engage with the health system and/or adhere to ART while others indicate non-adherence to increase with age. Women's education level was positively associated with ART adherence (Ayuo *et al.*, 2013, Bardeguet *et al.*, 2008; Kohler 2012). Ayuo *et al.*, (2013) in their Kenyan study of pregnant women initiating ART, reported that each additional year in school increased the likelihood of reporting perfect adherence by 6 percent.

Two studies in Kenya found that rural residency was a barrier to ART initiation and adherence. Ayuo *et al.*, (2013) reported that loss-to-follow-up is particularly likely to happen for women enrolled in HIV care at a rural clinic than women enrolled in similar care in a district hospital. A qualitative narrative analysis study found that HIV infected pregnant women in rural settings were less likely to disclose their HIV status than urban women (Ujiji *et al.*, 2011). The authors argued that these women, in striving to keep their status a secret, were more likely to miss clinic appointments resulting in poor ART adherence. Other studies carried out in Kenya, Ghana, and South Africa found that sufficient knowledge of PMTCT facilitated ART initiation, adherence and/or retention during and after pregnancy (Boateng 2013, Kohler 2012, Stinson, 2012).

Ujiji *et al.*, (2011) report that women's concerns about maintaining their status within their families sometimes led them to keep their HIV infection a secret, creating a barrier to initiation, adherence and retention. The study suggests that women's disclosure of their HIV status would undermine their roles as mothers and homemakers. Ujiji *et al.*, 2011 suggest that this non-disclosure made ART initiation and adherence particularly challenging for the women during pregnancy –when other elder women in their families make decisions about their health care. In another study, Awiti *et al.*, (2011) reported that women were reluctant to attend clinics for ART services because their visibility during long waiting times could reveal their HIV status and, in turn, enhance their risk of being stigmatized and perceived as incapable mothers. Poverty can also be a barrier to ART adherence. Studies from Kenya, Tanzania, and South Africa identified lack of food, water, or income as barriers to ART adherence. Women were less likely to adhere to their medications when food was unavailable, because taking ART on an empty stomach often caused negative side effects (Awiti *et al.*, 2011, Kirsten *et al.*, 2011, Mepham, 2011). The following section summarizes some of the key barriers from the various studies.

Barriers to use of services (Turan *et al.*, 2012, Kohler 2012, Spangler *et al.*, 2014)

- Stigma and fear of disclosure of one's HIV status.
- Denial, or not wanting to know one's status, is frequently cited as a perceived reason not to test both the mother and infant, ranking second only to stigma and fear of disclosure. Both males and females identify lack of disclosure of HIV diagnosis to a partner as a major obstacle for women in accessing care.
- Perceived fear that a woman's husband would not approve of HIV testing or treatment of the infant; "fear of family break-ups", potential abandonment by families, in that "she can be sent away after the test result" is related to uptake of maternal HIV testing.

- A lack of knowledge is cited as a barrier to HIV testing of both the mother and infant. These include; ignorance or lack of awareness of interventions (“some believe that there is no way they can prevent the baby from being infected”), lack of appreciation for the perceived benefit of the intervention (“not aware of the benefits they get from taking drugs”), and also having a lower level of education.
- Despondency or despair which includes: stress and worry about implications of a positive test result; survival of mother and child, as well as family relationships. Women report “stress” over a child’s survival if the mother was found to be positive. A perceived fatalism have also been described to be related to uptake of PMTCT.

One statement was:

*“even if they take the medicine, they will still die” or
“some prefer ending their lives”*

Others said that some women may
“prefer dying to taking medicine”

or that women may find
“death to be the only solution for both the mother and child”.

- Difficulty taking or a fear of medications has been reported by HIV-positive women, as well as women in the general population community. They report fear of harm to the mother and/or child, awareness or concern about side effects or size of the pills, and a concern that women who are very poor may not be able to afford food to take with the medication.
- Guilt has also been described as a perceived factor influencing women who do not want to test their baby for HIV.

2.3.6 Gaps and challenges

- 1) The country has invested heavily in large scale surveys to generate data and information on practice of these key behaviours but there is lack of comprehensive further analysis of these data sets to generate useful information to enable their understanding. Most of further analyses exist as post graduate dissertations or done by other academic experts whose outcomes are largely unavailable to programme managers and policy makers.
- 2) Except for HIV on PMTCT and access to ARVs, there are no data sets that provide information on knowledge and attitudes.
- 3) Gaps in the use of maternal health care services by HIV-positive female adolescents (Birungi *et al.*, 2011). To address these gaps, HIV/AIDS programmes need to screen their adolescent clients for sexual activity and pregnancy to identify those in need of maternal health services, provide or refer those with such needs for appropriate services and create linkages with maternal and child health clinics to ensure that such clients receive all the relevant services.
- 4) Lack of knowledge of one’s own and one’s partner’s HIV status remains an important obstacle to HIV prevention efforts in Kenya. More work is needed to increase the number of HIV-infected persons who know their status through expansion of all testing modalities. In terms of family, lack of knowledge of one’s partner’s HIV status continues to be an obstacle to prevention. Support

for disclosure of HIV status and partner testing is needed, particularly for HIV-infected persons. Additional efforts should be focused on facilitating couples testing and disclosure.

- 5) No studies examined the barriers that women who do not enter into care experience in accessing maternity services and initiating ART during pregnancy or postpartum. There is need for more research—and programming—aimed at understanding and supporting such women.
- 6) Loss-to-follow-up is particularly likely to happen in the postpartum period, which suggests this is an area that also needs increased attention as Option B+ is scaled up.
- 7) Future surveys should assess disclosure for all partnerships to determine whether differences exist according to type of partnership. This has not yet been captured by present data sets.
- 8) Most PMTCT programme assessments have been clinic-based but there are few community surveys of PMTCT performance (Kohler 2012). A number of studies take place within the health system, and but there is need for community-based research focused on how alternative health-seeking behaviours may intersect with ART initiation, adherence, and retention among pregnant and postpartum women.
- 9) There is greater need for the understanding of how interpersonal and community-level factors operate. Further studies are needed to examine the impact of HIV and treatment on women's aspirations and expectations, their roles and status within families, and the broader social dynamics in relation to pregnancy and HIV.

2.3.7 Conclusions

The central factor to the delivery of PMTCT interventions is awareness of one's HIV status, and even among women who access ANC, challenges exist in the uptake of testing (Kohler, 2012, NASCOP 2014). In addition, there is emerging evidence that skilled delivery assistance enhances the effectiveness of PMTCT interventions, as women who give birth with the assistance of a health professional have an additional opportunity for HIV testing and, if HIV-positive, may be more likely to use antiretroviral drugs for PMTCT meant to be taken around the time of delivery (Sripatana, *et al.*, 2007; Ndirangu, *et al.*, 2010; Kinuthia *et al.*, 2011). However, qualitative studies reveal that fears about HIV-related stigma may cause some women to avoid facility-based delivery (Turan, *et al.*, 2008; Awiti *et al.*, 2011; PSRI 2015). As Turan *et al.*, (2012) in a review of evidence concludes that the effects of stigma and discrimination are cumulative across the PMTCT cascade and therefore may significantly impact rates of infant HIV infection.

2.3.8 Early and appropriate care seeking for malaria and pneumonia

Overview

Pneumonia is the second leading cause of under-5 deaths in the world and in developing countries (WHO, 2008; WHO, 2009). Morbidity and mortality from these diseases can be reduced considerably if care is sought early (WHO/ UNICEF, 2014). Thus, the ability of caregivers to recognise and seek appropriate care for these common childhood illnesses is instrumental in reducing child deaths and in reaching the Millennium Development Goal 4 target of reducing child mortality by two thirds by 2015 (WHO/UNICEF, 2014). Therefore appropriate care seeking that addresses the major risk factors for the illness (malnutrition and indoor air pollution) along with vaccination is essential for preventing the occurrence of the disease and this includes correct diagnosis and treatment of pneumonia (WHO/UNICEF, 2005). The two tell-tale signs and symptoms of pneumonia are fast-breathing and difficulty in breathing however case management is the



Nursing officer Desmond Keverenge prepares a pneumococcal vaccine at Busili Rural Health Center in Nampacha near Kakamega County, Kenya.

cornerstone to pneumonia control strategies and this consists of classifying the severity/extent of illness using simple clinical signs such as fast-breathing, chest in-drawing and general danger signs, and then applying the appropriate treatment (WHO 2010 ;WHO, 2012). Appropriate care according to WHO and UNICEF includes presenting the sick child to providers that can correctly diagnose and treat pneumonia (such as in hospitals, health centres, dispensaries, community health workers, maternal and child health clinics, outreach clinics, and physicians' private offices).

The vital treatment tools for pneumonia include antibiotics and oxygen. In developed countries pneumonia is diagnosed using chest X-rays and lab tests while in developing countries pneumonia is diagnosed using symptoms and signs of illness to make a diagnosis (WHO and UNICEF, 2006). The key prevention strategies for pneumonia include: promoting adequate nutrition (including breastfeeding and Zinc intake), raising immunization rates and reducing indoor air pollution (WHO and UNICEF, 2006).

Malaria, like pneumonia, is one of the leading causes of morbidity and mortality (particularly in children under-5 years of age in Kenya) therefore the provision of prompt and effective treatment is the cornerstone of malaria case management. Diagnosis of malaria is based on clinical suspicion and on the detection of parasites in the blood (parasitological or confirmatory diagnosis). For malaria, appropriate care seeking involves patients with fever presenting to health facility who are managed in accordance with national malaria treatment guidelines and patients presenting to health facility with fever and ACT prescribed (MOPHS, 2010).

The World Health Organisation (WHO) and UNICEF recognises the importance of care seeking and has highlighted activities to improve family and community health practices (including disease recognition and care seeking) as one of the three central components of the Integrated Management of Childhood Illness (IMCI) strategy and this includes the caregivers' ability to recognise and seek appropriate care for their children (WHO and UNICEF, 2005).

Policies and guidelines

Globally there are several policies, guidelines and action plans that relate to malaria and pneumonia.

These include:

- Global action plan for the prevention and control of pneumonia.
- WHO recommendations on the management of diarrhoea and pneumonia in HIV-infected infants and children.
- Integrated management of childhood illnesses.

Malaria

- The National Malaria Treatment Guidelines (MTG; GoK, 2010)
- National Malaria Strategy 2009–2017
- Roll Back Malaria
- Insecticide Treated Nets Policy 2001-2010
- The Kenya Malaria M&E plan 2009-2017
- Kenya National Malaria Policy 2010
- Kenya Malaria Communication Strategy 2010-2013
- National Guidelines for The Diagnosis, Treatment and Prevention of Malaria 2010 (MOPHS 2010)
- Integrated Management of Childhood Illnesses of 1999
- National IMCI implementation Plan 2001-2004
- Kenya National Pharmaceutical Policy (KNPP)
- Clinical guidelines for the management and referral of common conditions. GoK,2009)

Data availability with respect to appropriate care seeking for Malaria and Pneumonia

Data on appropriate care seeking and pneumonia mainly comes from Kenya Demographic and Health Surveys (KDHS), Multi-cluster Indicator Survey (MICS) and the Malaria Indicator Surveys (MIS). The main information sought from the KDHS on care seeking for pneumonia and malaria are the proportion of children with ARI symptoms for whom medical treatment or advice was sought and percentage for whom advice or treatment was sought from a health facility or provider. Although there have been 5 rounds of MICS surveys, the most recent only captures information at sub-national levels. However, for DHS data for both malaria and pneumonia was not at sub-national level. For the malaria indicator survey the data was disaggregated according to the various malaria endemic zones. Information from MICS 5 and 4 are the only ones that are comparable to DHS and malaria indicator surveys.

Some of the questions in the KDHS that relate to malaria include:

- *Had Fever?*
- *Did you seek advice or treatment for the illness from any source?*
- *Where did you seek advice or treatment?*
- *Where did you first seek advice or treatment?*

For the MICS the questions that relate to care seeking for children with malaria are slightly different from the ones asked in the KDHS.

- *In the last two weeks, that is, since (day of the week) of the week before last, has (name) been ill with a fever?*
- *Was (name) seen at a health facility during this illness?*
- *Did (name) take medicine for fever or malaria that was provided or prescribed at the health facility?*
- *Where did you get the (name of anti-malarial from)?*

For the malaria indicator survey the questions asked were almost similar to the KDHS.

Has (NAME) been ill with a fever at any time in the last 2 weeks?

- *Did you seek advice or treatment for the fever from any source?*
- *Where did you seek advice or treatment?*

For both malaria indicator survey and Kenya demographic health survey, these questions were asked for births that occurred in the last five years but for multi-cluster indicator survey, the questions were restricted to the last child in the last two years. Data for pneumonia and malaria are only available in the KDHS and MICS. Some of the questions asked that relate to care seeking for pneumonia is the same as for malaria in the KDHS. However for MICS the questions are slightly different.

The woman is asked the following questions:

- *Has (name) had an illness with a cough at any time in the last two weeks, that is, since (day of the week) of the week before last?*
- *When (name) had an illness with a cough, did he/she breathe faster than usual with short, quick breaths or have difficulty breathing?*
- *Did you seek advice or treatment for the illness outside the home?*
- *From where did you seek care?*

Only Kenya Malaria Indicator Survey (KMIS) 2010 asked questions on knowledge and attitudes on care and treatment of malaria in children. A set of baseline indicators to measure caregivers' ability, opportunity and motivation to seek prompt treatment for fever were investigated in a pilot study prior to the main survey. The pilot survey provided specific questions for inclusion in the main survey which included; perception of severity of fever, importance of seeking care for fever, perceived affordability and availability of ACTs, and perceived efficacy of antimalarials in treating fever.

In the MICS and DHS there are no questions on knowledge and attitudes as the main questions that are asked are those that pertain to practice. However in the multi-cluster indicator survey there were questions on care seeking for malaria in children but data wasn't tabulated in the basic report. According to Kenya Demographic and Health Survey and the Malaria Indicator Survey, appropriate care seeking for malaria and pneumonia is measured using percentage for whom advice or treatment was sought from a health facility or provider.

The following table summarizes the most important sources of data and information from the three sources with respect to behaviours.

TABLE 2.9: Sources of data on care seeking for pneumonia and malaria

Care Seeking	Indicator(s)	Data source	Information on			Information available at sub-national level Yes/No
			Knowledge	Attitude	Practice	
Care seeking for pneumonia	The proportion of children with ARI symptoms for whom medical treatment or advice was sought from a health facility or provider	2014 DHS	None	None	Yes	No
	Children with suspected pneumonia who were taken to a health center/hospital	MICS (5)	None	None	Yes	Kakamega, Bungoma, Turkana
		MICS (4)	None	None	Yes	Homa Bay, Kisumu, Kisii, MigoriNyamira, and Siaya
Care seeking for malaria	Percentage for whom advice or treatment was sought from a health facility or provider	2014 DHS	None	None	Yes	Yes
		MICS (5)	None	None	None	Kakamega, Bungoma, Turkana
		MICS (4)	None	None	None	Homa Bay, Kisumu, Kisii, MigoriNyamira, and Siaya
	Percentage for whom advice or treatment was sought from a health facility or provider	Malaria indicator survey (2010)	Yes	Yes	No	No

Levels and differentials towards appropriate care seeking

Pneumonia

There were about 66 percent of children under-5 years with symptoms of Acute Respiratory Infections whom medical treatment or advice was sought from a health facility or provider—an increase from 56 percent in 2008/9 and 46 percent in 2003. There exists variation with regards to appropriate care seeking for pneumonia. The percentage of respondents who sought advice or treatment from a health facility or provider declines with age as a higher proportion of respondents (77.6%) for whom treatment or advice from a health facility or provider was sought were less than 6 months of age compared to 55 percent for those between 48-59 months. There are variations according to the type of cooking fuel used, depending on whether the respondent sought advice or treatment from a health facility or provider with households using electric or gas cookers having a higher proportion of respondents (75.4%), followed by coal/ignite at 66.5 percent, wood/straw at 64.8 percent and lastly paraffin/kerosene at 61.5 percent. A higher proportion sought advice or treatment from a health facility or provider for male children (67.7%) compared to females (63.7%).

There were rural-urban differentials on seeking advice or treatment from a health facility. There was a higher proportion for whom treatment or advice from a health facility or provider was sought for children in rural areas (66.7%) compared to those in urban areas (63.6%).

There are regional variations on seeking advice or treatment from a health provider or health facility whereby Nyanza and Central regions had the highest proportion at (71%) and (70.3%) respectively, followed by Rift Valley (68.1%), Eastern (67.6%), Coast (66%), Nairobi (65.2%), Western (56.5%) and lastly North Eastern (35.4%).

The proportion of those who sought advice or treatment from a health facility or health provider increases with increase in education whereby a higher proportion of children belonging to women with secondary and above education sought advice or treatment from a health facility or health provider compared to those with primary complete (68.1%), primary incomplete (63.2%) and those with no education (57.1%).

Malaria

According to the 2010 Malaria Indicators survey over 90 percent of mothers with children under-5 who had had a fever in the two weeks before the survey agreed that it is important to seek anti-malaria treatment promptly when a child has fever and believe that antimalarials can cure fever (Division of Malaria Control *et al.*, 2011). In the same survey, over 80 percent of these women disagreed that herbal remedies should be used first in the treatment of fever. Three-quarters of mothers agreed that fever treatment was affordable and that malaria medicines were available.

Sixty-three percent of respondents sought advice or treatment from a health facility or health provider which is an increase from 49 percent in 2008/9 (KNBS and ICF Macro, 2015). Seeking of advice or treatment from a health facility or health provider varies with age whereby children who were between 6-11 months had the highest proportion of respondents who sought advice or treatment from a health facility or health provider followed by those between 12 and 23 months (63%); 62.7 percent for those between 36-47 months; 61.6 percent for those between 48-59 months, 60.8 percent for those between 24-35 months and 58.3 percent for those less than 6 months (*Ibid*).

The 2014 KDHS shows a slightly higher proportion for whom advice or treatment was sought from a health facility or provider for female children (63.1%) compared to male (62%). There were slight differentials of advice sought from rural areas at 62.6 percent compared to urban areas at 62.3 percent. Sixty nine percent of respondents in Eastern province sought advice or treatment from a health facility or health provider followed by Central (68.2%), Nyanza (65.8%), Nairobi (63.3%), Rift Valley (61.6%), Western (51.5%) and North Eastern (49.5%). A higher proportion of respondents (67.5%) who sought advice or treatment from a health facility or health provider had secondary and above education compared to 64 percent who had primary complete education, 61 percent who had no education and 57.1 percent who had primary incomplete education.

Factors associated with care seeking for malaria and pneumonia

Chuma *et al.*, 2010 in a study in the poorest areas of four malaria endemic districts in Kenya found that affordability is a key factor. In their study, about 40 percent chose to self-treat by buying drugs from a shop, while others who visited a formal health facility reported not having enough money to pay for treatment. It was reported that others have to adopt coping strategies such as borrowing money and getting treatment on credit in order to access care. Other factors identified were provider-patient relationship, patient expectations, beliefs on illness causation, perceived effectiveness of treatment, and distrust in the quality of

care and poor adherence to treatment regimes. Availability barriers identified were related to facility opening hours, organisation of health care services, drug and staff shortages. Muthanje, (2010) in a study reported that majority of women (54%) preferred to take their children to hospital/health facility on suspicion of malaria compared to those who self-treated at home (32.7%) or took no action (2.3%) and those who took herbs (2.3%) and dressed their children warmly (7.8%). There was also a positive relationship between level of education and socio-economic status with appropriate care seeking for malaria. Mbagaya *et al.*, (2005) found that majority of women (32.4%) also preferred to purchase drugs over the counter as opposed to taking the children to hospital (30.4%) and other ways –that is self-medication, herbs and taking no action. The length of the illness was also found to be significant to seeking care whereby mothers whose children have lengthy fever tend to take their children to seek appropriate care.

There are studies that have shown that there were no rural-urban differentials in cases of fever (malaria) as the first initial action to treat malaria is to buy medicine from a shop and then later on visit a health facility. However, the age of the baby was found to have a significant effect on care seeking whereby mothers who had children who were less than 5 years were more likely to take their children directly to a health facility compared to those who had older children (Molyneux *et al.*, 1999). Other studies have shown that care-seeking was also shown to differ between seasons due to changes in cash availability and perceptions of illness severity between wet and dry seasons (Chuma, 2005; Chuma *et al.*, 2006). In a study in Bungoma district on a low-cost outreach education (vendor-to-vendor) programme to improve the private sector's compliance with malaria guidelines, the communities' perceptions of different types of treatment was found to hinder prompt access to the most effective treatment (Tavrow *et al.*, (2003).

The degree to which services are available and acceptable to the population plays a critical role in ensuring prompt access to effective treatment. In Baringo district, 74 percent of households reported that the main reason why they chose the formal sector as the first source of malaria treatment (Munguti, 1998) is because the public health facilities were close to where they lived. However since the distribution of health facilities is poor, there are studies that have reported a reduction in the number of patients using formal health services as their distance from health facilities increased while another study reported that the main reason the respondents chose to self-medicate is the health facility is far (Mbagaya *et al.*, 2005; Noor *et al.*, 2003).

In a study on the health seeking behaviour for common illnesses in rural Kenya, mothers were more likely to seek treatment in the cases where their children were suffering from Acute Respiratory Infection (pneumonia) compared to diarrhoea and fever (malaria). However the most common sources of health seeking outside the household for Acute Respiratory Infection, diarrhoea, or fever were drug-sellers (range 39-45%) and private care providers (range 22-24%). There was no difference between rural and urban respondents in the frequency of health seeking in hospitals for under-5 children with symptoms of pneumonia (Burton *et al.*, 2011). Breiman *et.al.*, (2011). A study in Kibera found that majority of children who reported symptoms of acute respiratory illness went to a healthcare facility and in cases where a hospital was not the primary source of healthcare, a higher proportion of the respondents sought advice from a healthcare provider. The distance to health facilities and the cost of healthcare has been found to be a hindrance to health seeking behaviour towards pneumonia (Breiman *et.al.*, 2011). In another study on the barriers to care seeking for childhood pneumonia, respondents reported a lack of information on pneumonia, home management, when to seek treatment and how much the treatment would cost (Bedford *et. al.*, 2014).

Bedford *et. al.*, (2014) found that prolonged waiting times; poor communication between staff and patients; negative previous experiences resulting in carers losing trust in health services; lack of a reliable drug stock at their local health facility and a fear of being tested for HIV when presenting their child for treatment were some of the major barriers to care seeking for children with pneumonia.

2.3.9 Information gaps

1. Most of the data are from the large scale surveys i.e. Multi-cluster indicator surveys and Kenya demographic and health surveys and mainly on practices related to care seeking on pneumonia and malaria. Only the malaria indicator survey has information on knowledge and attitudes.
2. There is lack of data at sub-national level –KDHS only has data at national level while Multi-cluster indicator survey only has data on few select sub-national areas in the last decade.
3. There is no further analysis on the large scale surveys that is able to explain the differences in the levels and differentials over the years and what explains the differentials in care seeking for both pneumonia and malaria.
4. There is a lack of knowledge on the appropriate care seeking for pneumonia as there are studies that have reported a lack of knowledge on respondents on the appropriate care for pneumonia and also the signs and symptoms of pneumonia.
5. Studies have found that in the cases of malaria/fever people choose to take their children to seek appropriate care a few days after the fever was first reported because some choose to self treat at home before taking children to health facilities after several days. Future studies should look into why people choose to self medicate first before seeking appropriate care.
6. Most of the studies on malaria and pneumonia are clinic based and do not focus on the community based barriers that affect care seeking for malaria and pneumonia.

2.3.10 Opportunities

There are opportunities which if harnessed might lead to improvements in early and appropriate care seeking. Some of the opportunities include:

1. There are several policy guidelines and programmes which if properly implemented may lead to improvements in care seeking and thereby improve child survival. An example is Roll Back Malaria Programme, National Guidelines for The Diagnosis, Treatment and Prevention of Malaria 2010 (MOPHS 2010), Kenya National Malaria Policy 2010, Kenya Malaria Communication Strategy 2010-2013.
2. The national malaria day can be used to emphasize the importance of early and appropriate care seeking for malaria.
3. World pneumonia day can also serve as a platform for providing information on the prevention, management and treatment of pneumonia and also the importance of care seeking.

2.3.11 Challenges

1. Poverty is also one of the major hindrances to care seeking due to the costs of antibiotics and anti-malarial drugs.
2. Drug and staff shortages within the health facilities acts as a major barrier to care seeking.
3. Lack of adequate information on appropriate care seeking for both malaria and pneumonia.

2.3.12 ORS/Zinc use for diarrhoea



Community Health Worker (CHW) Jen Owuor gives 3-month-old Jacktone, oral rehydration treatment for diarrhoea as part of the Integrated Community Case Management (ICCM) programme under the Wadagi Initiative in Kambayi, Homa Bay County, Kenya.

Overview

Globally, diarrhoea is the second leading cause of morbidity and mortality for children under the age of 5 after Pneumonia. Diarrhoea together with Pneumonia, account for 29 percent of all child deaths (UNICEF/WHO, 2013; Black *et al.*, 2008). Diarrhoeal diseases account for 17.5 to 21 percent of all deaths in children under-5 years, equivalent to 1.5 million deaths per year in developing countries (Boschi-Pinto *et al.*, 2005). In Kenya, diarrhoea is the second leading cause of death among children under-5 and is responsible for 20 percent of under-5 deaths in Kenya (GoK, 2010).

The WHO and UNICEF recommend low cost Oral Rehydration Salts (ORS) solutions and Zinc supplementations as the first line of treatment in the case of diarrhoea (WHO/UNICEF, 2004). However there are several components that are used for treatment including continued feeding and breastfeeding during diarrhoea episodes and the use of appropriate fluids available in the home if ORS are not available along with increased

fluids in general (WHO/UNICEF, 2004). Zinc was first introduced as a treatment of diarrhoea by the World Health Organisation (WHO) and United Nations Children's Fund (UNICEF) in 2004 (WHO/UNICEF, (2004). The use of Zinc for treatment of diarrhoea has shown to decrease duration and severity, and to prevent subsequent diarrhoea and acute lower respiratory infections over the ensuing 2-3 months while the use of low motility oral rehydration salts solution containing lower concentrations of glucose and salts is used to prevent dehydration and the need for intravenous therapy.

Supplementary Zinc benefits children with diarrhoea because it is a vital micronutrient essential for protein synthesis, cell growth and differentiation, immune function, and intestinal transport of water and electrolytes and thus essential for normal growth and development of children both with and without diarrhoea (Aggarwal *et al.*, 2007; Patel *et al.*, 2005). The use of ORS and Zinc are effective against diarrhoea mortality in home and community settings, and ORS is estimated to prevent 70–90 percent of deaths caused by acute watery diarrhoea, and Zinc is estimated to decrease diarrhoea mortality by 11.5 percent (Fischer-Walker *et al.*, 2010; Munos *et al.*, 2010).

Accelerated action against the main child killers is imperative as countries work to reduce mortality rates in children less than five years of age. The use of ORS and Zinc supplements for treatment of diarrhoea is vital for the reduction of under-5 deaths in the country which will aid in the realization of MDG 4 (reduction of under-5 mortality and 7 (Target 10 – to halve the proportion of people without sustainable access to safe drinking-water and basic sanitation.), SDG 2 and 5 and also the Kenya Vision 2030.

Policy guidelines

1. Child Survival and Development Strategy
2. National Health Sector Strategic Plan II (NHSSP II – 2005-2010)
3. Policy guidelines for the control and management of diarrhoeal diseases in children below five years (MOPHS 2010)
4. Scaling-up Strategy for Essential Treatments in Children under-5 Years in Kenya: Diarrhoea and Pneumonia (MOH, 2011)
5. Integrated Management of Childhood Illnesses strategy (MOH, 1998)
6. The Kenya Health Sector Strategic Plan 2013-2017
7. Kenya National Pharmaceutical Policy (KNPP) (MOMS, 2008)
8. Kenya essential package for health.

Knowledge of ORS and Zinc supplements for use in treatment of diarrhoea

According to the Kenya Demographic and Health Survey 2014, knowledge of ORS for use in the treatment of diarrhoea is high at 92 percent however for Zinc the knowledge of its use for treatment of diarrhoea is low at 17 percent. There are variations in the knowledge of ORS for treatment of diarrhoea by age whereby knowledge of ORS was high for persons between 25-34 years (93.9%) followed by those between 35-49 years (92.5%) and 91.8 percent and 89.2 percent for those between 20-24 years and 15-19 years respectively. A higher proportion of urban (94.9%) residents had knowledge of ORS compared to rural residents (91.6%). Knowledge of ORS also increases with increase in education whereby respondents with secondary and above education had the highest knowledge of ORS (96.4%) compared to those with no education (82.3%). The regional variations on knowledge of ORS were, Nairobi (95.8%), Nyanza (94.7%), and Western (94.7%)—had the highest level, followed by Eastern (93.5%), Central (93.4%) and Rift Valley provinces (91.6%) and lastly coast (89.9%) and north eastern provinces (89.2%).

Respondents between the ages of 25-34 had the highest level of knowledge of Zinc (18.5%) followed by those between 20-24 years (17.8%) and lastly 15.6 percent and 14.6 percent for those between 15-19 and 35-49 respectively. A higher proportion of urban respondents (20.7%) had knowledge of Zinc compared to rural respondents (15.3%). Knowledge of Zinc also increases with increase in education as women with secondary education (24%) and above had the highest level of knowledge compared to those with no education (8.9%). Women in the highest wealth quintile had the highest level of knowledge (21.3%) compared to those in the lowest quintile (10.2%). Women from Nyanza and Western had the highest level of knowledge of Zinc followed by Nairobi (19.7%), Central (17.8%), Eastern (17.5%), Coast (15.2%) and lastly Rift Valley (13.1%) and North Eastern (11.3%) (KNBS and ICF Macro, 2015).

There has also been an increase in the knowledge of ORS as a treatment for diarrhoea from 78.4 percent in 2008/9 to 92.8 percent in 2014 (KNBS and ICF Macro, 2015); KNBS and ICF Macro, (2010), CBS, MOH and ICF Macro, (2004).

Data availability on ORS and Zinc use in Diarrhoea treatment

Data on the use of ORS and Zinc in treatment of diarrhoea is available in large scale surveys such Kenya demographic and health surveys, multi indicator cluster survey. For both the Kenya demographic and health survey and the multi-cluster indicator surveys, the information is restricted to last born births in the last 2 years preceding the survey. The main information sought from the Kenya demographic health surveys and multi-cluster indicator surveys that relate to ORS/Zinc use for diarrhoea include: proportion of children under-5 in the last two weeks who received fluids from ORS packets, proportion of children under-5 in the last two weeks who received fluids from ORS packets and Zinc and the proportion of children under-5 in the last two weeks who received Zinc supplements. The questions that are asked in both the multi-indicator cluster survey, Kenya demographic and health survey are similar in design except the period of recall. The questions that are asked for multi-indicator cluster surveys and the Kenya demographic health survey include:

During this last episode of diarrhoea did (name) drink any of the following:

A fluid made from a special packet called ORS?

A pre-packaged ORS fluid?

A pill or syrup: Zinc?

The Table below summarizes the most important sources of data and information from the three sources with respect to ORS and Zinc use for diarrhoea. Thus the observed differences in practice cannot be attributed to the extent of knowledge or awareness of the practice.

TABLE 2.10: Sources of data ORS and Zinc use for diarrhoea

Care Seeking	Indicator(s)	Data source(s)	Information on			Information available at sub-national level (Yes/No)
			Knowledge	Attitude	Practice	
ORS use for treatment of diarrhoea	The proportion of children age 5 who were given fluids from ORS packets	2014 DHS	Yes	None	Yes	No
	The proportion of children age 5 who were given fluids from ORS packets and Zinc		None	None	None	
	The proportion of children age 5 who were given Zinc supplements		Yes			
	The proportion of children age 5 who were given fluids from ORS packets	MICS (5)	None	None	Yes	Kakamega, Bungoma, Turkana
	The proportion of children age 5 who were given fluids from ORS packets and Zinc					
	The proportion of children age 5 who were given Zinc supplements	MICS (4)	None	None	Yes	Homa Bay, Kisumu, Kisii, Migori, Nyamira, and Siaya

Levels and differentials of ORS and Zinc use in treatment of diarrhoea

According to the Kenya demographic and health survey 2014, 54 percent of the respondents used fluids from ORS packets for the treatment of diarrhoea while 7.2 percent used a combination of fluids from ORS and Zinc for treatment of diarrhoea. The use of fluids from ORS packets increases with increase in age of the child at 31.1 percent of children aged below 6 months followed by 56.1 percent for those between 6 and 11 months, 60.1 percent for those between 12 and 23 months, 49.8 percent for those between 24 and 35 months and 61.4 and 44.4 percent for those between 36-47 and 48-59 months respectively. A higher proportion of male children (56.3%) received fluids from ORS compared to females (51%). Sixty-two percent of the children who received fluids from ORS had bloody diarrhoea while 53 percent had non-bloody diarrhoea. There were rural-urban differentials in the use of fluids from ORS whereby a higher proportion of children in urban areas (57.5%) received fluids from ORS compared to 51.9 percent for children in rural areas. There were regional variations in the use of fluids from ORS whereby Nairobi had the highest proportion of children (63.4%) who had received fluids from ORS while 63.1 percent were from Coast province, 55.3 percent in North Eastern and Nyanza province, 53 percent in Rift Valley, 50.6 percent in Central, 47.2 percent in Eastern province and 45.6 percent in Western (KNBS and ICF Macro, 2015).

The use of fluids from ORS increases with increase in education of the caregiver whereby a higher proportion (57.5%) of children who use fluids from ORS had mothers with secondary and above education compared to 51.6 percent for those with primary incomplete and 51.5 percent for those with no education. Children who belong to higher wealth quintile households had higher proportions of use of fluids from ORS (55%, 55.3% and 54.5% for those in the fourth, middle and highest wealth quintiles) compared to 53.3 percent and 52.1 percent for those in the second and lowest wealth quintile respectively (KNBS and ICF Macro, 2015).

Seven percent of children of respondents reported having both fluids from ORS and Zinc. The use of fluids from ORS and Zinc increases with age as children less than 6 months had the least proportion (1.7%) of users. However peak use of fluids from ORS and Zinc is between 24-35 months at 9.3 percent followed by 6-11 months at 8.9 percent and 12-23 months at 7.9 percent and thereafter declines a little to 5.3 and 4.4 percent for children between 36-47 and 48-59 months. There were gender differentials in use of fluids from ORS and Zinc as a higher proportion (7.9%) of users were male children compared to female children (6.5%). With regards to the types of diarrhoea a higher proportion of respondents (11.1%) who used fluids from ORS and Zinc had bloody diarrhoea compared to 6.9 percent or those with non bloody diarrhoea. A higher proportion of children from urban areas (9.9%) used fluids from ORS and Zinc compared to those from rural areas (5.9%). The use of fluids from ORS and Zinc increases with increase in education as a higher proportion (12.6%) of children who used fluids from ORS and Zinc had mothers with secondary and above education compared to those who had no education (5.7%) and primary incomplete education (4.5%). Children from Coast province were the highest proportion (12.1%) of users of fluids from ORS and Zinc followed by 11.7 percent for Nyanza, 11.1 percent for Nairobi, 8.6 percent for Central, 7.2 percent for North Eastern, Western (4.7%), Rift valley (3.3%) and Eastern (3%) had the lowest. Children belonging to households in the higher wealth quintiles had higher proportions (fourth (11.5%) and highest (10.3%) of use of fluids from ORS and Zinc compared to those in poorer households (lowest (5.4%) and second (4.7%)) (KNBS and ICF Macro, (2015).

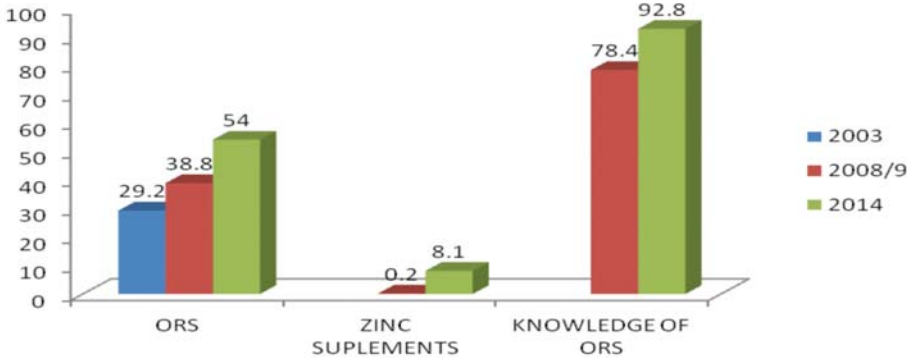
The use of Zinc supplements for diarrhoea treatment is extremely low in Kenya with only 8.1 percent of children reporting use (KNBS and ICF Macro, (2015). Children between 6-11 (10.6%) and 24-35 (10.3%) months had the highest proportion of users compared to 8.6 percent for those between 12-34 months, 5.7 percent for those between 36-47 months, 5 percent for those between 48-59 months and 1.8 percent for those under 6 months of age. There were slight gender differentials with 8.2 percent of female children reporting use compared to 8.1 percent for male children. Children with bloody diarrhoea had higher proportion (11.3%) of users of Zinc supplements compared to 7.8 percent for those with non bloody

diarrhoea (KNBS and ICF Macro, (2015). A higher proportion (11%) of urban children had used Zinc supplements compared to those in rural areas (6.7%). Nairobi (12.8%), Nyanza (12.7%), and Coast province (12.5%) had the highest proportion of users of Zinc supplements followed by Central (9.2%), North Eastern (8.2%), Western (5.1%), Rift Valley (4.5%) and lastly Eastern (3.4%)(*Ibid*). The use of Zinc was found to increase with increase in education whereby children whose mothers had secondary and above education had the highest proportion of use of Zinc supplements compared to those with primary incomplete (4.5%) and those with no education (7.9%)(KNBS and ICF Macro, (2015). The use of Zinc supplements increases with increase in wealth status of the household whereby children belonging to the fourth and the highest wealth quintile had a higher proportion (12.2% and 12.5%) of Zinc supplements use compared to those in the lowest and second wealth quintile at 6.1 percent and 5.2 percent respectively (KNBS and ICF Macro, (2015).

Trends in Zinc/ORS use for diarrhoea and knowledge of ORS

Trends in the use of ORS in the treatment of diarrhoea shows a gradual increase over time from 29.2 percent in 2003 KDHS to the current 54 percent in 2014 KDHS. For Zinc supplements data could only be generated from 2008/9 as Zinc was only introduced as a treatment for diarrhoea in 2004. However there is an increase in the use of Zinc from 0.2 percent in 2008/9 to 8.1 percent in 2014 though the figure is still very low.

FIGURE 2.8: Trends in Zinc/ORS use for diarrhoea and knowledge of ORS



Source: KDHS (Various years)

Factors associated with use of ORS/Zinc for treatment of diarrhoea

Njeri and Murithi, (2013) found that mothers who had knowledge and previous experience of ORS as a treatment for diarrhoea had a higher chance of using it for treating diarrhoeal diseases compared to those who had no knowledge. In a study in Asembo (Siaya County) and Kibera (Nairobi County) there was high level of knowledge of ORS in the use for treatment of diarrhoea with 96 percent and 94 percent reporting knowledge of ORS and 96 percent believing it is beneficial in the treatment of diarrhoea (Olson *et al.*, 2011). The study further reported that caregivers believe that they knew how to prepare ORS and believed that herbs are ineffective or harmful for treating diarrhoea and having a child who exhibited sunken eyes during illness were some of the factors that were associated with ORS use for treatment of diarrhoea (Olson *et al.*, 2011). Otieno *et al.*, (2013) in a study in rural Western Kenya found that most respondents had a good perception of Zinc use for the treatment of diarrhoea and that most caregivers thought Zinc was an appropriate treatment for diarrhoea during teething –as teething was associated with diarrhoea. Health workers also play a major role in use of Zinc for treatment as studies have reported that majority of women who use ORS and Zinc for treatment obtained information and also the products (Zinc and ORS) from

a health worker in a hospital, health facility or clinic (Olson *et al.*, 2011; Otieno *et al.*, 2013; Zwisler *et al.*, 2013). Njuguna, (2014) found that most respondents who gave their children Zinc supplements also gave their children ORS to treat the diarrhoea and when diarrhoea was caused by supernatural forces a child should not be given ORS and Zinc.

Feikinet *et al.*, (2014) found that availability of Zinc and ORS at home leads to the increase in the use of ORS and Zinc. Nduba *et al.*, (2015) found that myths and perceptions such as the use of special herbs and deworming tablets mixed with either blood or alcohol were better than modern drugs in the treatment of diarrhoea –were some of the barriers that prevent use of ORS and Zinc. In a comparative study between India and Kenya, Zwisler *et al.*, (2013) found caregivers in Kenya felt dissatisfied with the taste of ORS and the difficulty of getting a child to drink it as some of the reasons for not using it.

Carter *et al.*, (2015) in a systematic review of studies on harmful practices in the management of childhood diarrhoea reports existence of varying harmful practices across cultures that include; fluid and breastfeeding curtailment, food restriction, and inappropriate medication use. They suggest that programmes need to target not only the behaviours of child caregivers, but the broader social network, because findings show that these practices are often informed by traditional beliefs, popular knowledge, and the instruction of authority figures, including elderly community members and health workers. Carter *et al.*, (2015) notes that measurement of harmful practices appears to be inconsistent and not guided by a conceptual or theoretical framework and most studies focus on general practices in diarrhoea treatment, with harmful practices rarely a primary outcome of interest. They report that multi-country analyses using MICS and DHS data tended to focus on positive treatment practices rather than harmful practices.

2.3.13 Information gaps

1. There should be further research on why the knowledge of ORS is high, yet usage is still low.
2. There should be further research why women prefer to give their children ORS instead of Zinc.
3. There is no data at sub-national level on the knowledge attitudes and practices in relation to ORS and Zinc use for diarrhoea treatment.
4. There should be further research on the large scale survey data on the barriers to ORS/Zinc use for treatment of diarrhoea. Carter *et al.*, 2015 suggest that it is also important to assess harmful practices with nationally representative data and standardized measurements, through the analysis of the most recently available DHS and MICS data.
5. Most studies rely on sub-national population most of them have small sample sizes. Most of these studies are concentrated in Nairobi or Western Kenya with majority of the 25 counties having no studies.
6. The variation in treatment practices by perceived type of diarrhoea highlights the importance of using local terminology in order to capture all episodes of diarrhoea as perceived by the community (cf Carter *et al.*, 2015). There is also the challenge of recall period. Many studies use a recall period of diarrhoea in the past two weeks, but some studies use recall period that range from the past 24 hours to past six months or the “most recent” episode of diarrhoea. Fischer-Walker *et al.*, 2010 highlight the importance of using a shorter recall period for capturing episodes of diarrhoea of varying severity.

2.3.14 Opportunities

1. Since there exists disparities in the use of ORS and Zinc together therefore the co-packaging of both ORS and Zinc in one packet serves as an opportunity to increase both their uses.
2. Development and Training of healthcare workers using the diarrhoea Continuous Medical Education (CME) package by the Ministry of Health and partners such as Kenya Paediatric Association and Clinton Access Health Initiative to assess children suffering from diarrhoea and recommendation of ORS and Zinc as the first line treatment for treatment of diarrhoea serves as an opportunity to improve its use and reduce diarrhoeal diseases and deaths.
3. Approval of Zinc to be administered as an over the counter drug to be used in the treatment of malaria by the pharmacy and poisons board in 2011.
4. Studies are needed to help identify sub-populations that would benefit most in resource-limited settings and to ensure access to Zinc supplementation, especially for those families whose children are most at risk of diarrhoea but may not be able to afford treatments that include Zinc supplements.
5. Zinc supplements and ORS has been made affordable by the government and this will lead to increase in their uses for diarrhoea treatment.
6. The global hand washing day can be used to provide information on the benefits of hand washing in reducing cases of diarrhoea among children.

2.3.15 Challenges

Although the benefits of Zinc supplements are widely known, Zinc is not used to treat most cases of diarrhoea because the known benefits of Zinc supplementation are still not widely appreciated by physicians and health-care workers in developing countries.

2.3.16 Recommendations

- Recruitment of and capacity building for health workers, domestication of National FP and RH policies at county level.
- Health workers should address traditional and cultural beliefs through culturally acceptable communication.
- Sensitize community leaders about safe motherhood and establishing emergency communication services.
- Improve the attitude and behaviour of health workers towards patients.
- Raise community awareness –to transform attitude on seeking for HIV services.

2.3.10 List of reviewed publications

Author	Country	Study type, study population, sample size, year of study	Proportion restricting fluid	Proportion restricting breastfeeding	Proportion restricting food	Drugs administered			
Oyoo et al., 1991 [39]	Kenya	Cross-sectional survey, 6 sites across Kenya, 1990. Caregivers of children <5 years with diarrhoea in the previous 2 weeks, n = 23884 screened	Same or less fluid ^e	Stopped breastfeeding ^g	0-3.1	19.5 - 53.3	Gave any drug (range across clusters)	25.9 - 47.1	
Mirza et al., 1997 [97]	Kenya	Longitudinal study with 24 hour dietary recall, Kibera Slum 1989-1990. Caregivers of children 3-37 months with diarrhoea in the previous 3 days, n = 1496 episodes	Gave less cow's milk than before diarrhoea						
Othero et al., 2008 [7]	Kenya	Longitudinal study, Nyanza Province 2004-2006. Caregivers of children <5 years in reference to most recent episode, n = 927	Offered nothing to drink ^e		Did not eat anything (among all children)	39	Gave anti-diarrhoeal drugs	45.3	
			Offered much less ^e						
			Offered somewhat less ^e						
Burton et al., 2011 [98]	Kenya	Cross-sectional survey, Rural Western Kenya 2005. Caregivers of children <5 years with diarrhoea in the previous 2 weeks, n = 188	Offered same ^e				Gave antibiotic	62.4	
							Gave antimalarial	52.4	
							Gave IV fluid	2.6	
Olson et al., 2011 [42]	Kenya	Cross-sectional survey, Asembo (n = 371) and Kibera (n = 389) 2007. Caregivers of children <5 years with diarrhoea in the previous 2 weeks	Asembo: Stopped fluids other than breast milk and porridge (among those giving fluids in week before illness)	Asembo: Stopped breastfeeding ^g	Asembo: Stopped porridge	9	Asembo: Gave oral medication (not ORS or herbs)	77	
			Kibera: Stopped fluids other than breast milk and porridge	Kibera: Stopped breastfeeding ^g	Kibera: Stopped porridge	36	Kibera: Gave oral medication (not ORS or herbs)	81	
			Asembo: Decreased fluids ^h	Asembo: Decreased breastfeeding ^g	Asembo: Decreased porridge ^h	54	Asembo: Gave injected medication	24	
			Kibera: Decreased fluids ^h	Kibera: Decreased breastfeeding ^g	Kibera: Decreased porridge ^h	69	Kibera: Gave injected medication	28	
			Asembo: Same fluids ^h	Asembo: Same breastfeeding ^g	Asembo: Same porridge ^h	41	Asembo: Gave IV fluids	8	
			Kibera: Same fluids ^h	Kibera: Same breastfeeding ^g	Kibera: Same porridge ^h	18	Kibera: Gave IV fluids	7	
					Asembo: Stopped soft or solid food	10			

Author	Country	Study type, study population, sample size, year of study	Proportion restricting fluid	Proportion restricting breastfeeding	Proportion restricting food	Drugs administered
					Kibera: Stopped soft or solid food 37	
					Asembo: Decreased solid food ^h 54	
					Kibera: Decreased solid food< 70	
					Asembo: Same solid food ^h 41	
					Kibera: Same solid food ^h 23	
					Asembo: Stopped or Decreased feeding (including BF, porridge, solids) 36	
					Kibera: Stopped or Decreased feeding (including BF, porridge, solids) 54	
Omoro et al., 2013 [41]	Kenya	Cross-sectional survey (HUAS), Western Kenya 2007. Caregivers of children <5 years with diarrhoea in the previous 2 weeks. n = 275	Offered same amount to drink 19 Offered less to drink 67 Among those offering less: Somewhat less 52 Much less 38 Nothing 10		Offered usual amount to eat 16	
Nasrin et al., 2013 [91]	Kenya	Cross-sectional survey (HUAS), Western Kenya 2007. Caregivers of children <5 years with diarrhoea in the previous 2 weeks. n = 275				Gave leftover antibiotics at home 16
Zwisler et al., 2013 [68]	Kenya	Cross-sectional survey. 4 Provinces 2012. Caregivers of children <5 years with diarrhoea in the previous 2 months. n = 857				Gave antibiotic 51.3 Gave antimotility agent 10.4
Simpson et al., 2013 [99]	Kenya	Cross-sectional survey Western Kenya (year not specified). Caregivers of children 6–60 month with diarrhoea in the previous 6 months. n = 100				Gave antibiotic (at any point) 64 Gave antimotility (at any point) 13 Gave antibiotic (1st treatment) 26

Source: Carter et al 2015

Author date	Where published	Study type	Sample size	Place of study	Focus area	Recommendations
Gitimu Anne et al (2015)	BMC Pregnancy and Childbirth (2015) 15:9	cross sectional cluster survey 2012	1,205 female respondents (15-49 years), who had children less than five years (0-59 months) at the time of the study	Amref Health Africa intervention project entitled Mama na Mtoto wa Afrika, Makeni County	Factors influencing skilled delivery – education, ANC visits, and distance to health facility	qualitative research including focus group discussions could provide insight into the gender and societal norms
Delva et al 2010	Tropical Medicine and International Health, volume 15 no 5 pp 584–591 may 2010	Cross sectional survey	Facility records between January 2004 and September 2006 extracted from antenatal clinic, laboratory and maternity ward registers	three antenatal clinics in Mombasa and two in rural Kwale district of Coast Province	A Safe Motherhood project in Kenya: assessment of antenatal attendance, service provision and implications for PMTCT, Tropical Medicine and International Health	frequency and timing of antenatal visits did not improve
Adam et al 2014	The Pan African Medical Journal. 2014;18:4	Cross sectional	196 women pregnant, HIV positive attending the ANC/ PMTCT services at the health facility	Coast Province General Hospital	Knowledge and attitude of women on the available PMTCT services at the antenatal clinic of the Coast Province General Hospital	
Juley–Anne Bochaber Mokua	International Journal of Innovation and Scientific Research	Cross sectional	sample size not clearly specified	health facilities within Wareng District of UasinGishu County	Factors Influencing Delivery Practices among Pregnant Women in Kenya: A Case of Wareng District in UasinGishu County, Kenya	
Sydney A. Spangler et al 2014	JAcquir Immune DeficSyndr. Volume 67, Supplement 4, December 1, 2	longitudinal investigation of pregnant women attending rural antenatal clinics		9 government facilities (4 subdistrict hospitals and 5 health centers or dispensaries) supported by Family AIDS Care and Education Services in Migori District	HIV-Positive Status Disclosure and Use of Essential PMTCT and Maternal Health Services in Rural Kenya	HIV-positive status disclosure seems to be a complex yet critical factor for the use of PMTCT and maternal health services in this setting.
Van Maideren et al; 2013	International Journal for Equity in Health 2013, 12:	Kenyan Demographic and Health Surveys various years		National	The main objective of this study was to decompose wealth-related inequalities in SBA	Both health care indicators require a broad strengthening of health systems with a special focus on disadvantaged sub-groups.
Birungi et al 2011	International Perspectives on Sexual and Reproductive Health, 2011, 37(3):143–149, doi: 10.1363/3714311	Cross sectional survey	1,059 respondents age 18-24	Coast, Nairobi, Nyanza and Rift valley	Maternal Health Care Utilization Among HIV-Positive Female Adolescents in Kenya	
Pamela Kay Kohler	PhD Dissertation University of Washington 2012	DSS data cross sectional survey and longitudinal follow up		DSS site, Kisumu and Siaya counties	Access to Prevention of Mother-to-Child Transmission of HIV-1 Services in Kenya: Social and Structural Determinants	
Hodgson et al 2014	PLoS ONE 9(11): e111421, doi:10.1371/journal.pone.0111421	Systematic review	34 studies included in the review	Global	A Systematic Review of Individual and Contextual Factors Affecting ART Initiation, Adherence, and Retention for HIV-Infected Pregnant and Postpartum Women	programmes seeking to expand access to and continued use of ART by integrating maternal health and HIV services must identify and address the relevant barriers and enablers in their own context
Wang et al 2011	DHS Comparative Reports No. 26	cross sectional cluster survey 2012	(DHS) data from 1990 to 2009 in 38 countries	Multi country	Levels and Trends in the Use of Maternal Health Services in Developing Countries	qualitative research including focus group discussions could provide insight into the gender and societal norms

2.4 Appropriate feeding practices



Eunice Phoebe, a beneficiary of the UNICEF supported Operanyacare Programme, feeds her 6 month old daughter Immaculate porridge at their home in Nampacha near Kakamega County, Kenya.

2.4.1 Overview

This section looks at various quantitative and qualitative studies done on the state of appropriate feeding practices for babies 0-23 months, both breastfeeding and complementary feeding with a view to identify gaps and opportunities around knowledge, attitudes, beliefs and practices to engage people and communities around these areas.

Adequate nutrition during infancy and early childhood is fundamental to the development of each child's full human potential and also to improve child survival and promote healthy growth and development (PAHO/WHO, 2004). According to the convention on the rights of the child, every infant and child has a right to good nutrition (WHO, 2004). The period from birth to 2 years is a critical window of optimal nutrition as it lowers morbidity and mortality, reduces the risk of chronic disease, and fosters better development overall. Poor feeding practices can adversely impact the health and nutritional status of children during these formative years with immediate consequences –significant morbidity and mortality and delayed mental and motor development (WHO, 2003).

Breast milk is the best food for children's health and development, because it provides all of the vitamins, minerals, enzymes and antibodies that children need to grow. Breast milk is safe as it is always at the right temperature, requires no preparation, is universally available, affordable, and nutritious and is essential for child survival (UNICEF, 2015). Breastfeeding plays a key role in the life of an infant and child and is recommended that optimal breastfeeding starts within one hour of birth, exclusively breastfeed for 6 months with no additional foods or liquids, including water, and continued breastfeeding until age 2 or longer (with other complementary feeds) (UNICEF 2015, WHO, 2004).

Promotion of appropriate infant feeding practices has been identified as one of the key actions at the individual and family levels to reduce malnutrition, particularly during the key window of opportunity; from birth to the age of two years. Receiving proper nutrition during the first two years of life is vital for the healthy growth and development of a child. It has been particularly noted that healthy height and stature at two years of age is the best predictor of educational and economic success.

To enable mothers establish and sustain exclusive breastfeeding for 6 months and complementary feeding, the World Health Organisation (WHO, 2004) has developed eight core infant and young child feeding indicators to monitor and to guide the feeding practices of young children. These include: (1) early initiation of breastfeeding; (2) exclusive breastfeeding under six months; (3) continued breastfeeding for one year; (4) the introduction of solid, semi-solid or soft foods; (5) minimum dietary diversity; (6) minimum meal frequency; (7) minimum acceptable diet; and (8) consumption of iron rich or iron fortified foods (WHO, 2003).

The early initiation of breastfeeding, within one hour of birth, protects the new-born from acquiring infections and reduces new-born mortality due to the release of colostrum which provides immunity to the baby because of its high nutrient content and the antibodies it contains. Early initiation of breastfeeding is important for both the mother and child as early suckling stimulates the release of prolactin, which helps in the production of milk, and oxytocin, which is responsible for the ejection of milk. Exclusive breastfeeding is defined as the infant receiving breast milk without any additional food or drink for the first six months of life. Exclusive breastfeeding for 6 months has many benefits for the infant and mother as it aides in the protection against gastrointestinal infections, and also helps in quick recovery from illnesses –as breast milk provides all the energy and nutrients that the infant needs for the first months of life (WHO, 2003). Mothers also benefit from breastfeeding in that it helps prevent post-partum haemorrhage, reduces the risk of breast and ovarian cancers, there is more rapid maternal weight loss after birth and serves as a contraception method. In the long term, breastfeeding also reduces risk of type 2 diabetes (UNICEF, 2015 and WHO 2011). Even though breast milk is essential for child survival, globally it has not received the attention it should.

HIV can have a significant effect on infant feeding since it can be transmitted from a mother to child during pregnancy, delivery, and also through breastfeeding. UNICEF/WHO recommends that mothers who are HIV-infected take ARVs and exclusively breastfeed their babies for the first six months, then introduce appropriate complementary foods and continue breastfeeding up to the child's first birthday. It ensures the greatest chance of child survival as it prevents common deadly illnesses such as diarrhoea and pneumonia (WHO, 2009, UNICEF, 2015). This can significantly lower the risk of transmission of HIV to the child. Exclusive breastfeeding is associated with a three or four-fold lower risk of HIV transmission than mixed feeding (Nduati *et al.*, 2000; Newell, 1998). The impact of HIV infection on infant feeding practices is a significant public-health issue because: 1) malnutrition –which is an underlying cause in 45 percent of child deaths, and 2) underweight –which is the leading underlying cause of disability and illness worldwide among infants because of sub-optimal feeding practices (Black *et al.*, 2013).

Complementary feeding practice is also a significant factor that determines the nutritional status of children and at around the age of 6 months, an infant's need for energy and nutrients starts to exceed what is provided by breast milk, and complementary foods are necessary to meet those needs (PAHO/WHO, 2004; WHO 2010). If complementary foods are not introduced around the age of 6 months, or if they are given inappropriately, an infant's growth may falter. According to the WHO, appropriate complementary feeding is:

1. **Timely** –meaning that foods are introduced when the need for energy and nutrients exceeds what can be provided through exclusive and frequent breastfeeding;

2. **Adequate** –meaning that foods provide sufficient energy, protein, and micro-nutrients to meet a growing child’s nutritional needs;
3. **Safe** –meaning that foods are hygienically stored and prepared, and fed with clean hands using clean utensils and not bottles and teats;
4. **Properly fed** –meaning that foods are given consistent with a child’s signals of appetite and satiety, and that meal frequency and feeding method – actively encouraging the child to consume sufficient food using fingers, spoon or self-feeding – are suitable for age.

According to recommendations, infants should be introduced to solid and semi-solid foods at age 6 months, and gradual increases in the amount of food given and frequency of feeding as the child gets older. It is recommended that children who have been breastfed and are between ages 6-23 months should receive animal-source foods and vitamin A-rich fruits and vegetables daily, as food from at least three groups are considered the minimum for breastfed children (PAHO/WHO, 2004). Breastfed infants age 6-8 months should receive complementary foods two to three times a day with one or two snacks; while those between 9-23 months should receive meals three to four times a day with one or two snacks (PAHO/WHO, 2004; WHO, 2008; WHO, 2010a). However in sub-Saharan Africa, the minimum frequencies for feeding children in developing countries are based on the energy output of complementary foods which are based on age specific total daily energy requirements (WHO and UNICEF, 2003. MIYCN 2013).

Malnutrition remains a major threat to the survival, growth and development of children in Kenya and appropriate feeding practice among infants and children is a key area for improving child survival and promoting the healthy growth and development of a child. Poor nutrition at infancy and early childhood increases the risk of infant and child morbidity and mortality, diminished cognitive and physical development. Appropriate child feeding practices leads to improvement of nutritional status of infants and children which was key to achieving MDGs (1 and 4) and now the SDGs (2 and 3) and also the Kenya Vision 2030. The role of optimal nutrition in health and development necessitates increased commitment and investment to enable the country make significant progress in achieving these targets.

In May 2012, the 65th World Health Assembly (WHA) endorsed the Comprehensive Implementation Plan on Maternal, Infant and Young Child Nutrition (MIYCN). The WHA resolution urged Member States to put the MIYCN plan into practice by including proven nutrition interventions relevant to the country in maternal, child and adolescent health services and care. Kenya has since adopted a set of high impact nutrition interventions; however the coverage of these interventions remains low due to inadequate resources and low prioritization of nutrition. The importance of nutrition (appropriate feeding practices) is not only seen as a key area in which child and infant mortality can be reduced but also a critical component for survival, health and development.

There are several policy guidelines that have been developed both globally and nationally in relation to infant and child nutrition. Globally there are several policies and guidelines that guide breastfeeding and complementary feeding practices. These include:

- The Global Strategy for Infant and Young Child Feeding (WHO AND UNICEF, 2003)
- The International Code of Marketing of Breastmilk Substitutes
- The 1990 Innocenti Declaration on the Protection, Promotion, and Support of Breastfeeding
- The 2005 Innocenti Declaration on Infant and Young Child Feeding (Innocenti Declarations)
- ILO Maternity Protection Conventions
- Maternity Recommendations (1919, 1952, and 2000)

- The Maternity Protection Convention
- The 2010 WHO Guidelines on HIV and Infant Feeding
- The 2013 WHO Consolidated Guidelines on the Use of Antiretroviral Drugs for Treating and Preventing HIV Infection
- Global Strategy for Women’s and Children’s Health of which the “Every Woman Every Child” initiative is a supportive Programme. Main strategic areas: reducing financial barriers, creating a stronger policy environment for women’s and children’s health, and safeguarding the rights of young girls and women.

Nationally Kenya has developed several legislative and policy guidelines:

- The 2010 Constitution of Kenya recognises adequate food and nutrition as a human right (Article 43) and that every child has the right to basic nutrition (Article 53)
- Maternal Infant and Young Child Nutrition: National Operational Guidelines for Health Workers (MoPHS 2013)
- The Maternal, Infant and Young Child Nutrition Strategy (2012-2017)
- Infant and Young Child Nutrition Policy (MoPHS, 2013)
- National policy statement on maternal, infant and young child nutrition (2015)
- The Kenya National Nutrition Action Plan (2012-2017)
- The National Infant Young Child and Feeding Strategy 2007-2010 (MoH, 2007)
- Child Survival Development Strategy 2008 (MoH, 2008)
- The Kenya Food Security and National Policy (2011)
- Kenya Health Policy 2014–2030
- Breast Milk Substitutes and Control Act of 2012
- The Nutritionists and Dieticians Act of 2007, which requires all dieticians and nutritionists to be registered with the Kenya Nutritionists and Dieticians Institute (KNDI) in order to legally practice
- Integrated Management of Childhood Illness guidelines.

In addition there are several interventions and guidelines that have been developed in Kenya to improve appropriate feeding practices. In 2007 the Government of Kenya launched the Operational Guidance and Young Child Feeding in Emergencies (2007). Other initiatives aimed at the promotion of appropriate infant/child feeding practices include Baby Friendly Hospital Initiative (BFHI) which was developed by WHO and UNICEF and adopted by the Ministry of Health in Kenya to promote breastfeeding in maternity wards worldwide. The Baby Friendly Community Initiative (BFCl) aims at promoting and supporting breastfeeding at community level and providing support for mothers when they leave hospital. The ‘Malezi Bora’ campaign initiative of the Ministry of Health with support of UNICEF is focused on supplementation and distribution of Vitamin A two times in a year (in May and November) – because for children under the age of six it is necessary to receive one vitamin tablet every 6 months. Malezi Bora is a Swahili phrase meaning “good upbringing”. Malezi Bora weeks or child health weeks are observed bi-annually in the health calendar of Kenya, –in May and November. The campaigns include education on nutrition and feeding practices for young children and mothers.

The Second International Conference on Nutrition (ICN2) organized by the Food and Agriculture Organisation of the United Nations (FAO) and WHO, has set a Framework for Action that set out the strategies, policies and programmes that need to be implemented to “end hunger, achieve food security and improve nutrition” in line with the likely post-2015 UN development agenda. The rallying theme for mothers and children is that “*malnutrition hurts most in the earliest stages of life and special efforts are needed to address the nutritional needs of mothers before and during pregnancy, and of infants during the ‘first 1000 days’ from conception to the age of 2*” (WHO/FAO 2014).

2.4.2 Data sources

Quantitative data

Quantitative studies on appropriate infant feeding practices mainly come from the Kenya Demographic and Health Surveys (KDHS), Multi-cluster Indicator Surveys (MICS) and the KABP Studies. Reference was made to information about the last born births in the last 2 years preceding the survey. The main information sought from these surveys that relate to appropriate infant feeding practices include: the proportion of infants who were breastfed within 1 hour of birth, exclusive breastfeeding for under 6 months of age, continued breastfeeding at 1 year, continued breastfeeding at 2 years, introduction of appropriate complementary foods, median duration (in months) of exclusive breastfeeding, minimum dietary diversities, minimum meal frequency, proportion of children who had the recommended three infant and young child feeding practices and proportion of young children given iron rich foods or fortified foods and supplements (6-23 months). Some of the questions that are asked include:

- *How long after birth did you first put (NAME) to the breast?*
- *For how many months did you breastfeed (NAME)?*
- *Did (NAME) eat any solid, semi-solid, or soft foods yesterday during the day or at night?*
- *Did (NAME) eat any solid, semi-solid, or soft foods yesterday during the day or at night?*

For MICS the questions are slightly different and more detailed:

- *How many times did (name) eat solid, semi-solid (mushy) foods?*

Although there have been five rounds of MICs surveys, the most recent only captures information at sub-national levels however for DHS data for appropriate feeding practices there was no data at sub-national level.

Qualitative data

Review of qualitative evidence related to appropriate feeding practices was sort from studies done at national and sub-national levels. In Kenya, studies on appropriate feeding practices and care seeking behaviour have only been conducted in a few districts that have registered high prevalence in child and maternal morbidity and mortality. Majorly in Nyanza (Homa Bay, Kisii, Migori, Kisumu, Siaya), Coast (Mombasa, Kilifi, Kwale), Western (Kakamega, Busia, Bungoma), Eastern (Mwingi), Central (Maragua), Rift Valley (Kapsabet, Baringo), Nairobi (slums) and ASAL regions (Wajir, Samburu, Turkana, West Pokot). Adherence to MOH guidelines on breastfeeding was also generally reported as low in all these areas, despite demonstrated awareness by participants that breast milk contains complete nutrition for the baby.

Data were extracted and organized under the following headings: appropriate infant and young child feeding practices –benefits of breastfeeding, breastfeeding initiation and duration, exclusive breastfeeding,

complementary feeding, factors that influence appropriate feeding practices, barriers to appropriate feeding practices, gaps and recommendation.

Although the health benefits of breastfeeding are well documented and initiation rates have increased over the past 10 years, a third of the mothers wean before the recommended 6-months postpartum because of perceived difficulties with breastfeeding rather than due to maternal choice.

Women least likely to breastfeed are those who are young, have low income, are employed full-time, have unintended pregnancy, have negative attitudes towards breastfeeding, have low confidence in their ability to breastfeed. Support from partner and peer support intervention promotes positive breastfeeding behaviours and should be encouraged.

2.4.3 Knowledge on appropriate feeding practices

Quantitative studies

7 Studies: *Murage et al., (2011), KAPB Studies (Mbugua 2014, Meme 2013, Ndungu 2015)*

Qualitative studies

11 studies: *(Webb et al. 2012, Matsuyama et al. 2013, Murage et al. 2008, Thuita et al. 2015, Nduati et al. 2008, UNICEF 2007, Nyanga et al., 2012, Wapanga 2013, Sellen et al., 2007, Ochola et al., 2014, Murage et al., 2015)*

Infant and child feeding practices

Studies done in Kenya reported broad knowledge about breastfeeding and its benefits. Those interviewed mentioned that breast milk had all the nutrients that a baby needs for growth. Study participants however, demonstrated low awareness about the importance of the various components of breastfeeding, such as initiation of breastfeeding immediately after delivery, frequency of breastfeeding, and when to stop breastfeeding. What they knew was crowded with myths and misconceptions which was found to have an effect on early initiation of breastfeeding, whereby some women did not understand the importance of colostrum, while others believed it might cause certain diseases while others believed it was dirt (Murage et al., 2015, Mbugua 2014, Thuita et al., 2015, Nduati et al., 2008). Studies reporting inappropriate breastfeeding practices in most parts of the country were mostly stemming from lack of knowledge on recommended feeding practices.

Exclusive breastfeeding and complementary feeding

The Kenya Ministry of Health (MOH) and the World Health Organisation recommend exclusive breastfeeding for the first six months of a child's life for optimal growth and development. In Kenya, breastfeeding is universal, with most mothers (97%) breastfeeding their children for up to two years (median duration: 20 months). Nonetheless, this knowledge does not translate into the practice of exclusive breastfeeding. The practice of optimal breastfeeding from birth to 6 months (early initiation and exclusive breastfeeding) though, has shown marked increase, from 32 percent in the 2008-09 KDHS to the current 61 percent (KNBS and ICF macro 2015). There are rural-urban and regional differences. Urban women had a higher (3.7 months) median duration of exclusive breastfeeding compared to rural women (3.0 months). Women from Central region had a higher (4.3 months) median duration of breastfeeding compared to women from the other regions; Coast (3.8 months), Nyanza and Western (3.4 months) and Eastern (2.5 months). In a study on the factors influencing knowledge and practice of exclusive breastfeeding in Nyando district Kisumu County,



A mother breastfeeds her child at the Lodwar County and Referral Hospital in Turkana County, northern Kenya.

knowledge on exclusive breastfeeding was low (33%) (Nyanga *et al.*, 2012). Knowledge was found to have a significant effect on practice as those who had knowledge on exclusive breastfeeding were more likely to practice exclusive breastfeeding compared to those who are not aware (Nyanga *et al.*, 2012).

Complementary feeding should start at 6 months, when breast milk is no longer sufficient to meet the nutritional needs of growing infants, with continued breastfeeding well into the second year of life. When complementary food is introduced before 6 months, children are vulnerable to malnutrition due to inappropriate diets during this transitional phase (WHO, 2011). With regard to the duration of breastfeeding, studies show mixed views as to how long children should be breastfed. Duration of breastfeeding was said to be highly variable with some not breastfeeding at all, others breastfeeding for a few months, and others for a year, 2 years and beyond 2 years. The shortest duration was perceived to be among young mothers, working mothers and women participating in commercial sex work (Kimani-Murage *et al.* 2011). Responses about the appropriate age at which to introduce solid foods varied. Introduction of other foods started as early as 2 weeks and intensified at 2 to 3 months. At the desired age of 6 months, when other foods should be introduced, most children were already eating soft food and liquids. In all the study areas, it was noted that before the child started eating food from the family pot, the main method of cooking the child's food was boiling followed by mashing. Force-feeding was reported as a cultural practice in some communities, referring to the practice of covering a baby's nose during feeding so that the child will swallow and eat quickly. This introduction of complementary foods before 6 months was one of the indicators of lack of knowledge about complementary feeding.

Documents show it is common to introduce other foods and liquids to the infant's diet before 6 months. In the areas under study, introduction of other foods was based on the consistency of the feedings. These were classified as: From 0 to 2 months, the consistency of the foods was liquid (for example when porridge was given, it was very light). Other liquid feedings given were animal milk, warm water, and herbal concoctions. In Oloitokitok, ghee and milk cream were given, although the consistency was not clear from the respondents. At about 2 to 3 months, the consistency of the feedings became semi-solid, and in some cases, enriched with margarine or animal milk. In poor areas such as Ganze in Kilifi, porridge was enriched with salt. Introduction of food in most areas started at this age. By the time the child was 4 to 6 months, the consistency of the food became solid but soft. Most respondents reported giving a staple food such as ugali in soup and vegetables. For example, in Mumias, ugali was given with soup and mrenda (a vegetable). By the time children are 1 year old, they eat solid food from the family pot. (NARESA *et al.*, 2011).

HIV and appropriate feeding practices

HIV is considered an important factor affecting breastfeeding practices. Exclusive breastfeeding by an HIV-positive woman was perceived as a measure that would ensure that the child would not become HIV infected. Documents record inconsistency in the way the feeding recommendations for HIV-positive women were understood. Some respondents reported that an HIV-positive woman should not breastfeed at all and instead should give infant formula or animal milk, some favoured breastfeeding, and others favoured breastfeeding but only for a short time (Kimani Murage *et al.*, Kenya, 2015). The range of beliefs reported suggests a general lack of knowledge among the population about optimal infant and young child feeding within the context of HIV and the need for wider dissemination of national recommendations. HIV-positive women who breastfed also felt stressed that they were likely to infect their children. The fear of infecting the baby was real among those who breastfed. While some people may be informed about the policy on extended breastfeeding for 1 year for HIV-positive women, there is fear of extended breastfeeding beyond 6 months as the child may have developed teeth at 6 months, and may bite the mother, leading to infection of the baby with HIV. It was noted that HIV-positive women need more knowledge about infant and young child feeding, especially during introduction of complementary foods. A respondent in an FGD in Kwale quoted:

“If you decide it's food, you give it [the baby] food, if you decide it's breast milk you give it breast for six months; do not mix; if food, food only without breast... (otherwise) you will infect the child”.

Exclusive breastfeeding for six months was also perceived as a strategy for prevention of mother to-child transmission of HIV (PMTCT) and not as nutritional benefits of breastfeeding. It was reported that some people said they avoided exclusive breastfeeding even those who are HIV positive so that they are not associated with HIV, and some were said to brush off advice on exclusive breastfeeding by saying they are not HIV-positive:

“If I go and tell my friend not to give the baby food but breastfeed she will answer me back rudely and claim I think she has HIV. So it's good people like you to tell them...Some people believe those who breastfeed exclusively for six months are the mothers who are HIV positive”.
FGD, Young Mothers, Korogocho.

This was because of the infant and child feeding information disseminated to HIV mothers by health care workers that focused on exclusive breastfeeding and the counselling emphasised strict adherence, followed by rapid weaning for HIV-positive women. (Kimani Murage *et al.*, Kenya, 2015).

Mwanyumba *et al.*, (2002) and Ndonga *et al.*, (2015) found that adherence to exclusive breastfeeding was found to be improved if the partner was aware of the HIV status of the mother and involved in the decision whether to breastfeed or formula-feed. In a study in Nyanza province, women who had disclosed their HIV status were more likely to exclusively breastfeed compared to those who did not know their status or those who were negative.

2.4.4 Individual and community attitude towards exclusive breastfeeding and complementary feeding

Through qualitative studies, perceptions regarding the factors affecting the practices have also been explored. There is a widespread cultural perception that breast milk is not enough to meet a child's needs during the first six months of life. Most communities believe that exclusive breastfeeding is not a feasible practice. Ironically, this belief is also held by health workers, who should be disseminating information in line with MOH guidelines. This perception was common and prevalent in most regions and was closely linked to peer pressure that influenced mothers to introduce other foods early and general lack of community support for optimal infant and young child feeding practices. *“For some, milk alone cannot be enough . . . You will have to boil for them water because they cannot get satisfied with that milk. If you give them breast milk, they continue to cry because they are not satisfied, so you will have to boil water for them.* (Thuita FM *et al.*, (2011), (Balogun *et al.*, (2015)).

In many study areas, the perception of inadequate milk supply featured prominently among the reasons that women do not exclusively breastfeed (NARESA *et al.*, (2011), Nduati *et al.*, (2008), Thuita *et al.*, (2008), UNICEF (2007). This perception was sometimes based on the fact that women themselves did not eat properly, as well as on a general belief that breastmilk from any woman is simply inadequate for six months. This belief is reinforced regularly by older women, who often care for infants while their mothers go to work, by family members who buy or give food to infants when they cry, and by community norms that suggest a mother is neglectful when she gives nothing other than breast milk to an infant. These influences can be particularly powerful for younger mothers, who rely more heavily on older women for advice and guidance and are likely to lack confidence.

A baby crying was also linked only to the idea of the baby being hungry and nothing else. This creates pressure on the mother to introduce other food and reinforces the belief that breast milk is insufficient for the baby in the first six months of life. This practice of solving crying with other foods could lead to a vicious cycle that continually worsens infant and young child feeding practices; a young infant who eats foods other than breast milk is more likely to become ill or to be inadequately fed, thus giving the infant more reasons to cry.

Perceived burden of work was also seen as affecting the use of appropriate infant feeding practices. Studies show there is a lack of social/community support in relation to exclusive breastfeeding. A woman who does not engage in economic activities (for example a stay-at-home mother) is sometimes perceived as lazy, while those who go out to work are idealized as hardworking.

Perceived belief that baby boys should be breastfed more than baby girls stems from gender norms reported in most patriarchal communities and mothers reported feeling dizzy while breastfeeding baby boys, because boys are perceived to be hungrier and stronger. Hence, solid foods are introduced earlier for boys than for girls.

2.4.5 Beliefs and social norms

Some of the qualitative studies give explanations as to why exclusive breastfeeding for the first six months is not common amongst most communities, despite the respondents' awareness of the nutritional value of breast milk. The introduction of complementary foods occurs before 6 months, in fact as early as 2 weeks and intensifies at 3 months.

Culture exerts both positive and negative influences on breastfeeding practices. Culture may hinder the adoption of some of the WHO/UNICEF recommended infant feeding practices, because of the perceptions and norms associated with these practices (NARESA *et al.*, (2011), UNICEF (2007)). In qualitative, rural studies, mothers reported practising mixed feeding because of family and community pressure. Non-compliance with cultural practices leads to quarrels with husbands, mother-in-laws or female village elders, with the threat of curses. Findings showed that delayed initiation of breastfeeding, pre-lacteal feeding and failure to practice exclusive breastfeeding were widespread. This was because of traditional beliefs and practices strongly influencing infant feeding practices. These traditional beliefs and practices were maintained by elderly females, males and husbands.

Taboos and beliefs related to breastfeeding was commonly mentioned in qualitative studies which affected exclusive breastfeeding. If breached the baby will be immediately weaned off, or given traditional herbs to avert evil and ill health. For instance, extramarital sexual relations for the breastfeeding mother or father is prohibited, and also for a mother who gets pregnant while still breastfeeding (Matsuyama *et al.*, 2013). Communities in Western, Nyanza and Rift Valley believed that one should not continue breastfeeding if she has sex with a man who is not the father of the child as this will drastically affect the breastfeeding child as the child may get 'chira' (cultural disease in the Luo community) and become thin. Equally, if the father of the child has extramarital affairs he should also not touch the baby otherwise the child will fall sick. The respondents indicated that some children are not breastfed optimally due to untimely unintended pregnancies. They believe that if one falls pregnant, she should not continue breastfeeding as this will have negative effects on the breastfeeding baby. The child would have to be given traditional medicine (Webb-Girard *et al.*, 2012). If the breast produces milk when the mother is pregnant, the foetus is likely to die. Other beliefs and myths included that if one breastfeeds in public, a person with an 'evil eye' may look at them and this may cause the breasts to have sores or cause ill health in children; if one quarrels with her husband or a neighbour, one cannot breastfeed until a cultural ritual to cleanse her and the baby is performed. (Matsuyama *et al.*, 2013).

There were beliefs that if a child breastfeeds for too long, they would become foolish, while others believe that breastfeeding a baby after a gap of a whole day may cause illness to the baby such as diarrhoea. Still there are those who believe that if a child has delayed walking, if you stop breastfeeding the baby will start walking. Others considered breastfeeding as a way of family planning and to conceive they must stop breastfeeding first. They believe that one cannot conceive while breastfeeding, hence they do not use modern contraceptives when breastfeeding and they often end up with unplanned pregnancies. Conversely, if they want to conceive, they stop breastfeeding (Nduati *et al.*, 2008)

Other people believe that modern family planning methods would harm them, they believed that it would reduce milk production or change the colour of the milk. Religious teachings sometimes determine breastfeeding practices. For example, according to the Quran, a child should be breastfed for exactly 2 years, but one should not exceed the 2 years even by one day. There are those who also reported that they do not seek medical treatment because they believe in traditional medicine for their healing or belong to a religious sect who does not take their children to hospital. These groups of people lack the recommended information on adequate infant and child feeding practices. (Webb-Girard *et al.*, (2012), Nduati *et al.*, (2008))

2.4.6 Practices/Behaviours

Although early initiation of breastfeeding among neonates is important to ensure establishment of lactation, initiation of breastfeeding is delayed in most cases. The reasons for delayed initiation vary from region to region. Giving pre-lacteal feeds before the initiation of breastfeeding is a widespread practice. Variety of cultural practices observed in some communities related to breastfeeding restricted the initiation of breastfeeding immediately after delivery (NARESA *et al.*, (2011), Nduati *et al.*, (2008)). Case studies reported that newborns were kept away from the mother until the mother or baby goes through ritual cleansing of herbs. It was also believed that a woman should not breastfeed her new-born child, until the mother or infant is given a herbal solution. Some cultures in Oloitokitok, Mombasa, Kilifi believe that the stomach must be cleaned before the initiation of breastfeeding. Some of the materials used to clean the stomach are ghee, cream, salt-sugar solution, herbs, warm water.

“I breastfed him when I got out of the hospital and when I noticed that he had stomach upsets I introduced him to water”.

*(IDI, Young Mother, Viwandani). (Matsuyama *et al.*, 2013)*

In Kwale and Kilifi, a mother does not initiate breastfeeding in the first three to seven days. The colostrum is expressed out, discarded and not given to the baby as it is considered to be dirty and cause diseases such as leprosy or eye disease. In these first few days, the child is given warm water, other milk, and light porridge (Matsuyama *et al.*, 2013). According to traditional knowledge, the early introduction of water, other pre-lacteals and complementary foods is designed to enhance child survival. By exposing the infant to contaminants early, thereby increasing diarrhoeal morbidity and mortality, these instead achieve the exact opposite of the WHO rationale. The salt-sugar solution is particularly dangerous, putting the baby at risk of hypernatremia, a condition that may lead to brain damage and death.

In most study areas, poverty was cited as a major impediment to exclusive breastfeeding. Most mothers work outside the home to supplement the family income and therefore leave their infants in the care of housemaids, grandmothers, siblings, neighbours or a sub-standard day care center for long hours –who may not feed the children adequately because they lack adequate knowledge on feeding practices. Sometimes, infants are given sleeping pills or alcohol to make them sleep the whole day while mothers worked. Exclusive breastfeeding for six months was therefore not perceived as feasible because of maternal workload and family demands. Despite working outside the home, women do not commonly express breast milk, and yet the mothers stayed away from their children for long hours and hence could not sustain lactation. Expressing breast milk in most of these communities is not a common practice because it was considered culturally unacceptable, it is a taboo seen to offend the ancestors and it was believed to reduce the flow of milk.

Cultural practices resulting from the influence of respected members of the community or family also stood out as a significant barrier to the use of appropriate infant and young child-feeding practices. *“You see these women here; they do what the mother who gave birth to them does. I feed only foods which I know are our tribes’ foods. My mother-in-law will think I am not taking care of children, if I don’t start giving them food at an early age after birth.”* (Thuita FM *et al.*, (2011)).

Studies have found out that the influence of family members—especially grandmother, mother-in-law and men whom they respect play key role to influence maternal decision on choice of infant feeding practice. Mostly they advise introducing complimentary foods like porridge, cow’s/goat milk, bananas, potatoes. The studies noted that although health providers were the most trusted source of infant and young child feeding information, they often could not be consulted because they were far away. Mothers were left to consult authoritative family figures: mother-in-law, older women, husbands, peers, and CHWs. They encouraged them

to introduce other foods, for cultural reasons and influenced uptake of practices that are not recommended. These studies suggest that it is difficult to practice exclusive breastfeeding in prevailing social conditions where family members do not understand the value of exclusive breastfeeding or replacement feeding especially in situations where the mother is HIV positive (Wapangana *et al.* (2013), Thuita FM *et al.*, (2015), Thuita FM *et al.*, (2011)).

Male involvement in infant and young child feeding is also one of the socio-cultural factors that influence exclusive breastfeeding. Fathers were found to hold some power over infant feeding because of the financial assistance they provided, although the responsibility of feeding was left to the mothers.

Although they were not directly involved in infant and young child feeding; their role was mainly to provide food for children and the breastfeeding mother. Areas that reported lack of male involvement identified men's alcohol abuse as the reason. Male alcoholics neglect the family and domestic violence is common causing a lot of stress to the breastfeeding mother. Women who are in abusive relationships and experiencing marital stress are not able to adequately feed their children.

Others compete for attention with the baby and sometimes ask the mothers to stop breastfeeding for this reason. Certain housing structures do not offer a conducive environment for breastfeeding. The option of the mother sleeping with the baby on the same bed sometimes raises conflict with her spouse as the bed is also small. Mothers are often forced to stop breastfeeding prematurely.

Levels, trends and determinants of appropriate infant feeding practices

National and regional studies

Early initiation of breastfeeding is measured by the percentage of babies who are breastfed within one hour of birth. According to KDHS 2014, 62 percent of babies were breastfed within one hour of birth which represents an increase from 58 percent in 2008/9 and 52 percent in 2003. KDHS does not however, record data at sub-national level (KNBS and ICF Macro, 2015).

According to the KDHS 2014, respondents who were assisted with a traditional birth attendant had the highest percent of babies' breastfed within one hour of birth (64%) compared to 62 percent for those who were assisted by a health professional. Rural women had a higher percentage (63%) of babies' breastfed within one hour of birth compared to those in urban areas (61%). Women with no education had a higher proportion (76%) of babies' breastfed within one hour of birth compared to 65 percent for those with primary education-complete and 59 percent for those with secondary and above education. There were small differences with regards to place of delivery and percentage of babies breastfed within one hour of birth. There was no difference in the proportion of babies breastfed within one hour of birth between those delivered in a health facility and at home. There were wide regional differentials on the proportion of babies' breastfed within one hour of birth. North Eastern province had the highest proportion (81%) of babies who were breastfed within one hour of birth followed by Rift Valley (69%) and Coast with 62 percent. Nyanza, Western and Nairobi having 58 percent 52 percent and 61 percent respectively. Central having the lowest proportion of babies breastfed within one hour at 48 percent (KNBS and ICF Macro, 2015).

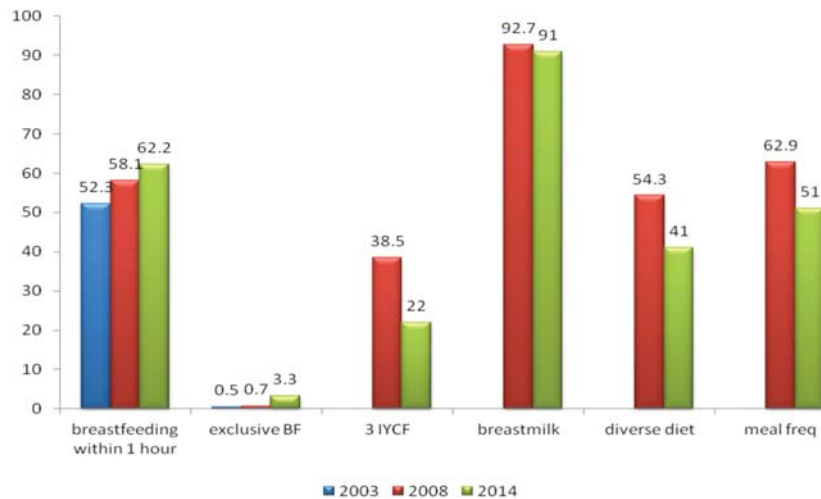
Exclusive breastfeeding is classified into two components: duration of exclusive breastfeeding (median duration in months of exclusive breastfeeding) and exclusive breastfeeding in months for children under 6 months of age. Sixty-one percent of infants under 6 months of age have been exclusively breastfed. There was an increase in the median duration of exclusive breastfeeding from 0.5 months in 2003 to 0.7 months in 2008/9 and 3.3 months in 2014. There were rural-urban differentials in the median duration of breastfeeding whereby urban women had a higher (3.7 months) median duration of exclusive breastfeeding compared

to rural women (3.0 months). Women from Central region had a higher (4.3 months) median duration of breastfeeding compared to women from the other regions, followed by Coast (3.8 months), Nyanza and Western (3.4 months), while women from Eastern province had the lowest median duration of breastfeeding at 2.5 months. Median duration of breastfeeding increases with increase in education whereby women with secondary and above education and those with primary education had the highest median duration of exclusive breastfeeding (3.4 months) compared to women with no education –who had the lowest median duration of breastfeeding at 2.8 months. Median duration of breastfeeding also increases with increase in wealth as women in the fourth highest wealth quintile had the highest median duration of breastfeeding (4.1 months) compared to women in the lowest wealth quintile at 2.9 months (KNBS and ICF Macro, 2015).

Murage *et al.*, (2011) also found a relationship between marital status and cessation of breastfeeding. Marriage had a positive association with practice of exclusive breastfeeding whereby women who were not in union, particularly those who were formerly married were more likely to stop breastfeeding their infants than women who were in union. Unemployed women were also likely to exclusively breastfeed compared to employed women. Early and single motherhood was found to have an influence on breastfeeding practices whereby teenage mothers would alter their breastfeeding patterns because they were concerned about their image in the community, while others were reluctant to exclusively breastfeed their young ones because they are concerned about their body image. (NARESA *et al.*, 2011)

The introduction of solid or semi-solid food to infants around the age of 6 months, breastfeeding through age 2 years, gradual increases in the amount of food given and frequency of feeding as the child gets older are the recommended appropriate infant feeding practices. There has been a decline in the minimum of 3 infant young child feeding practices from the previous KDHS (2008/9) to KDHS 2014 whereby the proportion of children receiving breast milk or milk products has reduced from 92.7 percent in 2008/9 to 91 percent in 2014. About 54 percent of children had an adequately diverse diet in 2008/9 compared to 41 percent in 2014. Ninety-one percent of children received breast milk or milk products, 41 percent of the children had an adequate diverse diet (i.e. they had been given foods from the appropriate number of food groups) and 51 percent had been fed the minimum number of times appropriate for their age. Feeding practices for 22 percent of infants and children met the minimum standards for the three infant young feeding practices however this is a reduction from 39 percent observed in 2008/9. The likelihood of children being fed according to the 3 infant young feeding practices increases with age as a high proportion of children between 18-23 months had the minimum standards of infant young feeding practices compared to 16.8 percent for children between 6-8 months. A higher proportion (31%) of children in urban areas had been fed according to the minimum standards of the 3 infant young child feeding practices compared those in rural areas (17%). The likelihood of children being fed according to the 3 infant young feeding practices increases with increase in education whereby a higher proportion of women with secondary and above education (33%) had children fed with the minimum standard 3 infant young child feeding practices compared to women with no education (8%) (KNBS and ICF Macro, 2015).

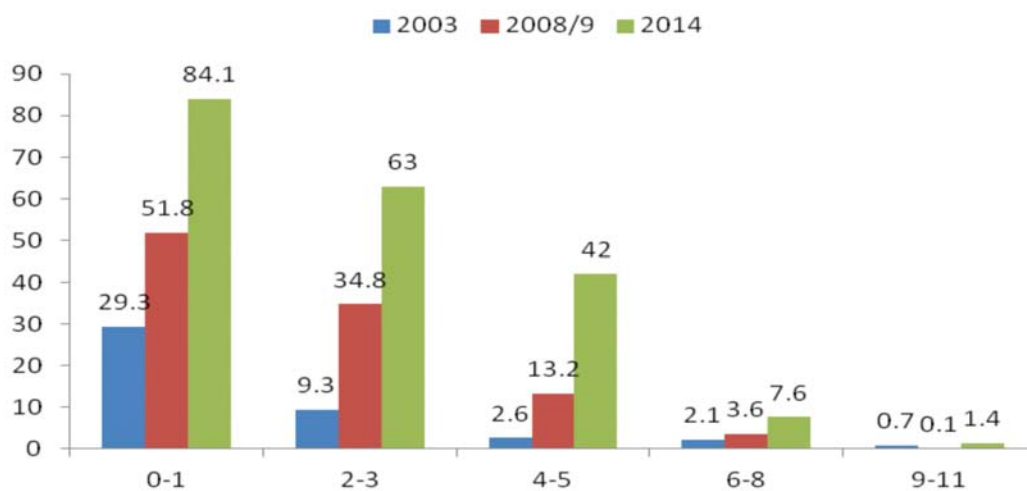
FIGURE 2.9: Trends in the appropriate infant feeding practices



Source: KNBS and ICF Macro, (2015); KNBS and ICF Macro, (2010), CBS, MOH and ICF Macro, (2004)

The figure below shows trends in breastfeeding status by age. The practice of exclusive breastfeeding within the first six months by age has been increasing overtime.

FIGURE 2.10: Trends in proportion of children exclusive breastfeeding by age in months KDHS various



Source: KDHS (Various years)

In summary, the percentage of children age 6-23 months fed in accordance with the three recommended IYCF practices decreased between 2008-09 and 2014, from 39 percent to 31 percent (KNBS and ICF macro 2015). Children in rural areas or whose mothers are in the lower socio-economic strata are less likely to feed in accordance with the three recommended IYCF practices. Appropriate feeding increases with increase in mother's education and household wealth. The practice of appropriate infant feeding is however declining but there are remarkable improvements in exclusive breastfeeding according to KDHS reports.

Place of delivery had a significant effect on the introduction of complementary feeding as mothers who delivered at home were more likely to introduce complementary feeding much earlier compared to those

who delivered in a health facility (Murage *et al.*, 2011). Child's sex, the mother's marital status, her ethnicity, and her level of education, the desirability of the pregnancy of the index child, the place of delivery were some of the predictors of early introduction of complementary foods whereby male children were more likely to be introduced to complementary foods much earlier because their mothers believed that breast milk was not sufficient Murage *et al.*, (2011).

Sub-National Studies (Quantitative)

TABLE 2.11: Quantitative Studies MICS

Indicators	MICS Preliminary 2013/14			MICS 2011					
	Kakamega	Bungoma	Turkana	Homa Bay	Kisumu	Kisii	Migori	Nyamira	Siaya
Early initiation of breastfeeding	30	50.8	54	41.3	43.1	47.9	39.6	40.5	33.2
Exclusive breastfeeding for children aged 0 to 5 months	34	43.1	68.7	35	38.5	41.6	35.6	37.1	28.7
Minimum dietary diversity of children 6-23 months	38.8	41.8	9.4	55.2	42.9	64.5	62.6	71.1	64.7
Minimum meal frequency of children 6-23 months	68.9	49.2	18	26.2	19.8	32.9	40.7	38.9	34.1

Table 2.11 above represents Multi-indicator Cluster Survey (MICS) for 2011 and 2013/14 key findings on appropriate feeding practice for infants and young children in Nyanza (Homa Bay, Kisumu, Kisii, Migori, Nyamira, Siaya), Western (Kakamega and Bungoma) and Turkana.

The 2013/14 findings shows that early initiation of breastfeeding (within one hour) is highest in Turkana and Bungoma (54% and 50.8%) but lowest in Kakamega (30%). Nyanza MICS registers Siaya (33.2%) as having the lowest proportion of infants who were breastfed within one hour of birth compared to other counties with an average of 40 percent.

Turkana also recorded the highest proportion of children under 6 months of age (68.7%) who were exclusively breastfed. Nonetheless, Turkana registered the lowest proportion (9.4%) of infants 6-23 months who received from 4 or more food groups (minimum dietary diversity) and lowest minimum meal frequency (18%) compared to Kakamega (38.8%, 68.9%) and Bungoma (41.8%, 49.2%). In Nyamira (71.1%), Siaya (64.7%) and Kisii (62.6%) more than two thirds of children 6-23 months were given the required minimum dietary diversities. Kisumu (19.8%) and Homa Bay (26.2%) records the lowest minimum meal frequency in Nyanza.

TABLE 2.12: Quantitative Studies KABP Studies

Counties							
Attributes	Samburu <i>KABP Meme M, 2013</i>	Turkana <i>KABP Mbugua S, 2014</i>	West Pokot <i>KABP Mbugua S, 2014</i>	Mandera <i>KABP Mbugua S, 2014</i>	Wajir <i>KABP Mbugua S, 2014</i>	Baringo <i>KABP Ndungu L, 2015</i>	Marsabit: (Laisamis) <i>KABP Mbugua S, 2014</i>
Baby should be put to the breast immediately they are born	88.0	75.5	92	95.0	89.8	89.2	83.4
Respondent would feed baby on colostrum		97.5	92.3	96.0	94.8	96.8	95.0
Benefits of feeding baby on colostrum		84.0	44.2	72.4	84.5	74.6	85.7
Nutritious to baby		47.1	32.4	62.0	56.5	60.3	28.0
Prevents diseases/ infections							
Early initiation of breastfeeding	89.6	69.8	89.5	91.8	87.2	86.7	79.5
Exclusive breastfeeding for children aged 0 to 5 months	69.4	31.6	37.9	78.0	72.3	31.6	78.6
Continued breastfeeding at 1 year (12 to 15 months)	90.4	18.4	85.2	76.9	65.4	31.6	88.7
Continued breastfeeding at 2 years (20 - 23months)	61.0	16.0	65.7	40.5	31.0	16.0	75.9
Introduction of appropriate complementary foods for child aged 6 to 8 months	90.3	60.4	70.8	62.7	51.2	26.2	65.4
Appropriate child dietary diversity score (4 or more food groups child aged 6 to 23 months)	25.0	9.5	16.3	22.5	26.3	33.21	20.6
Minimum meal frequency for breastfed child aged child aged 6 to 8 months (2 times)	69.8	45.3	97.4	54.9	42.9	50.81	50.6
Appropriate complementary feeding for children aged 6 to 23 months (fed solid and breastfeeding)	47.0	51.8	57.2	78.1	78.2	31.9	73.3
Given iron rich foods or fortified foods and supplements (6-23 months)	3.5	24.2	7.2	25.4	26.5	21.1	0.0

As shown in table 2.12 most of the knowledge indicators where the respondents scored highly (baby should be put to the breast immediately they are born, benefits of feeding baby on colostrum) are matched with

correspondingly high levels of practice (early initiation of breastfeeding within one hour and exclusive breastfeeding for children aged 0 to 5 months).

Exclusive breastfeeding was, however, low in Turkana (31.6%), West Pokot (37.9%) and Baringo (31.6%). Barriers include cultural practices influencing feeding practices negatively, lack of adequate support on exclusive breastfeeding from husbands; low socio-economic status; poor health seeking behaviours; heavy maternal workload; poor birth spacing; influence of mother-in-laws and older women. (Mbugua, 2014).

Complementary feeding practices as noted in the table were inadequate. The time of introduction of complementary foods, meal frequency, dietary diversity and iron fortified foods was generally low among the target groups particularly for the ASAL regions (Turkana, Wajir, Marsabit, Mandera, West Pokot, Samburu).

Factors that influence uptake of appropriate and recommended infant and young child feeding practices

Both quantitative and qualitative studies identify various factors that affect appropriate infant and young child feeding practices. Poor infant and young child feeding practices are widely documented in Kenya, with potential detrimental effects on child growth, health and survival. Documents listed many factors that influence infant and young child feeding practices. Some of these were unique to specific areas, but there were several common themes across the study regions. These included; knowledge about appropriate feeding practices, attitude and perceptions about breast milk supply and adequacy, beliefs and practices associated with infant and child feeding practices.

2.4.7 Information gaps

1. Most of the large scale surveys e.g. Kenya demographic and health surveys and multi-cluster indicator surveys only have data on practice with relation to appropriate feeding practices.
2. There is no data at sub-national level on knowledge attitudes and practices in relation to appropriate feeding practices.
3. There is lack of further analysis on existing data on practices in relation to feeding practices in order to explain the levels, differentials and trends.
4. There is need to investigate whether and to what extent food insecurity is undermining optimal breastfeeding patterns (because currently, infant feeding counselling and breastfeeding promotion campaigns in this and other resource-poor settings do not usually consider food insecurity).
5. Systematic reviews of studies from developing countries acknowledge that breastfeeding practices among mothers in developing counties are influenced by a variety of socio-demographic, socio-cultural and health-related factors. But research examining the impact of preconception and early prenatal breastfeeding plan as well as maternal self-confidence on breastfeeding duration and exclusivity is still lacking in developing countries (Balogun et al., 2015).
6. There is need for further research on why the practice of exclusive breastfeeding was low yet there was general awareness and knowledge of its benefits.
7. The studies at sub-national levels have been mostly in Western Kenya.
8. There is need for further research on complementary feeding practices since most of the research that is done is mainly concentrated on exclusive breastfeeding for the first six months.

9. Findings with regard to the relationship between family planning, unplanned pregnancies, breastfeeding and the health of the child.
10. There is need for further research on culture, livelihoods, seasonality and infant feeding practices.

2.4.8 Opportunities

1. The development of various policy documents and guidelines will act as an opportunity for the improvement of infant feeding practices. Some of the policies and guidelines that have been passed include:
 - The Breast Milk Substitutes Act
 - Policy Guideline for National Maternal, Infant and Young Child Nutrition
 - National Infant and Young Child Nutrition Policy.
2. The Kenya Bureau of Standards has developed complementary food standards.
3. The adoption of WHO and UNICEF training materials and guidelines that defines the kind of services and counselling for infant and child nutrition, provides an opportunity for increasing the human resource capacities thereby leading to improvement in appropriate infant feeding practices.
4. Integration of nutritionists within health management teams to support planning, service strengthening and monitoring.

2.4.9 Challenges

1. Poverty –as a huge segment of the Kenyan population are poor and this coupled with high unemployment rates affects infants feeding practices.
2. Food security –plays a critical role in nutrition of both the mothers and children. Food security is a hindrance to appropriate feeding practices particularly in areas with drought (i.e. North Eastern region, Turkana, parts of Eastern region) and this affects infant feeding practices.
3. Little is known about the impact of legislation on breastfeeding breaks for women in the informal economy. It is expected that women who work independently, such as those who sell goods in marketplaces, may be able to bring their infants to work with them to feed. However, many women in the informal economy work for an employer (Heymann *et al.*, 2013). The poorest women work in the informal economy. No studies have examined the extent to which these women may be covered by breastfeeding policies.
4. Low prioritization in terms of insufficient budgetary allocation to scale up nutrition interventions countrywide.
5. Lack of strong support systems among family and community, as well as cultural traditions unsupportive of breastfeeding.
6. Limited or nonexistent maternity leave for mothers in Kenya. Short maternity leave (up to six weeks) increases the odds of not breastfeeding or stopping early by 400 percent.

2.4.10 Recommendations

1. The consequences of poor infant and young child feeding do not seem to be clear to the communities. Mothers and all community members need clear and consistent messages on MOH guidelines at the household level.
2. Involvement of cultural custodians; cultural leaders, and peer support groups, can be used for enhancing primary caregivers' knowledge about breastfeeding in antenatal clinics, postnatal clinics, child immunization clinics, and community outreach programmes. Such opportunities can help provide correct information about recommended breastfeeding practices and support to primary caregivers and men in families to implement appropriate infant and young children feeding practices.
3. Design interventions that target the most influential people, including fathers and older women/grandmothers.
4. A man's role is widely believed to be limited to providing enough food for his wife and children. Better engagement of men and fathers was among the most frequent suggestions for improving infant and young child feeding practices. This suggestion logically follows the finding reported that husbands are among the most influential people in determining how a woman feeds her child.
5. Emphasize the benefits of exclusive breastfeeding, including the nutritional, protective, emotional, and cognitive development value. Repackage the messages to speak to what is idealized within the community.
6. Offer assurance that breast milk is sufficient for the baby even in cases of food insecurity. Women need to understand that even when they lack food, their breast milk is still adequate to sustain child growth and development.
7. Explain the importance of colostrum for immunity and protective purposes. This point can be linked with the ideal time to initiate breastfeeding.
8. Illustrate the dangers of introducing pre-lacteal feeds.
9. Address the perception that exclusive breastfeeding is for PMTCT. Emphasize the nutritional benefits of exclusive breastfeeding, and remove its association with HIV-positive women.
10. Educate mothers on the physiological benefits of breastfeeding, targeting young mothers who choose not to breastfeed for cosmetic reasons.
11. Promote breast milk expression, and educate women on how to express and store breast milk.
12. Address the misconception that when a baby cries, it always implies hunger. Illustrate the possible reasons why a baby cries and the actions to take if the crying persists.

Key complementary feeding messages should:

1. **Address the misconception** that early introduction of foods helps the baby learn to eat. Clearly illustrate introduction of complementary foods by developmental stage. Include what to introduce when, based on what is available in the geographical area.
2. **Address the benefits** and risks of commercial cereal mixes that are used for making porridge. Provide information on food enrichment and food consistency during weaning.
3. **Describe the best supplements** to enrich a child's food as well as the best consistency based on the age of the child.

4. **Address hygiene and food safety issues** during infant feeding, such as hand washing, utensil storage, leftover food storage, and water treatment.
5. **Take a family –and community-based approach** to changing infant and young child feeding practices rather than primarily relying on health worker training and individual counselling.
6. **The diversity in practices warrants further exploration** and may provide insights into how to promote the delay of food introduction in other geographic areas.
7. **Dispel myths and misconceptions** about infant and young child feeding and to disseminate and emphasize correct benefits of exclusive breastfeeding, including the nutritional, protective, emotional, and cognitive development value. Repackage the messages to speak to what is idealized within the community.

2.5 Full immunization of children by one year of age



Immunization programme in the village of Natir, Turkana County for children under-5 year olds and pregnant women.

2.5.1 Overview

Around the world, children continue to suffer and die from immunization preventable diseases. There are numerous barriers to full immunization coverage by one year of age, including misinformation and misperceptions about vaccines. Vaccines prevent more than 2.5 million child deaths each year and it has been shown that children who receive all appropriate vaccinations by 9 months of age are less likely to die than those who do not (Rutherford *et al.*, 2009). Immunization was therefore a key component of the drive to decrease childhood mortality and to achieve Millennium Development Goal 4—the reduction of under-5 mortality rates by two-thirds in 2015. Immunization is a proven tool for controlling and eliminating life-threatening infectious diseases and is estimated to avert between 2 and 3 million deaths each year (WHO, *the Global Vaccine Action Plan 2011–2020*, 2013). It is one of the most cost-effective health investments.

The World Health Organisation launched the Expanded Immunization Programme (EPI) in 1974 to prevent six major preventable childhood diseases namely, the measles, tuberculosis, pertussis (whooping cough), diphtheria, tetanus and poliomyelitis (WHO, 2013). Under the EPI, children receive one dose of BCG for protection against tuberculosis, three doses of the triple vaccine DPT (diphtheria, pertussis and tetanus), three doses of either IPV (injectable) or OPV (oral) for poliomyelitis protection and one dose of the measles vaccine by their first birthday. These combinations are also known as basic childhood immunization or full immunization in various countries and used interchangeably.

In 1991, the global target of vaccinating 80 percent of the world's children was declared to have been met, saving millions of lives. The capacities and capabilities of countries built through the EPI blueprint were responsible for such significant gains. Since then, more vaccines have been added to national immunization schedules, and the contribution of immunization programmes to ongoing declines in infant and child mortality has increased commensurately.

Despite this progress, vaccine-preventable diseases remain a major cause of morbidity and mortality. For instance, in 2013, 29 percent of deaths among children 1–59 months of age were estimated to have been caused by vaccine-preventable diseases (WHO & UNICEF, 2014).

Coverage gaps persist between countries, as well as within countries. Geographical distance from health centres is not the only determinant of low coverage; inequities are also associated with other socio-economic determinants, such as income levels and the educational status of the mother (WHO, 2013).

The Government of Kenya provides vaccines for the vaccine preventable diseases free of charge through the Division of Vaccine and Immunization (DVI). According to the Kenya DVI Comprehensive Multi-Year Plan 2011-2015, the DVI recommends that children receive Bacillus Calmette–Guerin (BCG) and polio vaccines at birth, three doses of polio and pentavalent (diphtheria, tetanus toxoid, pertussis, hepatitis B, and Haemophilus influenza type b antigens) vaccines at 6, 10, and 14 weeks of age, and measles vaccine at 9 months of age. Kenya added Pneumococcal Conjugate Vaccine (PCV) and rotavirus vaccine to their national immunization plan in 2011 and 2014, respectively (Kenya DVI Comprehensive Multi-Year Plan 2011-2015).

This report focuses on state immunization by age one in Kenya. It reviews literature on past studies on immunization in Kenya with an aim of unearthing gaps in data and information and making recommendations for policy and programmatic action.

2.5.2 Vaccines and Immunization, Kenya

The World Health Organisation regulates vaccines and supports countries in vaccine introductions, strengthening coverage and data quality (GAVI, 2011). This is done through EPI. Among the main objectives of EPI is to ensure full immunization of children under one year of age in every district.

In Kenya, the immunization programme is managed by the Division of Vaccines and Immunization (DVI). The division has been in existence since 1980 when it was established as Kenya Expanded Programme on Immunization (KEPI) under the Department of Preventive and Promotive Health Services of the then Ministry of Health. It was renamed as the Division of Vaccines and Immunization in 2008 in order to focus on handling of vaccines and immunization services in Kenya (MOH, 2011).

The goal of the Division of Vaccine and Immunization is to reduce morbidity, mortality and disability due to life threatening infections caused by vaccine preventable diseases. The Government of Kenya provides vaccines for the vaccine preventable diseases free of charge through DVI.

The World Health Organisation allows a country to include additional vaccines deemed necessary for the specific country into the country specific EPI. In Kenya for instance, other vaccines under the Kenya DVI include Yellow Fever and Tetanus (TT) (both administered to districts at high risk of the disease), and Vitamin A (MOH, 2011).

2.5.3 Rationale of full immunization

Infant immunization is essential for improving infant and child survival. Immunization coverage levels and trends are necessary for a number of reasons. They are used (i) to monitor the performance of immunization services locally, nationally and internationally; (ii) to guide strategies for the eradication, elimination and control of vaccine-preventable diseases; (iii) to identify areas of immunization systems that may require additional resources and focused attention; and (iv) to assess the need to introduce new vaccines into national and local immunization systems.

Models of vaccine-preventable disease burden frequently include immunization coverage levels among their components. Coverage levels for measles vaccine and DTP are indicators of health system performance frequently considered by funding agencies when reviewing applications for financial and technical support. Measles immunization coverage is one of the indicators for tracking progress to reduce child mortality. Also, trends in immunization coverage are used to establish the link between immunization service delivery and disease occurrence and to provide a framework for setting future coverage goals.

By helping healthy people stay healthy, vaccines remove a major barrier to human development. Immunized children have higher cognitive abilities and are more likely to attend school and go on to be productive members of their community. By reducing illness and long-term disability, vaccines also generate savings for health systems and families. Health workers are freed up and parents spend less time looking after sick children. Immunization protects preventable diseases in the future –it has helped to eradicate polio to some extent. If different countries keep on practicing immunization, in the near future countries will be able to eradicate all these diseases completely. Immunization has reduced mortality rate and has made children more healthy and fit.

2.5.4 Policy and legal framework

Global policy environment

Full immunization is a directive of WHO, which all nations must adhere to. At the World Health Assembly (WHA) in 1989, immunization goals were set for the 1990s which included the encouragement that:

“...all Member States ... continue their vigorous pursuit of the aim of providing immunization services for all children of the world in the hope that coverage levels under the Expanded Programme (on Immunization) will surpass 80 percent in all countries/areas by the end of 1990 and that levels of 90 percent, in the context of comprehensive maternal and child health services, can be achieved by the year 2000.”

This goal was reiterated at the WHA in 1992.

The United Nations General Assembly Special Session (UNGASS) reformulated the child immunization goal to say that “By 2010, to ensure full immunization of children under one year of age at 90 percent nationally, with at least 80 percent coverage in every district or equivalent unit”. Kenya can only achieve this by ensuring that all children are fully immunized. This is also underscored in the 2015 United Nations Millennium Sustainable Goals. Especially goal 3 on Good Health and Well-being which is aimed at ‘Ensuring healthy lives and promoting well-being for all at all ages’ (UN, 2015).

In addition, full immunization is in line with stipulated United Nation Rights of the Child. Article 24 (Health and health services) of Convention on the Rights of the Child states that:

“Children have the right to good quality health care – the best health care possible – to safe drinking water, nutritious food, a clean and safe environment, and information to help them stay healthy. Rich countries should help poorer countries achieve this” (UNICEF, 2014).

Kenya, in solidarity with the rest of Africa, must uphold the Ouagadougou declaration on Primary Health Care and Health Systems in Africa, to guide the overall strategic focus for the health sector (WHO, 2010). Full child immunization is a key part of primary health care.

National policy environment

Chapter 4 of The Constitution of Kenya (2010): Outlines various rights that the citizens are entitled to. Article 53(c) states:

“Every child has a right to basic nutrition, shelter and health care”.

In addition, chapter 3 article 20(b) states:

“..in allocating resources, the state shall give enjoyment of the right or fundamental freedom having regard to prevailing circumstances, including the vulnerability of particular groups or individuals” (GoK, 2010).

This means that mother/caregivers have a right to demand for full immunization services for their children from the government.

The Kenya Vision 2030: Under the social pillar, the Government aims to provide an efficient integrated and high quality affordable health care. Ensuring full immunization is a step toward achieving this goal.

The Kenya Health Policy Framework of 1994-2010: Provides the health policy and strategic direction in improving the health status of the population by ensuring provision of equitable quality health services through a decentralized health system. This policy directs immunization services to improve on access and equity specifically.

The Integrated Management of Childhood Illness (IMCI) Strategy: Implemented by the Government of Kenya, in collaboration with the World Health Organisation (WHO), the United Nations Children’s Fund (UNICEF), and other partners. It encompasses a range of interventions that combines prevention and better management of childhood illness through nutrition, immunization, maternal health, and other important health factors.

Programmes (Kenya National Health Sector Strategic Plan II 2005-2010)

Kenya Health Policy 2012-2030: This policy gives direction to ensure significant improvement in overall status of health in Kenya in line with the country’s long term development agenda, Vision 2030, The Constitution of Kenya and global commitments.

Kenya National immunization policy guideline 2013: It aims to ensure uniform implementation of immunization services and guides service providers across the country. The National policy guidelines for immunization seek to comprehensively guide health workers on vaccination priorities and acceptable practices for the overall good of all Kenyans.

Programmes, guidelines and strategies

In Kenya, immunization services are free of charge and provided alongside maternal and child health care. This is as stipulated in policy on health (MNCH, 2013).

WHO recommends that for full immunization, children should receive vaccination against tuberculosis (BCG), three doses each of the DPT-HepB-Hib, and polio vaccines and a vaccine against measles. These are also termed as the three basic vaccines. The following is a summary of Kenya’s immunization schedule for the three basic vaccines as recommended by WHO: BCG is given at birth, DPT-HepB-Hib and Pneumococcal vaccine (PCV 10) are both administered at 6, 10 and 14 weeks, and Measles vaccine is due at 9 months of age (MOH, 2013).

According to WHO, countries must increase immunization coverage to at least 90 percent national vaccination coverage and at least 80 percent vaccination coverage in every district or equivalent administrative unit. In line with this, the Kenya Division of Vaccines and Immunization (DVI) came up with initiatives to ensure that the WHO set target is met. Since 2007, in conjunction with UNICEF and other partners, Ministry of Health introduced an initiative termed as 'Malezi Bora' week –to enhance delivery of immunization services and other health interventions. This is a week marked with a shift from past programmes where health interventions such as immunization are delivered mainly through outreach campaigns. During Malezi Bora week, mothers are also given health education including information on routine immunization offered in local health facilities (UNICEF, 2007).

In addition, the Ministry of Health introduced a immunization monitoring booklet printed in both national languages (Kiswahili and English) to replace the clinic card. The booklet termed as Maternal & Child Health Booklet (MNCH, 2007) is a guide for mothers and caregivers. It shows a schedule of all the services including vaccines that a child must receive at various milestones.

It is important to note that, Kenya has explicit policies on immunization. However, the country has not met both the national and sub-national targets set by WHO at 90 percent and 80 percent respectively. This has been attributed to socio-cultural barriers, lack of equity in the distribution of health facilities and differences in socio-economic development across the country. These barriers should be addressed for the country to realize the benefits of full immunization coverage.

2.5.5 Knowledge, Attitude, Beliefs and Practices on full immunization of children by one year of age

Knowledge

Global Level

Parental misperceptions or lack of knowledge have been identified as major barriers towards immunizations in children. It has been associated with parents' anxieties or concerns about childhood immunization. According to studies reviewed, parental or care givers knowledge, attitude beliefs and practices has a direct effect on uptake and achievement of full immunization status of children.

Topuzoglu *et al.*, (2006) in a study conducted to assess knowledge of mothers in Umraniye-a suburban district of Istanbul regarding immunization, found that, mothers were not able to name all of the vaccines that were in the national immunization scheme. The mothers knew that the names of the vaccines were written on their children's immunization cards, yet they had problems in remembering the names of the vaccines. Particularly the illiterate mothers who stated that they had difficulty. They also stated that some of the names written on the cards used medical terms that seemed unfamiliar to them. They found that mothers also did not know which vaccine was administered to their children, this was because they could not read the name of the vaccine from the vaccination card and they could not get satisfactory information from the health personnel administering the vaccine. With regards to benefits of immunization, they found that most of the mothers stated that it was important to follow the scheme promptly. Yet they could not explain what would happen if they had delays.

Babiryea *et al.*, (2011) in a study titled, "more support for mothers: a qualitative study on factors affecting immunization behaviour in Kampala, Uganda", observed that the fear of perceived ill effects of immunization underpinned the strong belief against immunization. All study participants perceived that a lack of trust towards vaccines existed among community members. Common beliefs were that vaccines were 'expired' and could cause 'physical disability and/or death' among their children. The perceived susceptibility of their

children to suffer from severe effects of the vaccines led some to decline immunization. They also found that it was a woman's job to understand immunization and to ensure that children are receiving the vaccines. Immunization was the sole responsibility of the mother –the father had very minimal information on immunization. Generally, within the communities, immunization was seen as the mothers' responsibility and the father can only step in when necessary.

The findings from this study are similar to a study conducted by Topuzo lu *et al.*, 2006 in Istanbul. The study observed that the responsibility of taking children for immunization was left totally to the mother. Interestingly, the socially subordinate role of women did not provide the means of getting the immunization services. The women were dependent mostly on social networks for getting the immunization services. At the same time another important barrier to the services was related to the economic constraints and accessibility of the services. In addition, the lack of effective communication and information transfer between the health personnel and the mothers formed an important obstacle to achieve full immunization.

Kenya

There are no quantitative studies that have documented the level of knowledge on full immunization of children by one year of age in the country. But there are a number of qualitative studies on the same.

UNICEF (2015) in a study on barriers and supportive factors in the uptake of MNCH in Homa Bay County found that majority of respondents cited disease prevention as one of the benefits associated with immunization. However, a good number did not know about specific diseases targeted by vaccines. Diarrhoea and pneumonia were rarely mentioned as illnesses recently targeted by immunization. The respondents did not seem to know at what age the first and interval vaccination were to be given. While some correctly stated that first vaccination ought to be given at birth, the vast majority mentioned a period ranging from several days to even two months.

In a similar study by UNICEF (2015) on barriers and supportive factors in the uptake of MNCH in Turkana County it was established that despite low coverage in the county, most participants were able to enumerate at least one or two benefits associated with immunization such as disease prevention. However, when required to enumerate specific diseases targeted, most of the study participants thought that vaccination protected children from almost all types of diseases. When asked about the age of first immunization, most participants were not sure about it. The vast majority mentioned a period ranging from several days to even two to six months.

According to (Shen *et al.*, 2014), development of a profile regarding what parents and guardians know in terms of full immunization of children is important as it is a prerequisite for making a decision to initiate uptake of immunization services. The authors of many of the studies reviewed found that generally parents and care givers needed a good understanding of immunization preventable diseases, the benefits of having the children immunized, how vaccination works to prevent childhood diseases, the potential side effects of vaccines and the immunization schedule in order to be highly motivated and able to take their children for vaccination.

In another study Owino *et al.*, (2009), carried out a study in Mathare area in Nairobi to identify the determinants of immunization coverage. It was established that participants of the FGDs generally knew the vaccines that their children should receive during infancy. When asked to mention the vaccines they knew, the most frequently mentioned vaccines were measles and polio vaccines. The study participants explained that the reasons for failure to immunize children revolved around the parental ignorance or lack of knowledge on return dates for subsequent vaccines, lack of motivation making mothers not take their children for vaccination for no apparent reason and fear of adverse events following immunization.

Another study by Ojaka et al., (2011) who did a study focusing on community perceptions of malaria and vaccines in the South Coast and Busia regions of Kenya, established that, there was a strong relationship between knowledge and good immunization status. The results also showed that parents had relatively high knowledge on immunization coverage. The study also established that parents too, were aware of the benefits of immunization to their children. A majority of the study participants held the view that the main benefit of immunization was avoidance of disease related child death and disability and reduction in the severity of disease.

From the same study, it emerged that parents and care givers were aware of the source of information for immunization services. According to the study, parents in both the Coast and Busia regions said that they mainly got information on immunization from the health education provided by service providers about vaccination when they went for the service.

Parental perceptions, barriers of access to vaccines and knowledge of vaccines appear to be appreciation of the basic concept that vaccination is good for their child's health and prevents a number of specific diseases, that multiple visits are required for protection, and when and where which child needs to be seen next. This is clearly shown in the study by Ojaka et al., (2011), which revealed barriers of access to immunization services. The study found that, although parents could list places where children could be vaccinated, they felt that clinic services were at times difficult to access. Some also said they did not get sufficient advance notice about vaccination days. Parents and other caregivers also complained of the inconvenience of travelling to a clinic and then waiting for hours only to be told that services were not available because of stock outs of vaccines and other drugs. For their part, many service providers interviewed said they were sometimes unwilling to open vaccine vials with short expiration dates if there were not enough children to use all the doses.

According to Adhiambo et al., (2010) study on seasonal influenza, vaccination of children before and after a seasonal influenza vaccination effectiveness study in low-income urban and rural Kenya, established that, majority of the study participants attributed low temperatures and dust as main causes of influenza. A few also said smoke, contact with influenza-infected persons and allergic reactions could cause influenza.

Findings from the same study established that, majority of pre-vaccination respondents were willing to have their children vaccinated. However, almost all respondents said they needed more information before they would vaccinate their children. Respondents required information on safety, efficacy and benefits of the vaccine.

Attitude

There is no documented quantitative information on attitudes towards full immunization of children by one year. There are a number of qualitative studies touching on the same.

Attitudes and behaviour of health staff are one of the most important and frequently cited factors that discourage full immunization of children. Some studies reviewed indicate that, at least some health workers treat mothers in an unfriendly or disrespectful manner and they were not willing to explain to the mothers which vaccine they were administering to their children. According to Owino et al., (2009), negative attitude of –and use of abusive language– by health workers, when care givers took their children for immunization greatly influenced full immunization of children. The study further established that some respondents cited being chased away from the clinic by the nurses if they had not attended antenatal clinics. The service providers attitude therefore affects the caregivers' attitude to attending antenatal clinics. The study also showed that the mothers felt humiliated –which discourages them from going back to the health centers

for further immunizations. Sometimes, health workers often communicate inadequately with mothers, so that many mothers leave not knowing when to return and what to do about side effects. The findings here is consistent with findings from a study done in Istanbul by Topuzo lu *et al.*, (2005) whose findings indicated that, although some of the mothers stated that they wanted to know which vaccine was administered, they were inhibited by the negative attitudes of the health personnel.

Ojaka *et al.*, (2011), established that, some women seemed to be the focus of negative reactions at vaccination centers for reasons that had to do with their parenting choices. The study found that some mothers reported being scolded by health care providers or even other women for having given birth at close intervals, or having several children to vaccinate at the same time, or for being pregnant while still breastfeeding. For mothers in Samia, Busia County being pregnant past the age of 45 was said to elicit frowns and scorn at vaccination centers.

The results of the same study also indicated that, the health workers themselves also had a negative attitude to parents who did not routinely bring their children for vaccination, they spoke of feelings of frustration when parents did not come in for vaccination and added that the feeling of frustration could lead to them being unfriendly, or scold the parent. Some providers and many parents described families who had not taken their children to be immunized as “lazy,” “ignorant,” or “difficult. Additionally, the perceived attitudes of some service providers toward patients also appeared to affect willingness to attend a clinic. Some parents were reportedly concerned that they could be criticized for not dressing their children well, for following traditional health practices, or for having babies wear items to protect them against harm. For example, the study documented a case of young fathers in Busia township who reported that, dirty clothes worn by a child or mother or failure to cover a baby with a shawl sometimes elicited criticism from service providers.

When the parents had poor perception of immunization and just had myths and fears, immunization status was low as demonstrated by Ojaka *et al.*, (2011), attitude of the mothers towards vaccination was found to be negative, as some parents in Busia and the Coast highlighted fears that the government may be using vaccines to sterilize young female children or to reduce the population.

According to Adhiambo *et al.*, (2011), who did a study by interviewing parents who had fully vaccinated their children and those who had not fully vaccinated their children with the new influenza vaccine, they found that attitude of parents towards the benefits and side effects of a new vaccine being introduced was important. The study found that while most parents in the fully vaccinated group had no concerns about the vaccine, half the parents in the partially and non-vaccinated groups had concerns about the vaccine; most said they were concerned about side effects because it was a new vaccine. Few parents of partially vaccinated children said they were concerned about side effects because they had heard of a child who had reacted negatively to vaccination.

Beliefs

No quantitative studies have been documented on beliefs and there are also few qualitative studies on beliefs in the country.

UNICEF (2015) in a study on barriers and supportive factors in the uptake of MNCH in Turkana County established that most of the focus group discussants and key informant interviewees explained that fear of side effects of vaccines inhibited mothers from having their children vaccinated. Other impediments included myths and beliefs about immunization, cultural and religious beliefs, misunderstanding of side effects, and seasonal events such as severe famine –greatly influenced uptake of immunization services. For instance,

some religious groups did not support vaccination of children, arguing that it was harmful to their health (cause them not to have the number of children they might wish to have in future).

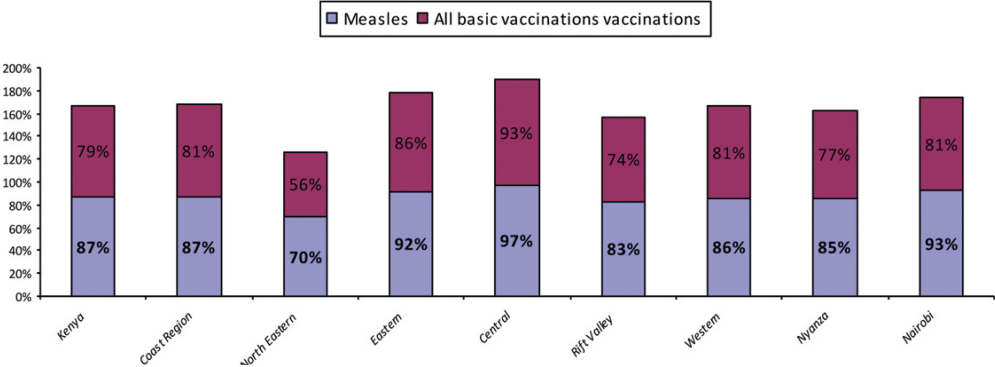
In a related study by UNICEF (2015) on barriers and supportive factors in the uptake of MNCH in Homa Bay County, found that there were conflicting perspectives on adequacy of vaccines and their availability –in their interviews and discussions with health providers, men, women and local leaders. The major impediments to vaccination of children revolved around social, cultural and religious beliefs; lack of appropriate knowledge about diseases targeted as well as accessibility factors.

Adhiambo *et al.* (2010), reported that some mothers had little belief in the concept of prevention of diseases, especially new diseases being introduced in the routine immunization programme. Study participants noted that some religious denominations also forbid childhood immunization (Ojaka *et al.* 2011). According to the research another issue which emerged was that some parents in Busia and the Coast highlighted fears that the government may be using vaccines to sterilize young female children or to reduce the population.

Practices

Levels, trends and differentials of practice of full immunization

FIGURE 2.11: Proportion of child age 12-23 month who immunized –by region



Source: DHS 2014

Secondary data analysis shows that available information is mainly on the practice of immunization. Quantitative information on the knowledge, attitudes and beliefs on immunization is missing. The main sources of data on child immunization by age one, is Kenya Demographic and Health Surveys (KDHS). Figure 2.11 shows that by 2014, eight out of every ten children received full immunization and close to 9 out of every 10 children received measles immunization in Kenya. A close look at immunization levels across regions show that North Eastern had the lowest proportion of children fully immunized (56%) as well as those who had received a measles vaccine (70%). Rift Valley and Nyanza are also lagging behind with a proportion of children fully immunized at less than 80 percent. Internationally, Kenya has not yet met the internationally set target of national routine immunization coverage of 90 percent nationally and at least 80 percent vaccination coverage in every district or equivalent administrative unit (WHO, 2013).

Levels by counties

TABLE 2.13: Top five and bottom five counties

Top five counties in percent immunization coverage			Top five counties in percent immunization coverage		
	Measles	All basic vaccinations		Measles	All basic vaccinations
Kiambu	99	99	Garissa	81	62
Nandi	98	96	Kajiado	81	59
Tharaka Nithi	99	95	Wajir	65	56
Nyamira	98	95	Mandera	62	44
Vihiga	98	94	West Pokot	58	36

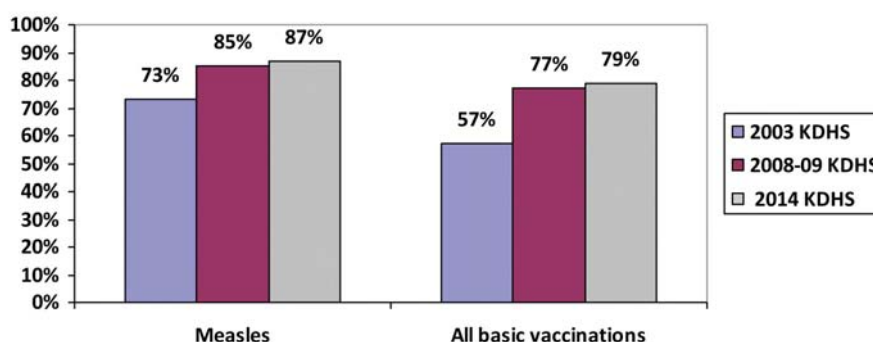
Source: DHS, 2014

Table 2.13 presents levels of immunization coverage in the top five and bottom five counties. All the five top counties have achieved more than 80 percent immunization coverage threshold set by WHO. On the other hand, none of the lowest performing counties has reached this target. Proportion of children fully immunized in Mandera and West Pokot is way below a half.

Trends in immunization coverage in Kenya

Figure 2.12 shows trends of vaccine coverage in Kenya for the period between 2003 and 2014. For the 10 years period, there was a steady increase in percentage of children age 12-23 months who received various vaccinations. The figure shows that for the first half, percentage of full immunization coverage increased by 20 percent. This is seen to have slowed down in the second half with an increase of only 2 percent. Similar trend is seen in percentage of children age 12-23 months who received measles vaccines.

FIGURE 2.12: Trends in vaccination coverage among children age 12-23 months



Source: KDHS reports 2003, 2008-09 and 2014

Differentials in immunization coverage by background characteristics

Table 2.15 present levels of immunization coverage by background characteristics. The table also presents a comparison of the levels of immunization coverage for 2008 and 2014. The results show that immunization levels do not vary by sex of the child. However, place of residence, region of residence, mother's education level and level of income affect the levels of immunization coverage. Children born in the urban residence are more likely to be immunized than those born in the rural areas. Geographical distance from health centres is one of the determinants of disparity in immunization coverage between urban and rural areas.

At regional level, table 2.15 shows that in the period between 2008-09 and 2014, proportion of children fully immunized has remained relatively low in North Eastern region in comparison to the rest of the regions. For Central region, this proportion has remained relatively high in comparison other regions. Notably both regions have had an increase in the percentage of the children fully immunized in the period but percentage coverage for measles vaccine in North Eastern has decreased in 2014.

Expectedly, the likelihood of a mother/caregiver ensuring that her child is fully immunized increase with the increase in both her level of education and wealth quintile. Mother's with at least secondary education and those from households with highest wealth quintile have the highest levels of immunization.

Five years is a period long enough to realize a change if appropriate interventions are put in place. To demonstrate this, table 2.14 shows that the gap between proportions of children fully immunized in Central region and those in North Eastern has remained the same for the five years period. i.e. $[(86-48) = (93-56) = 38]$. However, the gap between proportion of children born of mothers with at least secondary level of education who were fully immunized and those born of women with no education has increased from 20 percent to 30 percent. Finally, the gap between percentage of children born in rich families who were fully immunized and those from poor background has not changed.

TABLE 2.14: Vaccination coverage by background characteristics

	Measles DHS-2008-09	Measles DHS 2014	All basic vaccination DHS-2008-09	All basic vaccination DHS 2014
Sex				
Male	84	88	75	79
Female	86	86	80	80
Residence				
Urban	90	92	81	83
Rural	83	85	76	77
Region				
Coast	85	87	76	81
North Eastern	79	70	48	56
Eastern	89	92	84	86
Central	88	97	86	93
Rift Valley	89	83	85	74
Western	78	86	73	81
Nyanza	78	85	65	77
Nairobi	88	93	73	81
Mother's Education				
No education	79	71	67	57
Primary incomplete	80	83	71	75
Primary complete	87	90	80	84
Secondary+	92	94	87	87
Wealth quintile				
Lowest	76	76	66	66
Second	81	87	75	80
Middle	86	88	80	82
Fourth	90	95	83	87
Highest	94	93	85	86

Source: KDHS reports 2014

Barriers to full immunization

Economic access constraints

Income level

Studies have shown that parents with low level of income are least likely to have their children fully immunized. Findings of DHS surveys showed a direct relationship between increase in income and increase in proportion of children fully immunized (KNBS & ICF MACRO, 2014). One possible explanation for this relationship is that poor people may prefer to spend time on income earning opportunities rather than on accessing preventive health services, such as immunization whose long-term preventive benefits are less tangible. Also, even when such services are free of charge, indirect costs, such as those accrued for travel to immunization centers or time lost from income generating activities may hinder seeking of vaccination services (Egondi *et al.*, 2015).

On the supply side, this is shown by low allocation of resources by the state to the health sector. If health is not given priority in budgetary allocation, services like immunization risk being sacrificed. The government is required to achieve the commitment in the Abuja Declaration to allocate 15 percent of government expenditure budget to health.

Proximity to the health services

There are imbalances in geographical distribution of health facilities in terms of the numbers and types of facilities available. Some areas have disproportionately more facilities than others. Consequently, while the average distance covered to reach the nearest health facility is reasonable (within 5 kilometres for medical services, and 2.5 kilometres for public health services as recommended by WHO). There are under-served areas in the Country, particularly in the Northern Counties of Isiolo, Turkana, Mandera, West Pokot, Marsabit, Samburu, Wajir, and Garissa.

Socio-cultural barriers

Socio-cultural barriers associated with low literacy levels, religious beliefs and gender bias hinder access to health services in general. For instance, in 2015 an anti-polio campaign in Kenya met opposition from Kenya's Catholic bishops who alleged that the vaccines were birth control in disguise (VOANEWS, 2015). Similar objection have been reported by some Muslim countries by claims from some clerics. Other religions are opposed to medical services of all kinds as they believe in the healing power of God. Other examples are communities that are not exposed before one year is over (UNICET & UNFPA, 2014).

Available qualitative information show that there are a number of social-cultural barriers to full immunization. For instance, Ojaka *et al.*, (2011), observed that certain traditional cultural practices inhibited timely immunization, especially with regard to vaccines given soon after birth. In the Busia region for example, study participants reported that mothers who delivered at home were required to keep the baby indoors for three to four days after birth (three days for a girl, four days for a boy). In addition, it emerged that some mothers do not like their children to be weighed naked during a check-up or to have them share the weighing basket with others. Another study by Adhiambo *et al.*, (2011) found that the study respondents said it was unnecessary to seek hospital care for influenza; instead, they used home remedies like drinking hot water or hot lemon solution. Other home remedies mentioned were drinking traditional liquor, drinking ginger and garlic solution, sponging the nose with warm water, sniffing herbal medicine powder, and steaming one's face with herbal medicines solutions. A few respondents mentioned painkillers and antihistamine

medications as influenza remedies. In the same study, the findings showed that respondents were concerned about side effects of new vaccines. Parents of partially vaccinated children said they were concerned about side effects because they had heard of a child who had reacted negatively to vaccination.

Health facilities' capacity to maintain quality vaccines

For health facilities to offer immunization services they must have capacity to do so. For instance, temperature monitoring is extremely important to ensure the potency and effectiveness of vaccines. Some facilities have vaccine refrigerators but lack a power supply back-up for use during a power blackout. In addition, challenges in logistics of transporting vaccines from one facility to another, result in limited availability of vaccination services.

2.5.6 Opportunities

Kenya may take advantage of support from international organisations to improve on the health systems so as to achieve full immunization for all children. Such support include (i) WHO—regulates vaccines and supports countries in vaccine introductions, strengthening coverage and data quality; (ii) UNICEF—procures vaccines and supports countries in maintaining their cold chain, improving access and collecting data (iii) The World Bank—helps pioneer innovative finance mechanisms like the International Finance Facility for Immunization (IFFIm) and the Advance Market Commitment (AMC) (iv) the private sector partners—who provide funding and expertise (v) Developing country governments—identify their immunization needs, co-finance and implement vaccine programmes (vi) Civil society organisations—help ensure that vaccines reach every child (vii) Vaccine manufacturers—guarantee vaccine quality, supply and affordability for developing countries and (viii) Donor governments—make long-term funding commitments (The Gavi Alliance, 2007).

The Kenya Constitution (2010) bill of rights acknowledges health care as one of the fundamental rights to children. This gives the state power to allocate part of the budget for programmes and other activities aimed at delivering health care services to the children –among them, immunization.

The currently on going “*Beyond Zero*” campaign is an opportunity to increase full immunization coverage. Mothers who access skilled delivery services are more likely to have their children fully immunized as a result of intervention put in place during delivery.

Increase in caregiver/mother’s education is directly related to increase in access of health services. The current free primary and secondary education in Kenya will lead to an increase in the number of girl-child educated and by extension, an increase in the number of children fully immunized. This initiative should be supported by all.

In Kenya, basic health services are free of charge in all level 2 and 3 government health facilities. For higher levels, the cost is subsidized. This, coupled with increase in the number of government health facilities, courtesy of Constituency Development Funds (CDF), gives a chance to children who would have otherwise missed out on immunization due to lack of finances, a chance for full immunization.

2.5.7 Information gaps

- Studies provide knowledge on measles and polio vaccines only from qualitative studies.
- Quantitative studies on knowledge lacking both at national level and county levels.
- Studies are mainly small scale that cannot be generalized for the entire country or even the counties where it was conducted.
- There is scanty information on focus counties by UNICEF.

2.5.8 Conclusion

From the reports reviewed, it was established that there are no quantitative studies that have documented level of knowledge, attitude and beliefs on full immunization by age one in Kenya.

2.5.9 Recommendations

- National surveys should endeavour to collect information on knowledge, attitudes, and beliefs and practice both at national and county levels.
- Immunization services should be synchronized with other devolved health care services. This will help in improving coverage for immunization services.
- Programmes on advocacy and behaviour change communication should be designed to address socio-cultural barriers to immunization.
- Government should provide all health institutions with facilities for safe storage and transportation of vaccines. This will minimize wastage of vaccines.
- Government should work towards equity in geographical distribution of health facilities-especially for underserved counties.
- More investments in the education of the girl-child are required. Education is correlated with higher immunization coverage.
- Government should allocate more resources to Ministry of Health in line with international commitments. More resources will boost immunization services along other health care services.

2.6 Parents enrol their children in school and keep them in school



Students at Bura boarding primary school are eager to respond to their teacher's question. UNICEF provided 100 desks and teaching materials to the school in Garissa County.

2.6.1 Overview

Education is defined as the act or process of acquiring knowledge, skills and attitudes or behaviour systematically especially during childhood and adolescence (American Psychological Association, 2016; Chicago Manual Style, 2016; Modern Language Association, 2016). Universal access to primary education was one of the Millennium Development Goals (MDGs) envisioned by the United Nations (UN), to be reached by 2015. Additionally, in 2015, UN adopted 17 Sustainable Development Goals (SDGs) to guide government's policies and funding for the next 15 years. SDG No. 4 on "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" emphasizes on quality education to be achieved by 2030. Global evidence shows that the attainment of universal education for all is far from being realized. In Kenya, it is estimated that about 4 percent of the children aged 6-13 years and 61.5 percent of the youth aged 14-17 years are not in school (KIPPRA, 2014). This implies that, Kenya's potential labour force lacks the education required to achieve the Vision 2030 goals. Parents enrolling their children and keeping them in schools is critical in the economic development of a given nation.

Moreover, Kenya is undergoing a tremendous change in devolution, urbanization and therefore, education for children is key for country's development. Children are usually enrolled to pre-primary school at the age of 3 or 4 years but preferably at the age of 3 years. The government views education as the primary means of socio-economic development and has therefore identified the challenges to achieving universal education, these include: limited community participation; health support services; high school drop-out cases amongst others. (Ministry of Devolution and Planning, Second Medium Term Plan, 2013–2017).

The current 8-4-4 education system in Kenya was launched in 1985. The system is designed to provide eight years of primary education, four years of secondary education and four years of University. There is also a vocational education which is aimed at preparing students who would not continue with secondary education, to gain vocational and technical skills.

2.6.2 Importance of parents enrolling and keeping children in school/rationale

Education is fundamental to development of human resource capacities for sustainable economic growth and development. By imparting new skills and knowledge in people, education expands human capabilities, increases labour productivity and enhances essential participation and partnerships in nation building. In Kenya, Provision of education is a major component in the realization of the Kenya's Vision 2030. Attendance to pre-school education in an organized learning or child education programme, is important for the readiness of children for school. Early Child Development Education (ECDE) is important to build a strong foundation for cognitive, socio-emotional and health development that maximizes on the child's learning potential which is as a result of geographical location, gender and wealth distribution (NCCS, 2014).

Long term improvements in productivity, ensuring that children are enrolled in school and go through the complete phase is an important investment for the economy as it builds a skilled workforce that will propel the country's development agenda throughout the coming years.

Enrolling children in school and ensuring they complete the school cycle encourages a more enlightened generation. A more enlightened population would be additionally cautious of their surrounding in matters pertaining to health. Having majority of the population enlightened however would contribute towards a largely healthy population due to increased awareness level.

Women bear the greatest brunt when it comes to a choice between male and female enrolment in school. Educating women and girls is fundamental to development and growth because learning and skills enable all people to live healthier, happier, and more productive lives.

Education has the potential to equip people with the skills, attitudes and norms needed to hold governments to account, to challenge autocracy and to assess policies that affect their lives. At an individual level, education is a crucial determinant of whether people have the capabilities—the literacy, the confidence, and the attitudes that they need to participate in the society. As a concrete example, when poor and marginalized people are educated, they are often more likely to participate in meetings of local political bodies and devolved bodies managing education, health and water resources.

Parents enrolling their children in school can help bridge the gap of inequality between different social classes. When education is made accessible to all, irrespective of social, cultural or any other affiliation, children grow up having a level playing field in relation to opportunities—all factors constant. It also ensures that none having a competitive edge over another due to factors that would otherwise hinder enrolling or going through the full school cycle.

Enrolling children in school does not only build them academically but is also crucial in helping them appreciate the various cultures, beliefs, religions and other affiliations they encounter hence, as they grow and learn together they can appreciate the value of diversity and how to live peacefully together—fostering national unity.

The reduction of inter-generational cycles of poverty, the promise of education as a means of transformation and escape from poverty is at the heart of national and global policy commitments to investing in school education. It is also a primary motivator in the far-reaching financial sacrifices that families often make to enrol their children in school. Investment in children's education today, is the best guarantee of equitable and sustainable development tomorrow and also cuts off the transmission chain of the inter-generational cycle of poverty.

2.6.3 Policy and legal guidelines on education

International protocols

Sustainable Development Goals (SDGs) - SDG 4 Education 2030 “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”: The global education agenda (Education 2030) is part of the 17 UN Sustainable Development Goals (SDGs) that make up the Agenda 2030 for sustainable development (UN, 2015). Since the setting of Education for All targets in Jomtien (1990), global nations ushered in new decades of commitment to expanding access to education. The SDGs succeed the Millennium Development Goals (MDGs) adopted by the UN in 2000. The MDGs No. 1 “Achieve universal primary education” was specifically targeted to ensuring that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling. In 2015, the UN again adopted 17 sustainable development goals. The SDG 5 “Achieve gender equality and empower all women and girls” targets to end all forms of discrimination against all women and girls everywhere and also to eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation. The sustainable development goals seek to change the course of the 21st century, addressing key challenges such as poverty, inequality, and violence against women.

The 2006 Convention on the Rights of Persons with Disabilities: Article 24 on education emphasize that, state parties to the convention recognise the right of persons with disabilities to education. With a view to realizing this right without discrimination and on the basis of equal opportunity States Parties shall ensure an inclusive education system at all levels and lifelong learning for Persons with Disability (PWDs).

The 1990 Convention on the Protection of the Rights of All Migrant Workers and Members of their families: Each child of a migrant worker shall have the basic right of access to education on the basis of equality of treatment with nationals of the State concerned. Access to public pre-school educational institutions or schools shall not be refused or limited by reason of the irregular situation with respect to stay or employment of either parent or by reason of the irregularity of the child’s stay in the State of employment.

The 1948 Universal Declaration of Human Rights (UDHR): Article 26 of the 1948 UDHR states that, everyone has the right to education and that it should be free at least at the primary level. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit. That education should focus on full human development, strengthen respect for human rights, and promote understanding, tolerance and friendship. Parents have a prior right to choose the kind of education that shall be given to their children.

1989 United Nations Convention on the Rights of the Child: (Right to education): Article 28 states that, all children have the right to a primary education, which should be free. Wealthy countries should help poorer countries achieve this right. Discipline in schools should respect children’s dignity. For children to benefit from education, schools must be run in an orderly way –without the use of violence. Any form of school discipline should take into account the child’s human dignity. Therefore, governments must ensure that school administrators review their discipline policies and eliminate any discipline practices involving physical or mental violence, abuse or neglect. The Convention places a high value on education. Young people should be encouraged to reach the highest level of education of which they are capable.

National guidelines

Constitution of Kenya, 2010: Article 53 (b) points out that ‘...every child has the right to free and compulsory basic education...’ Article 56 (b) also stipulates that ‘...the state shall put in place affirmative action programmes designed to ensure that minorities and marginalized groups are provided with special opportunities in educational and economic fields.

Basic Education Act (2013) and (Amendment) Act, 2014. This Act states that all children are entitled to basic education irrespective of their gender, religion, and ethnicity and/or economic background. The Act states that the County Education Board will coordinate with all relevant agencies to ensure that all the barriers to the right to quality education are removed and will work with the National Government to facilitate realization of the right to education within the county and put measures in place to ensure all children and youth of school going age within the county attend and stay in school to complete basic education.

Children’s Act 8 of 2001: This Act states that, every child shall be entitled to education –the provision of which shall be the responsibility of the Government and the parents. Every child shall be entitled to free basic education which shall be compulsory in accordance with article 28 of the United Nations Convention on the Rights of the Child.

Free Primary Education (FPE) Policy: In line with global and African trends, Kenya re-introduced free primary education in 2003. Following the adoption of the policy, the government put out a roll out strategy to address the FPE initiative in the Kenya Education Sector Strategic Plan 2003-2007 whose goals are: attainment of education for all by 2015; universal Primary Education by 2005; transition rate from primary to secondary of 70 percent by 2007, reduced disparity in participation; increased quality and relevance to National Development needs and aspirations; and improved access. The FPE policy resulted in over 1.5 million children returning to school in the first term of that year (KNBS, 2005). The number of children enrolled in primary school has since then continued to increase to reach over eight million children in the year 2008. Primary to secondary school transition was, according to the Ministry of Education (MOE), over 70 percent in 2008 and is expected to further increase due to increased government spending on secondary education. The recent commitment by the government to pay secondary school tuition fees has boosted secondary school enrolment and retention.

The Sessional Paper No. 1 of 2005 on Policy Framework for Education, Training and Research. This document spells out the education policy in Kenya towards the realisation of the national economic blueprint. Over these years, there have been significant reforms in the education sector that are guided by this policy and the sector wide approach to education delivery as outlined in the Kenya Education Sector Support Programme (KESSP) of 2005. In spite of these ongoing reforms, it is estimated that nearly 1.2 million children in Kenya are out of school (KNBS, 2006) out of which 915,000 are reported to be in child labour.

The revised Policy Framework for Education of 2012 is mandated to “Aligning Education and Training to the Constitution of Kenya (2010) and Kenya Vision 2030 and beyond”. The mandate of the Education Sector is to respond to the Constitution (2010) and Kenya Vision 2030 and in so doing, to propose strategies to address wastage and inefficiency; improve financial management and accountability, and to make education in Kenya inclusive, relevant and competitive –regionally and internationally. The policy framework was informed by the work of earlier commissions, task forces, working groups and the report of the task force on the realignment of the education sector to Constitution, 2010 and Vision 2030. These aimed at establishing a national system of education to lead Kenya on the path of self-determination (Ominde, 1964); diversification of the curriculum to allow more secondary schools to provide technical and vocational subjects with phasing out of teachers without secondary education (Ndegwa, 1971); national unity and economic self-determination (Gachathi, 1976); expansion of secondary education, higher education and the introduction of the 8-4-4 system (Mackay, 1981); improving financing, quality and relevance (Kamunge, 1988); accelerating industrial and technological development and life-long learning (Koech, 1999) and re-aligning the education sector to the Kenya Constitution 2010 and Vision 2030 (Odhiambo, 2010).

During the last few years, major reforms and innovations have included the implementation of Free Primary and Free Day Secondary Education. This has enabled the country to make significant progress towards attaining Education for All (EFA) and the MDGs. To date, the main focus has been on improving levels of access, retention, equity, quality, relevance, and the overall efficiency of the education sector (KIPPRA, 2013).

The Sessional Paper number 1 of 2005 explicitly describes the policy guidelines on ECDE in Kenya which recognises early childhood education for children age 4-5 years. The revised Sessional Paper of 2012 proposes the integration of health and nutritional support for under-5 year olds attending day care centers and ECDE to enhance holistic child development. Kenya Constitution 2010 devolved the management of ECDE to the county level so as to ensure all children below 5 years have access to ECDE.

Policy Framework for Nomadic Education in Kenya (2009) and the Revised Policy Framework for Nomadic Education in Kenya, 2015: The Policy Framework for Nomadic Education in Kenya covers the following geographical areas in Kenya:

- a) Nomadic Pastoralists living in the following counties; Mandera, Wajir, Garissa, Tana River, Isiolo, Marsabit, Turkana, West Pokot, Samburu Nomadic parts of Kajiado, Narok, Baringo, Laikipia, Homa Bay.
- b) The informal urban settlements of Nairobi, Mombasa, Kisumu, Nakuru, Thika, Eldoret and Kitale.

This policy framework builds on the policy developed in 2009 to document and reflect the structural, socio and economic changes that are taking place in the country. Some of these changes include the devolved governance structures, the bill of rights, the new Arid and Semi-Arid Lands (ASALS) transformative structures that requires a common coordinated approach on issues affecting the ASALS of Kenya.

The Kenya National Policy on Gender and Development (NPGD), 2000: This policy spells out a policy approach of gender mainstreaming and empowerment of women. It further states that; it is the right of women, men, girls and boys to participate in and benefit equally from the development process. The NPGD provides a framework for mainstreaming gender in all policies, planning and programming in Kenya and puts in place institutional mechanisms to ensure effective implementation.

One of the major achievements in the education system in Kenya is integration of special needs education in primary schools through promoting inclusive education. Evidence shows that the distribution of the schools does not meet the demand. A major challenge for Kenya is lack of data on children with special needs to inform effective special education service delivery and planning.

These interventions have resulted in expansion of the education sector, including improved access and equity in education; improved quality, transition and relevance; and deepening integration of science and technology in the sector. Overall, all sub-sectors of education recorded remarkable increase in access and participation rates but the quality remains questionable (KIPPRA. 2014 & 2015).

National Education Sector Plan (NESP): The Basic Education Programme Rationale and Approach 2013/2014 – 2017/2018 emphasizes a holistic and balanced development of the entire education sector. The NESP implementation plan focuses on the urgent need to enrol all students in basic education, raise literacy and numeracy levels, reduce existing disparities, and improve the quality of education with a focus on teacher quality, school level leadership, more effective applications of teacher training in the classroom, increasing resources to the education sector, and targeting improvements and monitoring key results. With the overarching goal *Enhanced Quality Basic Education for Kenya's Sustainable Development*, the NESP clusters around the four basic principles of: Inclusiveness, Integrated and Unified System, Equitable School Environment and Quality of Learning.

Persons with disabilities Act No. 14 of 2003. Section 18 of this act states that: i) No person or learning institution shall deny admission to a person with a disability to any course of study by reason only of such disability, if the person has the ability to acquire substantial learning in that course; ii) Learning institutions shall take into account the special needs of persons with disabilities with respect to the entry requirements, pass marks, curriculum, examinations, auxiliary services, use of school facilities, class schedules, physical education requirements and other similar considerations; and iii) Special schools and institutions, especially for the deaf, the blind and the mentally retarded, shall be established to cater for formal education, skills development and self-reliance.

2.6.4 Indicators of measuring enrolment and retention of children in schools/ Education outcomes

According to the World Bank there are 15 indicators for measuring education outcome of children enrolling in schools and their performance. According to UNICEF there are about 12 indicators however, this study focuses on only four indicators as follows:

1. Enrolment rates

This indicator generally measures the level of participation in education levels covering pre-primary, primary and secondary education. It is categorized into the following:

1.1: Gross and Net Enrolment Ratio in Early Childhood Development Programmes

1.2: Gross and Net Enrolment Ratio in primary schools

1.3: Gross and Net Enrolment Ratio in secondary schools

Gross enrolment rate; this indicator is used in place of the Net Enrolment Ratio when data on enrolment by single years of age is not available. It can also be used together with the Net Enrolment Ratio to measure the extent of over-aged and under-aged enrolment. **Net Enrolment Ratio/Participation Rate;** this indicator provides a more precise measurement of the extent of participation in education of children belonging to the official school age.

Gross primary enrolment ratio is the ratio of children irrespective of age who are enrolled in the primary school to the total population of children of official school age. Net primary enrolment ratio is the ratio of the number of children of official school age (as defined by the national education system) who are enrolled in primary school to the total population of children of official school age.

2. Transition rate

The indicator assesses the extent by which pupils are able to move to the next higher level of education (ECD to primary; primary to secondary). This indicator also measures the retention rate which determines the degree of pupils/students in a particular school year who continue to be in school in the succeeding year. Percentage of Grade I Pupils with Early Childhood Development Programmes is an indicator of measuring the transition rate of pre-schoolers to primary school. Primary completion rate is the ratio of the total number of students successfully completing (or graduating from) the last year of primary school in a given year to the total number of children of official graduation age in the population.

3. Completion rate

The completion rate measures the percentage of grade/year 1 entrants who graduate in ECD; elementary/secondary education.

4. Gender Parity Index – GPI

The ratio of girls to boys (GPI) in primary, secondary and tertiary education is the ratio of the number of female students enrolled at primary, secondary and tertiary levels of education to the number of male students in each level. A GPI of less than 1 indicates a gender disparity in favour of the male population; that is, a higher proportion of males than females attend that level of schooling. A GPI greater than 1 indicates a gender disparity in favour of females. A GPI of 1 indicates parity or equality between the rates of participation for the sexes.

2.6.5 Knowledge, Attitude, Beliefs and Practices on enrolling and keeping children in school

Knowledge

Global perspective

Findings from the reviewed studies show that, a range of interrelated Knowledge, Attitude, Beliefs and Practices factors interact to influence how and why parents enrol and keep their children in school. The review showed that parents were aware of the importance of enrolling and keeping their children in school. (Mapp, 2002; Muhammad Buzdar and Ali, 2011).

A study by Patrick O’Hearn Elementary School, in Boston, in the United States to assess how and why parents are engaged in their children’s learning showed that, parents understood clearly that their involvement helped their children’s educational development. Most of them acknowledged that they were aware their children should be in school as stipulated by the law but most enrolled their children to the school as a desire for a better future not just because the law says so (Mapp, 2002).

Studies by Buzdar and Ali, (2011) showed that, there was varied attitudes of parents towards enrolment and keeping children in school. The results further indicated that parents had favourable attitude towards enrolment. According to them, there were no major differences among the opinions of tribal parents regarding the significance of enrolling their daughters’ in schools.

A focus group discussion conducted among the Karamojong community in Uganda to assess their beliefs towards educating their children revealed interesting facts. The finding showed a popular belief among the parents that educated girls become prostitutes. This belief was pointed out in all the FGDs conducted. The Karamojong culture detests prostitution and therefore many parents shun enrolling girls to school for fear of identifying with prostitutes (Victoria Namukwaya, Kibirige, 2014). Studies reviewed touching on practices affecting enrolling and retaining children in school revealed that, among the Karamojong in Uganda, the most common factor why many parents did not enrol their children in school is the people’s nomadic pastoral lifestyle. In this lifestyle, the ‘kraal’ system was pointed out in all the focus group discussion sessions as a key factor why many children, particularly boys, could not attend school (Victoria Namukwaya, Kibirige, 2014). In Kotido district, cattle from several homesteads are kept and grazed together in mobile ‘kraals’ which move from place to place in search of water and pasture. It is the responsibility of young boys (before teen age) and youth (teens) to take care of the animals under the leadership of grown up ‘kraal’ leaders.

Kenyan situation

Parental knowledge is found to be an important factor in determining whether parents enrol and keep their children in school. According to studies reviewed, parental knowledge on importance of enrolling children and keeping them in school has an effect on enrolment and keeping them in school. The reasons why many Kenyan children of school going age do not enrol in school at all and why some of those in schools drop out before completion are many and varied. Parental knowledge is linked to a range of factors like, when children start school, how often they attend, whether they have to temporarily withdraw and also when and if they drop out (Croft, 2002: pp, 87-88).

Kimu, (2012) found out that, parental involvement in schools was characterized by diverse levels of interaction among the teachers and parents. Parents continued to be involved in their children's education to a limited extent only. However, both teachers and parents acknowledged that more parental involvement was required for improving the quality of their children's education. Schools and parents did not understand what parental involvement entailed and were unaware of the full benefits of involvement beyond activities such as fundraising for the schools, solving pupils' discipline problems and attending the occasional annual general meetings.

Lack of understanding and ignorance of the parents towards some levels of education led to low enrolment rate of children in early childhood education institutions in Thogoto and Karai Zones of Kikuyu district. The other reasons included; Parents' level of education, parents' economic status among other constraints (Njoroge and Komo, 2013).

A study by King N, Dewey C, Borish D. (2015) found that there were continued differences in responses when guardians and FGD participants were asked about the perceived value attributed to education. The findings showed that parents viewed education as a driver of the economy which has resulted in many parents sending their children to school. Some parents however cited education cost, as one of the reasons they were not able to enrol and keep their children in school while others did not support education because they do not understand the value. The review showed that, the informants interviewed indicated that most community members support education, and those who do not, are ignorant about its value.

Frederick Mugisha, (2006) carried out a study on school enrolment among urban non-slum, slum and rural children in Kenya. Participants pointed out poor quality of primary schools in slums, limited access to secondary school for slum children, increased vulnerability to coercion into sexual activity and other ills that hinder school participation, disabling environment at home and increased child labour.

Attitude

Many attitudinal issues emerged from the reviews as to why parents and guardians enrol, fail to enrol, retain the children or withdraw the children from schools. Here the studies reviewed included, (Ekiru, 2012; Kimu, 2012; Jacobs 2008; Gimbo, Mujawamariya and Saunders, 2015; Chepleting *et al.*, 2013. Majority of the studies reviewed showed that, some parents had a negative attitude towards enrolling their children, some parents saw the girl-child as a worker.

A study by Ekiru, (2012) on parental attitude towards educating the girl-child in Kaaleng division Turkana County, showed that parents had a negative opinion on the issue of enrolling and keeping children in school as they considered being in school as not beneficial to the child, due to the constant movement. It further showed that, parents would rather allow their children to be taught traditional life skills by the elders as they moved about with their animals in search of water and pasture. Parents also had a negative attitude towards taking their daughters to join schools. The study showed that the girls are subjected to family chores hence

sidelining them from joining ECDE centers and primary schools. On the other hand, the girls themselves also have a negative attitude on education. It was also noted in the study that in this community, women are seen to be inferior to their male counterparts hence they should not be educated.

These findings were however not consistent with studies conducted by Kimu, (2012). According to the study, parents do not have a skewed attitude towards enrolling and keeping their children in school but other external factors compelled them to do so. The study also noted that, various factors seem to cause problems regarding the involvement of parents, namely: lack of a functional policy in schools on parental involvement; the illiteracy of many parents in the community; parental work commitments; time constraints; the gendered nature of parental involvement and the lack of parenting skills among the parents.

A study by Gimbo, Mujawamariya and Saunders (2015), on why Maasai enrol their children, established that, Maasai parents have a positive perception of the value of education and that is why the enrolment of children in primary schools in the entire community increased. According to them, the value of education was attached to the fruits expected from education. Most parents hoped that educated children will be in a position to help their parents in the future. The findings also showed that parents who educated their children, are benefiting from the support they get from their educated children. Findings from the same study also showed that some Maasai people perceive education as a threat to culture. According to the findings, enrolling the children in school to get education was seen as something that would ruin Maasai culture among the young generation.

In another study carried out by Abudho Bashuna, (2013) on factors influencing primary school enrolment and performance of girls among the Gabra of North-Horr in Marsabit County, he found out that, over the years due to low outcome from education in the community, people have started viewing education negatively and hence there is no rush to invest in education. The age of 'go to school and get a good job' seem long gone, as unemployment continues to pose major socio-economic challenges. Considering that the mainstay of the community is livestock rearing, it has become a great risk for parents to sell their inheritance (cattle), in pursuit of education. With doubts cast on the economic viability of the educational endeavour, many parents may not be convinced that investing in education is worthwhile any longer. This loss of faith on individual returns is becoming a deterrent. The presence of some educated people, who are unemployed, reinforces the notion that education is a worthless pursuit.

Beliefs

Cultural dynamics and beliefs about education, its value and participation, all impact the way children participate in education. The Turkana people also practice cultural beliefs and values that children are a source of wealth especially girls and boys are to provide protection and security to the family and society. In 2013, researchers Chepleting S, Chepkemei A, Yano KL, Chebet LL did a study in West Pokot and found that gender stereotyping, such as the belief that women do not require an education as they belong in the house supporting the family, played a role in the higher dropout level for female students in the area. The same study also revealed that there was a general belief among the community that children are supposed to stay home and help their parents, this factor seemed to affect girls more than boys.

In relation to parents enrolling children of female gender to school, all FGDs and key informants interviewed in the same study revealed that daughters in the Maasai culture are seen primarily as a source of wealth and as such may be married off young as opposed to being sent to school –as early marriage brings quick returns. Respondents reported that in the Maasai culture, the parents of the groom will pay bride wealth in terms of cattle to the family of the girl. Since wealth in Maasai culture is defined by the number of cattle one has, early marriage for daughters is therefore a way for her parents to become wealthy. Culture may hinder

the parents from seeing a benefit from educating a young girl. Her education is seen as a delay to wealth accumulation (Gimbo et al., 2015).

On education and resilience in Kenya’s arid lands of Wajir, Marsabit and Turkana counties, the findings showed that, cultural divisions can be particularly acute for girls. Girls who have gone to school may lose their ‘marriageability’. Many of them feel deeply insecure inside the schools, enduring rape and other forms of sexual abuse. Yet many also report they are better able to choose whom they marry and feel they have more potential at home and in society. Many young men who leave schools with low qualifications accept life as second and third class citizens in the growing towns and trading centres. A rising proportion absorbs social stress by turning to drugs or adapt by turning to crime and insurgency (UNICEF, 2015).

Practices

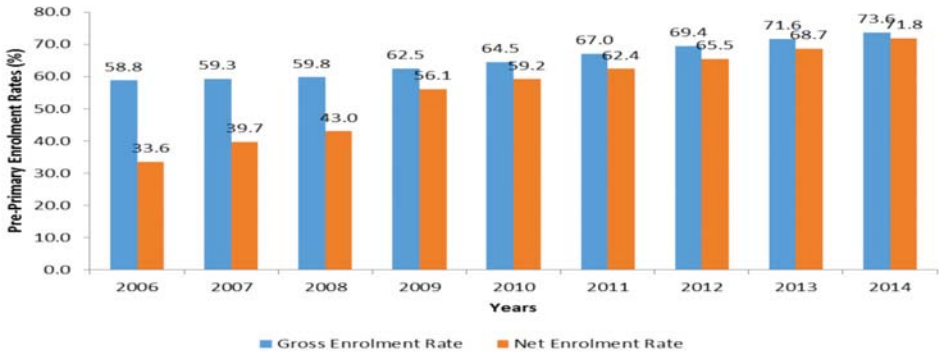
Trends, levels and differentials of education outcomes

a) Pre-Primary Education

Gross Enrolment Rate (GER) and Net Enrolment Rate (NER)

The total enrolment in pre-primary schools grew by 3.5 percent from 2.9 million in 2013 to 3.0 million in 2014 (Republic of Kenya and KNBS, 2015). Figure 2.13 shows that the Gross Enrolment Rate (GER) increased from 58.8 percent in 2006 to 73.6 percent in 2014 while the Net Enrolment Rate (NER) raised steadily from 33.6 percent in 2006 to 71.8 percent in 2014 (Republic of Kenya and KNBS, 2015; Republic of Kenya and KNBS, 2014; Republic of Kenya and KNBS, 2013; Republic of Kenya and KNBS, 2012; Republic of Kenya and KNBS, 2011; Republic of Kenya and KNBS, 2010; Republic of Kenya and KNBS, 2009; Republic of Kenya and KNBS, 2008). The increase in enrolment at pre-primary education can partly be attributed to investment in pre-primary education by both National and County Governments (Republic of Kenya and KNBS, 2015).

FIGURE 2.13: Trends in Pre-primary Gross Enrolment Rate (GER) and Net Enrolment Rate (NER), 2006-2014, Kenya



Source: Ministry of Education EMIS and various Economic Surveys (2010-2009)

Gender Parity Index in Early Childhood Education Centres

The number of children enrolling in ECDE centres across the country has been on the rise since the introduction of free primary education in 2003. Table 2.15 presents the number of children enrolled in pre-primary schools in the years 2003 to 2014. The number of pre-schoolers increased from 1,602,232 (816,577 males and 785,655 females) in 2003 to 3,019,865 (1,543,482 females and 1,476,383 males) in 2014. Table 2.15 also shows the gender parity index (GPI), which assesses sex-related differences in school

attendance rates. The results further indicate that male pupils dominated the ECD programmes compared to their female counterparts in the years 2003 to 2010 but the gap narrowed to almost one, where the male and female children were almost equal in 2011. From 2012-2014 the proportion of female population participating in ECD programmes outweighed their male counterparts with GPI of above 1.

According to UNICEF, about 44 percent of children aged 36-59 months are attending pre-school. Urban-rural and regional differentials are significant – children attending ECDI was 61 percent in urban areas and 42 percent in rural areas. Among children aged 36-59 months, attendance to pre-school ranges from 53 percent in Kisumu County a more urbanized county to 30 percent in Siaya County. No significant gender differentials are observed, but differentials by socio-economic status are significant. About 65 percent of children living in rich households attend pre-school, while the figure drops to 33 percent among those from the poorest households. According to the study, it is not surprising to note that the proportions of children attending preschool at ages 36-47 months (28%) is much lower than for the 48-59 months (62%) (UNICEF, 2011).

In 2014, the percentage of children in first grade of primary school who attended pre-school during the previous school year was recorded at 43.8 percent and 60.3 percent in Kakamega and Turkana counties respectively (MICS, 2014.)

TABLE 2.15: Number of children enrolled in Pre-primary schools in Kenya by year (2003-2014)

Year	Male	Female	Total	GPI for ECD*
2003	816,577	785,655	1,602,232	0.962132
2004	823,417	804,304	1,627,721	0.976788
2005	830,828	812,347	1,643,175	0.977756
2006	866,445	805,891	1,672,336	0.930112
2007	876,163	814,930	1,691,093	0.930112
2008	885,320	834,925	1,720,245	0.943077
2009	967,544	946,678	1,914,222	0.978434
2010	1,216,087	1,185,708	2,401,795	0.975019
2011	1,281,161	1,275,151	2,556,312	0.995309
2012	1,346,235	1,364,595	2,710,830	1.013638
2013	1,411,309	1,454,039	2,865,348	1.030277
2014	1,476,383	1,543,482	3,019,865	1.045448

* Computed value from the raw data given for GPI

* The Gender Parity Index for pre-primary school is the ratio of the primary school Gross Enrolment ratio for females to the Gross Enrolment for males.

Source: Source: Ministry of Education EMIS and various Economic surveys 2005-2015

Early Childhood Education GER and NER in Selected Counties

Table 2.16 presents information on GER and NER in the pre-school for the 25 UNICEF focused counties. From the table, Homa Bay, Isiolo and Samburu counties have a high GER of over 100 percent. The high GER is as a result of many over-age children enrolling in pre-school. On the other hand, Wajir County has the lowest NER of 23.7 percent.

b) Special needs education

It is estimated that only 2-3 percent of disabled children in poor countries go to school (World Bank, 2009 [cited in NCCS 2015]). In Kenya this has been achieved through the 3,464 special needs institutions out of which 2,713 are integrated and 734 are special needs schools (NCCS, 2015).

TABLE 2.16: ECDE GER and NER by selected counties

COUNTY	Gross Enrolment rate GER)(%)			Net Enrolment rate (NER)(%)		
	Boys	Girls	Total	Boys	Girls	Total
Baringo	87.7	85.3	86.5	84.5	82.5	83.5
Garissa	83.4	57.3	69.4	79.2	54.4	65.9
Homa Bay	104.3	108.9	106.6	94.6	89.7	92.2
Isiolo	113.1	102.6	107.7	98.6	97.5	98.0
Kajiado	72.7	66.0	69.4	71.4	64.6	68.0
Kakamega	67.9	65.5	66.7	64.8	62.0	63.4
Kericho	85.4	84.1	84.7	81.9	80.6	81.3
Kilifi	79.8	82.8	81.2	77.6	80.6	79.0
Kisumu	69.1	70.4	69.7	67.9	69.1	68.5
Kitui	89.4	85.1	87.2	86.4	82.4	84.4
Kwale	83.2	84.2	83.7	80.9	81.4	81.2
Marsabit	57.1	46.4	51.5	55.8	45.5	50.5
Mombasa	72.5	61.5	66.8	71.3	60.9	65.9
Nakuru	66.0	68.7	67.3	64.5	67.2	65.9
Nandi	91.5	88.2	89.8	88.9	85.2	87.0
Narok	74.2	66.6	70.4	70.8	63.3	67.0
Nyeri	77.8	78.6	78.2	76.4	77.3	76.9
Samburu	119.7	106.3	113.0	59.4	75.5	67.5
Siaya	72.3	74.7	73.5	70.3	72.5	71.4
Taita Taveta	83.4	77.1	80.2	81.3	75.2	78.1
Tana River	72.8	67.3	70.1	71.6	66.4	69.0
Trans Nzoia	52.9	52.4	52.7	49.3	48.6	48.9
Turkana	109.8	86.3	97.6	84.9	78.3	81.5
Wajir	32.0	20.4	25.6	29.6	19.0	23.7
West Pokot	100.6	97.1	98.9	82.1	78.9	80.5

Source: Ministry of Education Statistical Booklet, 2014

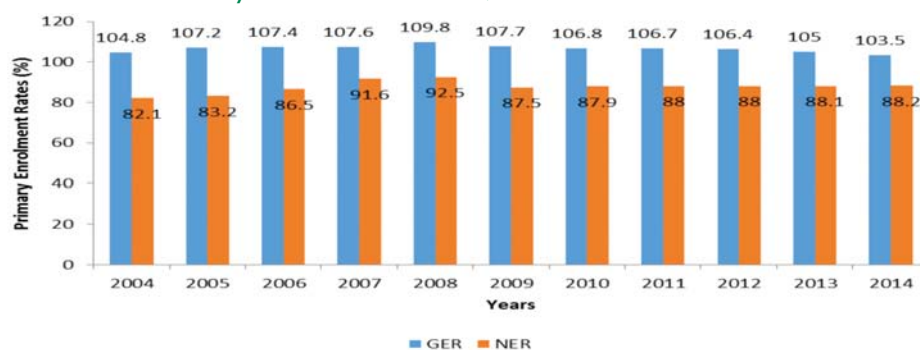
c) Primary education

Gross Enrolment Rate (GER) and Net Enrolment Rate (NER)

Figure 2.14: shows the primary school GER and NER for the years 2004 to 2014. The GER increased from 104.8 percent in 2004 to 105 percent in 2013 and then dropped to 103.5 percent in 2014 while the NER increased from 82.1 percent in 2004 to 88.2 percent in 2014. The high GER may be attributed to enrolment of over-age and under-age pupils in primary schools. The NER remained relatively stable during the review period, suggesting that majority of primary school going age population are attending school.

According to KIPPRA reports, the net enrolment in primary school increased from 76 percent in 2002, to 95.3 percent in 2012 because of the introduction of free primary education (KIPPRA, 2013). In 2014, total enrolment in primary schools increased to 10 million from 9.38 million in 2010. The Gross enrolment rate for primary schools in 2013 was at 105 percent and 103.5 percent in 2014. Despite the increase the high pupil:teacher ratios and inadequate infrastructures have compromised the quality of education and learning. (In primary schools pupil:teacher ratio is per the norm, though we have poor distribution of the teachers yielding to high pupil:teacher ratios in some areas (MoEST Statistical Booklet, 2014). In addition gender and regional disparities in access and participation in primary education has remained a challenge (Republic of Kenya and KNBS, 2015).

FIGURE 2.14: Primary school GER and NER, 2004-2014



Source: Ministry of Education EMIS and various Economic Surveys (2006 – 2009)

School attendance ratios

Table 2.17 presents the primary school net and gross attendance ratios (NAR and GAR) by household residence, region, and wealth quintile. The NAR is 86 percent at the primary school level. It is slightly higher for girls (87%) than for boys (85%). The differentials in attendance ratios are much greater across regions than between girls and boys. Sixty percent of boys age 6-13 in the North Eastern region are attending primary school, while 94 percent are attending in the Central region. Similarly, only 51 percent of girls age 6-13 in North Eastern are attending primary school, as compared with 95 percent of girls in Central. As might be expected, the NAR for primary school is higher in urban areas (89%) than in rural (85%) and it increases with increasing wealth (KNBS and ICF Macro, 2014). With the exception of North Eastern, GARs are quite high in all regions, indicating that a substantial number of boys and girls who are not of official primary school age are attending primary school (KNBS and ICF Macro, 2014).

TABLE 2.17: School attendance ratios and GPI

Background characteristics	Net Attendance Ratio (NAR)				Gross Attendance Ratio (GAR)			
	Male	Female	Total	GPI	Male	Female	Total	GPI
PRIMARY SCHOOL								
<i>Place of residence</i>								
Urban	88.1	90.2	89.2	1.02	106.6	103.2	104.9	0.97
Rural	83.6	85.3	84.5	1.02	110.1	106.4	108.2	0.97
<i>Region</i>								
Coast	76.6	80.3	78.5	1.05	103.4	100.2	101.8	0.97
North Eastern	59.6	50.3	55.5	0.85	81.0	61.5	72.2	0.76
Eastern	90.8	92.3	91.5	1.02	118.8	114.9	116.8	0.97
Central	93.7	95.0	94.3	1.01	111.9	108.4	110.2	0.97
Rift Valley	84.1	85.9	85.0	1.02	108.4	105.5	107.0	0.97
Western	86.1	89.5	87.9	1.04	118.0	114.3	116.0	0.97
Nyanza	83.8	85.3	84.5	1.02	105.8	102.9	104.3	0.97
Nairobi	92.3	93.2	92.8	1.01	105.7	101.2	103.3	0.96
<i>Wealth quintile</i>								
Lowest	71.0	71.1	71.0	1.00	97.5	90.5	94.1	0.93
Second	86.9	89.5	88.2	1.03	115.6	112.9	114.2	0.98
Middle	89.4	91.6	90.5	1.02	116.7	114.5	115.6	0.98
Fourth	91.0	93.0	92.0	1.02	112.5	108.4	110.4	0.96
Highest	91.6	92.6	92.2	1.01	103.9	101.3	102.6	0.97
Total	84.8	86.7	85.7	1.02	109.2	105.5	107.3	0.97

Net attendance ratios (NAR) and gross attendance ratios (GAR) for the de facto household population by sex and level of schooling; and the Gender Parity Index (GPI), according to background characteristics, Kenya 2014
 Source: Modified table KDHS report 2014 page 28

Gender Parity Index in Primary Education

Table 2.17 also shows the gender parity index (GPI), which assesses sex-related differences in school attendance rates. The GPI is calculated by dividing the GAR for the female population by the GAR for the male population or dividing the NAR for the female population by the NAR for the male population. The GPI for NAR shows close to gender parity at the national level in primary school; however, the GPI for GAR at the primary (0.97) level is skewed to favour male children. Among the regions, North Eastern has the lowest NARs, GARs, and GPIs.

Female and male enrolment in primary school

Table 2.18 presents the enrolment of pupils in primary schools in both standard one and standard eight. The number enrolled in standard one has been increasing steadily similarly to standard eight. However, the pupils enrolled in standard one is not the same as the number completing or enrolled in standard eight. For instance, there were 679,000 male pupils enrolled in primary schools in 2003 but seven years later, there were only 453,300 male pupils in 2010. This means that not all pupils complete the primary education or survive to complete education. Similarly, out of 1,243,100 children enrolled in standard one in 2007 only 898,700 reached Standard eight after seven years.

TABLE 2.18: Female and male enrolment in primary school in '000'

Year	Standard one			Standard Eight		
	Male	Female	Total	Male	Female	Total
2003	679.0	632.7	1,311.7	282.4	269.1	551.5
2004	646.2	606.2	1,252.4	334	309.1	643.1
2005	620.4	585.8	1,206.2	342.1	309.6	651.7
2006	593.2	568.1	1,161.3	333.5	302.3	635.8
2007	638.9	604.2	1,243.1	379.2	360.8	740
2008	650.9	617.2	1,268.1	366	330.1	696.1
2009	670.9	655.7	1,326.6	377.1	350.0	727.1
2010	715.6	655.1	1,370.7	453.3	422.0	875.3
2011	713.9	656.8	1,370.7	451.6	428.1	879.7
2012	712.2	658.1	1,370.3	449.8	433.0	882.8
2013	710.5	659.1	1,369.6	448.1	436.8	884.9
2014	708.9	663.4	1,372.3	446.3	452.4	898.7
TOTAL	8,061	7,562	1,5623	4,663	4,403	9,066

Source: Modified tables from Economic Surveys (2004-2015)

According to KNBS, 2015, the total enrolment rose marginally from 9.9 million in 2013 to 10.0 million in 2014, with 8.6 million of those enrolled being in public schools. Enrolment in standard one increased from 1,369.6 thousand in 2013 to 1,372.3 thousand in 2014 Republic of Kenya and KNBS, 2015. Enrolment of girls in standard one rose by 0.6 percent compared to that of boys which declined by 0.2 percent. The retention rate from standard 1 to 5 for girls was 96.7 percent compared to that of boys at 89.9 percent. During the review period, enrolment at standard 7 was 1,205.6 thousand pupils compared to 898.7 thousand pupils in standard 8, implying that fewer pupils progressed to standard 8. (Republic of Kenya and KNBS, 2015).

Primary school GER and NER in selected counties

Table 2.19 presents information on GER and NER in primary school for the 25 UNICEF focused counties. From the table, it is notable that Nandi and Kitui Counties have the highest GER of 121.8 and 120.6 respectively. The high GER is attributed to over-age children enrolling in class one. On the other hand, Wajir County recorded the lowest GER of 35.2 percent, meaning very few children are enrolling to primary school. This low rate can be attributed to the access issues that prevent children in arid areas from joining primary schools. The table also shows that county and gender disparities exist in GER and NER.

TABLE 2.19: Primary GER and NER by selected counties

COUNTY	Gross Enrolment rate GER)(%)			Net Enrolment rate (NER)(%)		
	Boys	Girls	Total	Boys	Girls	Total
Baringo	102.30	96.30	99.30	87.20	83.80	85.50
Garissa	94.00	52.00	71.40	74.50	42.90	57.50
Homa Bay	117.00	115.40	116.20	98.20	98.40	98.30
Isiolo	104.60	96.30	100.30	87.30	82.20	84.70
Kajiado	92.70	89.10	90.90	75.20	74.80	75.00
Kakamega	120.70	119.50	120.10	97.90	94.10	96.00
Kericho	120.20	117.40	118.80	99.70	99.00	99.30
Kilifi	106.80	111.90	109.30	81.40	86.50	83.90
Kisumu	108.60	113.90	111.20	93.20	96.70	94.90
Kitui	121.50	119.60	120.60	94.70	94.20	94.40
Kwale	106.50	108.50	107.50	74.10	78.30	76.10
Marsabit	86.80	72.70	79.50	71.30	60.60	65.80
Mombasa	80.50	74.90	77.60	70.80	66.70	68.70
Nakuru	114.00	111.00	112.50	99.60	98.40	99.00
Nandi	122.50	121.20	121.80	97.90	97.00	97.50
Narok	107.00	96.70	101.80	88.50	81.70	85.10
Nyeri	119.40	118.50	119.00	98.50	98.80	98.70
Samburu	80.70	66.70	73.70	64.80	55.50	60.10
Siaya	117.50	116.50	117.00	95.30	96.10	95.70
Taita Taveta	123.80	114.50	119.00	95.70	91.20	93.40
Tana River	80.50	73.90	77.20	64.00	61.20	62.60
Trans Nzoia	110.80	113.70	112.30	90.70	94.50	92.60
Turkana	91.20	64.70	77.40	67.50	50.80	58.80
Wajir	46.90	25.60	35.20	35.60	20.40	27.20
West Pokot	111.80	106.80	109.40	85.50	84.10	84.80

Source: Ministry of Education Statistical Booklet, 2014

Attendance of children in schools by survivorship of their parents

Table 2.20 presents the percentage of children age 10-14 attending school, by the survivorship of their parents. The results show a high level of school attendance overall among both boys and girls, regardless of whether or not a parent is deceased (96 percent and 97 percent respectively). It is sometimes assumed that becoming an orphan jeopardizes a child's chances of attending school, but the data in Table 2.21 does not strongly support this theory. In fact, the greatest differential is seen in the lowest wealth quintile, in which only 89 percent of children living with at least one parent are attending school, as compared with 94 percent of double orphans (both parents have died). (KNBS and ICF Macro, 2014). There are no differentials among orphan children living in the urban and rural areas in terms of the school attendance (96.2%). However, among the children whose parents are alive, the proportion attending vary according to their place of residence (Table 2.21), where 98.3 percent and 96.1 percent of children living in urban and rural areas, respectively, attend school. The proportion attending school is based on the *de jure* children 10-14 years of age and by parental survival.

TABLE 2.20: School attendance by survivorship of parents

Percentage attending school by survivorship of parents		
Background characteristic	Both parents deceased	Both parents alive and living with at least one parent
Sex		
Male	95.0	97.0
Female	97.4	96.5
Place of residence		
Urban	96.2	98.3
Rural	96.2	96.1
Region		
Coast	78.9	95.5
North Eastern	*	72.2
Eastern	92.2	98.6
Central	*	99.5
Rift Valley	95.2	95.9
Western	100.0	99.3
Nyanza	99.0	99.4
Nairobi	*	99.2
Wealth quintile		
Lowest	94.4	88.7
Second	97.1	99.1
Middle	97.6	99.4
Fourth	98.8	99.1
Highest	88.8	99.2
Total	96.2	96.7

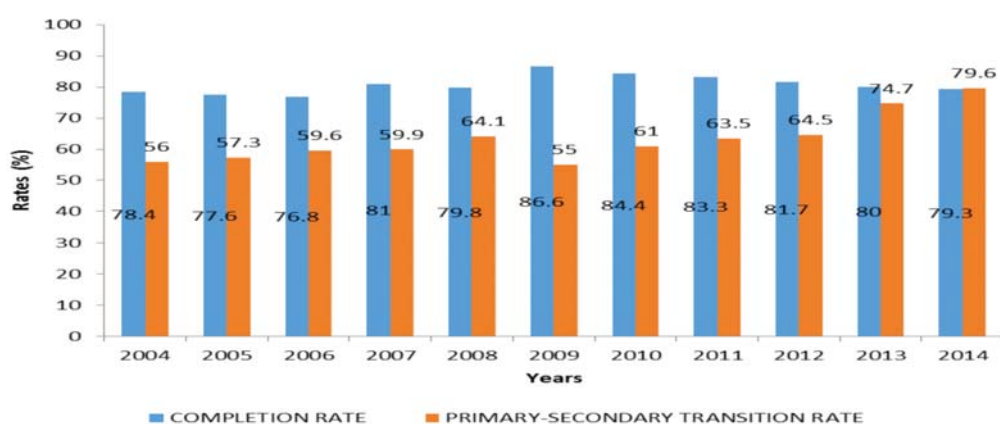
Note: Table is based only on children who usually live in the household. Figures in parentheses are based on 25-49 un weighted cases. An asterisk denotes that a figure is based on fewer than 25 un weighted cases and has been suppressed.
Source: Modified table 2.12 from KDHS report 2014 page 25

Transition rate in primary

Transition Rate (TR) is the number of pupils (or students) admitted to the first grade of a higher level of education in a given year, expressed as a percentage of the number of pupils (or students) enrolled in the final grade of the lower level of education in the previous year. It conveys information on the degree of access or transition from one cycle or level of education to a higher one.

Figure 2.15 shows the Pupil Completion Rate (PCR) and Primary to Secondary Transition Rate from 2004 to 2014. The PCR increased from 78.0 percent in 2013 to 78.5 percent in 2014 while the Primary to Secondary transition rate rose to 80.4 percent in 2014 from 76.8 percent in 2013. However, the PCR decreased from 78.4 percent to 76.8 percent from 2004 to 2006 and then picked from 81 percent in 2007 to 83.2 percent in 2009 then dropped, unlike the primary-secondary transition rate which increased steadily from 2004. The improvement of Primary to Secondary transition rate can partly be attributed to implementation of Free Day Secondary Education (FDSE) and expansion of education facilities (KIPPRA, 2014).

FIGURE 2.15: Shows the Pupil Completion Rate (PCR) and primary to secondary transition rate from 2004 to 2014



Source: Ministry of Education EMIS and various Economic Surveys (2006 – 2009)

d) Secondary education

Enrolment in secondary schools in Kenya

Table 2.21 presents the enrolment of students in secondary schools in numbers. In 2003 the total enrolment was 251,822 students while in 2014 it rose to 667,151 in form one—representing 37.7 percent increase. While for form four enrolment improved by 40.6 percent from 2003 to 2014. Total enrolment of girls increased by 37.5 percent from 122,935 in 2003 to 2.4 million in 2014 while that of boys grew by 38.0 percent. In four form, the total enrolment has also increased since 2003 to 2014 from 102,322 to 247,537 for male—representing a 41.3 percent increase while that of girls improved by 39.8 percent from 85,089 in 2003 to 214,060 students in 2014.

TABLE 2.21: Enrolment of students in secondary schools by sex (2003-2014)

Year	Form one			Form four		
	Male	Female	Total	Male	Female	Total
2003	128,887	122,935	251,822	102,322	85,089	187,411
2004	145,145	125,542	270,687	101,301	89,416	190,717
2005	124,469	111,384	235,853	110,909	98,367	209,276
2006	161,588	137,873	299,461	131,491	111,615	243,106
2007	170,650	143,045	313,695	137,304	113,899	251,203
2008	207,212	180,461	387,673	161,026	136,275	297,301
2009	232,854	212,467	445,321	182,764	154,546	337,310
2010	266,707	232,226	498,933	169,899	141,999	311,898
2011	276,965	244,636	521,601	206,552	166,501	373,053
2012	282,555	249,573	532,128	223,132	188,198	411,330
2013	327,775	289,753	617,528	244,463	204,204	448,667
2014	339,134	328,017	667,151	247,537	214,060	461,597
Total	2,663,941	2,377,912	5,041,853	2,018,700	1,704,169	3,722,869

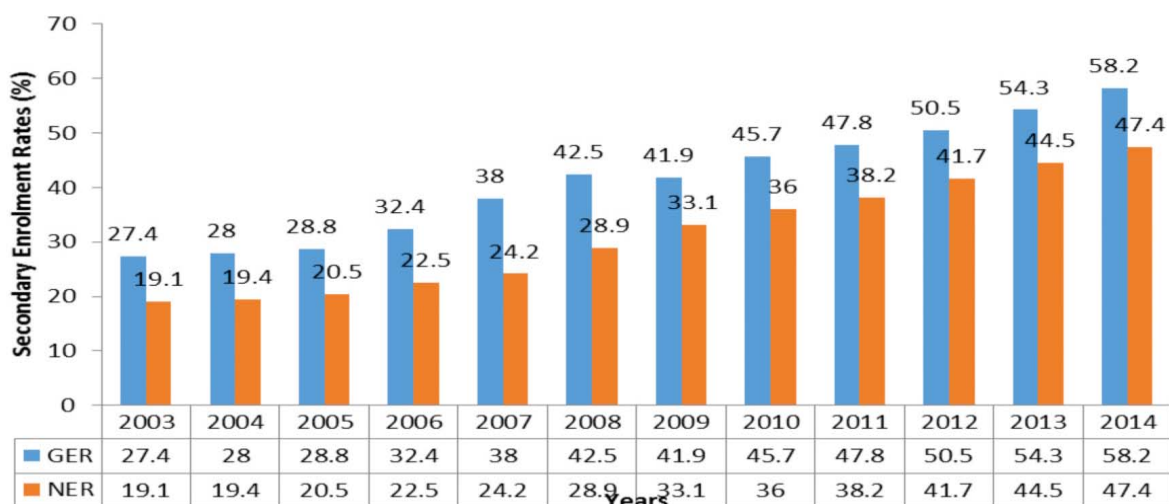
Source: Modified tables from Economic Reports (2005-2015)

Gross and Net Enrolment Rates

Figure 2.16 presents trends in secondary school GER and NER from 2003 to 2014. The GER increased from 27.4 percent in 2003 to 58.2 percent in 2014. Significant improvement was also registered in the NER that increased from 19.1 percent in 2003 to 47.4 percent in 2014. The upward trend in NER can partly be attributed to the implementation of Free Day Secondary Education (FDSE) and infrastructure development in schools.

Although there is an improvement of both gross and net enrolment of students in secondary schools, there exist a gap between those who are under age and appropriate age to join secondary schools. The recommended age to be in secondary school is 14-17 years but the deviation between GER and NER is an indicator that more students join secondary schools when they are overage. In addition to the age gap, a significant proportion of children are still out of secondary schools in Kenya with only a half having access to the secondary schools (GER 58.2 and NER 47.4).

FIGURE 2.16: Secondary school GER and NER, 2003-2014



Source: Ministry of Education EMIS and various Economic Surveys (2006 – 2009)

Secondary school GER and NER in selected counties

Table 2.22 presents information on the GER and NER in the primary school for the 25 UNICEF focused counties. From the table, it is notable that Nyeri County has the highest GER (132.4%) and NER (86.1%) while Turkana and Wajir counties have the lowest GER of 12.1 percent and 12.8 percent and NER of 8.7 percent and 9.3 percent respectively. It is also important to note that there exist disparities in both GER and NER for both males and females. In all the counties except for Nandi and Nyeri, the GER for boys is higher than that of girls. Kisumu, Kitui, Kwale, Nandi and Nyeri counties have a higher NER for females than males. These disparities can be explained by the contextual issues affecting the education sector in each of the different counties herein.

TABLE 2.22: Secondary school GER and NER by selected counties

COUNTY	Gross Enrolment rate (GER) (%)			Net Enrolment rate (NER) (%)		
	Boys	Girls	Total	Boys	Girls	Total
Baringo	56.50	51.40	53.90	47.00	43.60	45.30
Garissa	29.10	10.90	19.30	18.00	7.40	12.30
Homa Bay	78.80	59.30	69.20	65.50	50.50	58.10
Isiolo	35.00	22.40	28.50	28.70	18.90	23.60
Kajiado	34.10	30.80	32.40	27.20	25.40	26.30
Kakamega	66.20	62.50	64.30	53.00	51.20	52.10
Kericho	73.90	66.30	70.10	61.00	56.20	58.60
Kilifi	40.60	34.80	37.80	27.60	24.30	26.00
Kisumu	68.50	68.00	68.20	57.70	58.50	58.10
Kitui	67.90	68.70	68.30	54.40	55.80	55.10
Kwale	35.80	35.10	35.50	25.20	25.50	25.30
Marsabit	19.20	12.70	15.80	15.70	10.20	12.90
Mombasa	39.70	30.00	34.70	31.50	24.60	27.90
Nakuru	70.70	66.80	68.80	60.50	58.50	59.50
Nandi	63.10	63.20	63.20	50.00	51.30	50.70
Narok	29.00	20.00	24.50	23.40	16.50	19.90
Nyeri	126.80	138.20	132.40	84.00	88.30	86.10
Samburu	25.30	14.60	20.00	19.20	11.60	15.40
Siaya	81.70	68.60	75.10	67.70	57.60	62.60
Taita Taveta	81.60	81.00	81.30	63.20	64.30	63.80
Tana River	26.50	14.50	20.50	21.00	11.90	16.50
Trans Nzoia	56.00	49.80	52.90	44.40	40.20	42.30
Turkana	16.90	7.70	12.10	11.90	5.80	8.70
Wajir	19.50	7.20	12.80	14.10	5.40	9.30
West Pokot	26.50	24.10	25.30	19.50	18.30	18.90

Source: Ministry of Education Statistical Booklet, 2014

Secondary Gender Parity Index and completion rate

The Gender Parity Index improved from 0.94 in 2008 to 0.96 in 2009 and in 2011, it is in favour of girls at 1.01 (KIPPR, 2013). However, this is different from the Kenya National Bureau of Statistics—KNBS (Various), Economic Survey sources. From table 2.23 the gender parity index in secondary education is favouring men since 2010 to 2013. The GPI is fluctuating year after the year at below 1.0 implying girls have less access to secondary education compared to their male counterparts. The completion rate has reduced from 85.2 percent in 2009 to 70.3 percent in 2010 before dropping to 80.4 in 2011. The rate rose again to 86.9 percent and drastically to 74.4 percent in 2014.

TABLE 2.23: Gender parity index and completion rate in secondary education 2009-2013

Indicator	2008	2009	2010	2011	2012	2013	2014
GPI	0.94	0.96	0.86	0.87	0.88	0.87	0.95
Completion (%)	*	85.2	70.3	80.4	86.9	81.7	74.4

* Not found³
 Source: MOE, 2014 and Economic Surveys (Various)

Behaviours on education

Majority of studies show that different cultural practices influence enrolment and continuation rates in schools, these include practices such as early marriage and female genital cutting that affect the older girls in the 6 to 13 age group, and lead to dropping out of school. In a patriarchal society, and in poor households, sons' education is at times supported at the expense of their sisters' education, because of a perception that boys will contribute to the future wealth of the family. For example, a study by Chepleting *et al.*, (2013) in west Pokot found that, parents and guardians pressure girls to marry because of dowry payments and having fewer dependents at home. Early marriage and teenage pregnancy play significant roles in the high female school dropout level in the area.

Ekiru, (2012) conducted a study in Turkana, to investigate how culture of pastoralism affects enrolment in schools. The results revealed that migration of parents together with their children from one place to another affected the enrolment and retention ratio in schools. As a result of nomadic life, the children do not have time to enrol at ECDE centers and primary schools. Those who have enrolled are not assured of being in school throughout the entire course of study. According to Ekiru, cultural practices and beliefs such as rite of passage like initiation, discrimination of the girl-child leads to absence of children in school and poor performance. It also emerged from the literature that, enrolment of boys in school was higher than that of girls because girls move with their parents to assist in domestic chores like baby-sitting and watering animals while on transit with their parents.

According to Bashuna, (2013) it was established that there was gender preference when it came to enrolling children to school in Gabra of North-Horr, Marsabit County. The study results showed that in most families, a girl would be left at home in favour of a boy hence girls miss out on schooling. The decision as to who to enrol in school mainly comes from the head of the household, that are male –and most fathers would prefer a boy to go to school. Other factors that bar girls from enrolling in school are: early marriages; lack of school fees; household chores; looking after animals; failure of girls and parents to appreciate the value of education; and cultural practices that enhances gender segregation and consider girls as home assets in the community, were noted as some of the key factors that influence girls' enrolment in school.

Findings from the same study also showed that early marriage has been seen to influence school enrolment and completion in this community. In the Gabra community, girls can be married off as early as 8 years, and this is the age at which girls are required to enrol in school. It therefore becomes impossible for such girls to be enrolled in school. In this community, arranged marriages or 'booking girls' for marriage at a very young age or even at birth is very common. In some cases, parents of a boy in the community can actually give a ring to an expectant mother, to book the pregnancy for their boys in case it turns out to be a girl.

In a study by Were, (2012) on determinants of school enrolment among public day secondary school students in Butula district, Kenya. The findings of the study show that secondary education is still heavily in the hands

of parents although the Ministry of Education pays tuition fees. Parents are responsible for the payment of a development fund, uniform, caution money, and harambee fund. This situation has put pressure on the parents as most schools send students home, if they can not afford to pay the required amount of fees. The inability of the parents to pay fees was seen as a contributing factor to discontinuation of school attendance.

Gimbo *et al.*, (2015) found that, one of the major cultural practices that Maasai of the older generation would not want to change is Female Genital Mutilation/Cutting (FGM/C). Traditional ear piercing and stretching is yet another cultural practice that some Maasai parents fear losing, if their children obtain an education. Key informants told researchers that a big ear shows that a person is a good listener. Respondents reported that schools teach against these practices and so education may affect the sustainability of such cultural customs among the Maasai.

According to preliminary results of the 2015 National Adolescent and Youth Survey conducted by NCPD, the major issues contributing to primary school drop-out in most counties of Kenya is lack of school fees and poverty. Child labour contributed to school drop-out in Homa Bay, Kericho, Baringo and Garissa counties. Teenage pregnancies and early marriages for girls were common in Siaya, Marsabit and Kericho counties. Lack of school fees and drug abuse also played a role in secondary school drop-out (NCPD, 2015). This situation can be explained in a quote from an FGD participant in Kericho and Siaya.

'Some drop out of schools to look for money in quarries or tea plantations or at the market because parents cannot afford school uniform.'

(FGD, male young person 10-14, Kericho).

Another one had this to say:

'Most girls drop out of schools due to pregnancy in which most of them do not wish to become pregnant but they are forced to be pregnant because they sleep with other men to get school fess.'

(FGD, female young person, 15-19 years, Siaya).

According to 2015 UNICEF report on education and resilience in Kenya's arid lands, the enrolment levels are low, ranging from net enrolment of 27.2 percent of children of primary age in Wajir to 58.8 percent in Turkana and 65.7 percent in Marsabit. At a secondary level, net enrolment is almost the lowest in Kenya: 8.7 percent of secondary age children in Turkana, 9.3 percent in Wajir and 12.9 percent in Marsabit. Performance in these counties is consistently below the national average. (UNICEF, 2015).

From the same study, religious practices were found to affect parents choices in what kind of education to enrol their children in. According to the study, Muslim parents are increasingly choosing to send children to Islamic madrassa instead of secular schools, as they trust these institutions to provide a good education; while traditional pastoralist education, and its urban equivalent where children learn a business or artisanal trade from family, is showing consistency in providing a relevant, but limited, education to the majority of children (UNICEF, 2015).

Factors affecting enrolment and retention of children in schools

Kenya has achieved 100 percent access rates in education up to standard six, however, low access rates are experienced from standard seven and in secondary schools (MOE 2014). Moreover, the other main issues facing the education sector have been challenges on equity, quality, relevance and efficiency in the management of educational resources (MOE, 2010). Access and participation at the ECDE level are still low

with a NER of 71.8 percent in 2014. This means that 28.2 percent of the school-age going pupils were not in school in 2014. The GER stood at 73.6 in 2014. The low access levels can be explained by the fact that ECDE was not compulsory in Kenya, in spite of being critical in laying the foundation for performance in the subsequent levels of education.

The 2014 Situation Analysis (SitAn) on children and adolescents in Kenya, established that drought and security-related emergencies serve as barriers to education access for ECDE and primary school girls and boys in the arid districts of Kenya. Frequent man-made and natural disasters have affected the continuity of learning and access to schooling at all levels. Conflicts and clashes are common in some districts during elections. The flow of refugees from neighbouring Somalia and Sudan has overstretched education services in Dadaab and Turkana. These disasters affect children at all levels of formal schooling, as well as adolescents' not attending school. The assessment further established that, lack of latrines and sanitary pads for girls in schools in rural areas is one of the primary causes that prevent many females from attending school and contributes to the drop-out rate in secondary school (UNICEF, 2014).

According to the study by ILO, (2010) sickness and schooling costs claim up to 75 percent of reasons for absenteeism, in-depth data reveal that children also miss school due to lack of strictness and proper monitoring in schools (like cases where children do not go to school during the first and second weeks of opening or after the mid-term break). Absenteeism is also caused by: drought and lack of food; distances to school; beliefs around witchcraft and evil spirits; cultural practices –especially funerals; drug abuse (in secondary schools); and grade repetition—where children who are overage, lack motivation to attend school. Deeper analysis also pointed to laxity of programmes and perceptions around certain term times, seasonal child labour (participating in farming activities, taking care of siblings and nursing ailing parents, boys engaging seasonally as beach boys, charcoal burning, brewing and selling of 'mnazi' (coconut brew), and quarrying, beliefs around witchcraft and evil spirits, lack of food, long distances to school and safety, and flooded rivers during the rainy season. Grade repetition also emerged as a prominent factor.

School costs, often referred to as indirect (non-fees) costs were identified as the leading factor, accounting for 66 percent of all cases of absenteeism. Other factors included truancy (child does not want to learn), child labour, drug abuse, negative attitudes towards education and poor role modelling, pregnancy and early marriage, and HIV and AIDS (ILO, 2010).

Like absenteeism and dropout, the main reason given as to why children had never enrolled in a school was lack of funds, cited by about 70 percent of the respondents. Other reasons included ignorance and beliefs held by parents, distance to school, disability as well as the conflicting religious values and Islamic bias against secular education (ILO, 2010). A school feeding programme plays a major role in enhancing pupils' participation in co-curricular activities and enhances participation of pupils in primary education.

The increase has been accelerated by the introduction of Free Primary Education (FPE) and Free Day Secondary Education (FDSE) Programmes in 2003 and 2008 respectively (KIPPRA, 2014; MOE, 2012). The expansion in secondary school enrolment can be attributed to the recent reforms in the sector, including Free Day Secondary Education (FDSE) policy, which involves government disbursement of capitation grants to public secondary schools at Ksh 10,265 per student since January 2008, and the affirmative action of expanding secondary education streams to at least three streams per class (KIPPRA, 2014).

2.6.6 Challenges

While the introduction subsidies of secondary school fees reduced the cost for households, indirect costs are still twelve to twenty times as much as the monthly income of parents in rural areas –leaving secondary school out of reach for the poorest households. There exists a crisis in access to secondary education among children in some regions like Coast and North Eastern where the GER and NER are much lower than the national figures.

Employment is a key factor in giving hope to children to remain in schools as they acquire knowledge however, Kenya faces unemployment and underemployment among the learned youth. Thus, many children end up not willing to go through the education system. In addition, this makes parents not pay much attention to education of their children. The percentage of children attending school by survivorship of their parents is not aggregated by age therefore this indicator is crude in its nature. Therefore GER and NER for this group cannot be computed.

Although there is routine collection of data for monitoring education performance, longitudinal studies need to be done to compute completion rate and also the underlying causes of failure to complete primary education and secondary education.

More studies need to be done especially on knowledge and attitudes on importance of education of their children since most of the indicators are around the practices.

Poverty issues: These should be addressed as they generally impede access to education.

The HIV/AIDS scourge. This pandemic has led to increased school dropouts, especially for girls who are faced with increased domestic responsibilities when family members are ailing or succumb to the pandemic. The overall effect has been reduction of opportunities for further learning and skills development among the children and youth.

2.6.7 Opportunities

Based on both National and International Conventions, there are numerous opportunities that parents, children and the entire community should embrace to make sure that children are enrolled and kept within the school environment until they complete their education. By virtue of Article 2(6) of the Constitution, treaties or conventions ratified by Kenya are to form part of the law of Kenya. Accordingly, a number of conventions relating to education which Kenya has ratified, form part of the education legal framework of the country. They give power and rights to all children to attend and participate in education opportunities offered by the government. According to Article 53 (1b) of the constitution of Kenya (b) 53; every child has the right to free and compulsory basic education. This right to the child is an opportunity for the government to ensure all the children are in school and the parents to take their children to schools. There are three main sets of issues relating to education in chapter four of the Constitution of Kenya, 2010 on 'The Bill of Rights':

- (a) The Constitution affirms the right of all Kenyans to education. **Article 21** recognises the fundamental duty of the State and every state organ to observe, respect, protect, promote and fulfil the rights and fundamental freedoms outlined in the Bill of Rights.
- (b) The right to education includes both duties and obligations which are to be realized immediately and those which are subject to progressive realization. The obligation to ensure free and compulsory basic education and the prohibition of discrimination in education are, for instance, immediate

obligations. These also qualify as ‘minimum core obligations’ which apply regardless of available resources. On the other hand, most of the obligations relating to the right to education are to be realized progressively according to the maximum available state resources.

- (c) Whilst the detailed implications of this Rights Approach to free and compulsory education and related services will need to be determined, it is clear that people will increasingly demand their rights through a more empowered civil society. The provisions of **Article 46 (1a, b)** are important as they grant consumers the right to goods and services of reasonable quality and to information necessary for them to gain full benefit from goods and services. Education as a service must meet minimum quality standards, which suggest there will be an increase in pressure for improved education service delivery and quality, with comparisons being made between counties concerning meeting declared indicators and results.

Kenya has ratified two key regional conventions which make provision for education. These are; **the African Charter on the Human and Peoples’ Rights, Article 17**, which provides that every individual shall have a right to education (African Charter on Human Rights, 1981); and **the African Charter on the Rights and Welfare of the Child, Article 11**, which provides detailed provisions on the right to free and compulsory basic education for the child and the state’s obligation towards that right (African Charter on the Rights and Welfare of the Child).

Of the UN Conventions, Kenya has ratified the International Convention on Social and Economic Rights, **Article 13**, which declares the recognition of the right of all to education and the objectives thereof, and the Convention on the Rights of the Child, **Articles 28, 29 and 30**, which secure the rights of a child to free and compulsory basic education (Convention on the Rights of the Child). According to the **Article 28: (Right to education)** of the UNCR (1989): All children have the right to a primary education, which should be free. The Convention places a high value on education. Young people should be encouraged to reach the highest level of education of which they are capable. **Article 23** (children with disabilities) of the UNCR states that children who have any kind of disability have the right to special care and support as well as all the rights in the convention, so they can live full and independent lives. **Article 7.(1)** of the Children’s Act 2001 states that: Every child shall be entitled to education the provision of which shall be the responsibility of the Government and the parents and (2) (Children’s Act 2001, Kenya) Every child shall be entitled to free basic education which shall be compulsory in accordance with article 28 of the United Nations Convention on the Rights of the Child.

Other opportunities include: Kenya targets education and training as a key strategy to realisation of the Vision 2030. The Jubilee Manifesto accords education a lot of prominence which has translated into increased funding for FPE and FDSE and government efforts to make basic education absolutely free and compulsory by 2017.

- Kenya is overhauling the current education system under the current curriculum reforms in an endeavour to provide quality and relevant education to all.
- School education days should be utilized to challenge students on the importance of education.
- World education day, national education days.
- World teachers’ day –UNESCO inaugurated 5 October as World Teachers’ Day.
- Sporting and entertainment days in schools need to be organized by the teachers and parents to encourage the parents to enrol their children in schools at all levels.

- Parents and community need to be empowered and encouraged to enrol their children in schools.
- Development partners, civil society and private sector: Their support is essential in formulation of gender sensitive education policies and provision of basic education in hardship areas.

2.6.8 Existing data and information

There are a number of reports and studies documenting trends, levels, differentials of education outcomes in Kenya from Ministry of Education reports, Economic surveys, Kenya economic reports, Multiple Indicator Cluster Survey reports, and Kenya Demographic and Health Survey (KDHS) reports. Moreover, there are fewer studies documenting parents' and care givers' knowledge, attitude, beliefs and practices on enrolling and keeping their children in school. Most of the qualitative studies reviewed are on a small scale and the findings may not be used in generality. For the qualitative data, the existing data and information is presented in appendix I.

2.6.9 Information and data gaps

There are some gaps in the existing data sets. They are as follows:

- The 2014 DHS has some indicators on education –the data set only has indicators for attendance rates for children aged 10-14 years by the survivorship of their parents, mostly in primary schools leaving out ECD and secondary children or rather the children aged 3-9 and 15-17 years.
- Existing data sets and sources on enrolment, transition and completion rates vary to a large extent and are incomparable.
- MICS only has information on literacy, attendance ratio, it does not indicate information on knowledge on enrolling and keeping children in school.
- Specific indicators for children with special needs are also rare to be found.
- Other than the existing data set, studies on knowledge, attitudes and beliefs on education, enrolment and retention of children in schools are fewer and on a small scale.
- There is no quantitative data on parents and care givers knowledge, attitude and beliefs on enrolling their children and keeping them in school.

2.6.10 Recommendations

- There is need to unify the source of data since most of the education data are found in EMIS so that there is no variation of the data (not clear). There is need for the government to come up with EMIS policy to manage education statistics.
- Need to have indicators for all the children instead of focusing on a segment of the population of the children like GER and NER in DHS 2014 for children aged 10-14 years.
- Need to carry out a comprehensive survey on knowledge, attitudes towards and beliefs on education, enrolment and retention of children in schools amongst parents and community in order to encourage parents to enrol and retain their children in schools.
- There is need to refine specific indicators especially for children with disabilities.

2.6.10 List of reviewed literature

Studies	Author	Where	Year	Key findings	Gaps
Key factors influencing primary school enrolment and performance of girls among the Gabra of North-Horr in Marsabit county	Abudho Shanu Bashuna	Marsabit	2013	<p>Attitude</p> <p>Parents no longer value the age of go to school and get a good job' seem long gone, as unemployment continues to pose major socio- economy challenges.</p> <p>The loss of faith on individual returns is becoming a deterrent to enrolling children in schools</p> <p>Behaviour/practice</p> <p>There is gender preference when it came to enrolling children to school in Gabra of North-Horr; Marsabit County. Boys were favoured than girls</p> <p>Girls can be married as early as when they are 8 years, and this is the age at which girls are to enrol in school. It becomes impossible for such girls to be enrolled in school.</p> <p>In most families, a girl would be left at home in favour of a boy hence girls miss out on schooling.</p> <p>Other factors like early marriages, lack of school fees, household chores that regularly bar girls from enrolling to school</p>	<p>Does not capture the knowledge and beliefs of the locals on enrolling and keeping their children in school</p> <p>Findings cannot be generalized to other areas</p>
School enrolment among urban non-slum, slum and rural children in Kenya: Is the urban advantage eroding?	Frederick Mugisha	Nairobi	2006	<p>Knowledge</p> <p>Participants pointed out: poor quality of primary schools in slums, limited access to secondary school for slum children, increased vulnerability to coercion into sexual activity and other ills that hinder school participation, disabling environment at home and increased child labour</p>	Only carried out in one county
Why Maasai Parents Enrol their Children in Primary School: The Case of Makuyuni in Northern Tanzania	Gimbo et al	Makuyuni northern Tanzania	2015	<p>Attitude</p> <p>The value of education was attached to the fruits expected from education, most parents hoped that educated children will be in position to help their parents in the future.</p> <p>Some Maasai people perceive education as a threat to culture.</p> <p>Enrolling children in school to get education was seen as something that would ruin Maasai culture among the young generation</p> <p>Beliefs</p> <p>Daughters in the Maasai culture are seen primarily as a source of wealth and as such may be married off young as opposed to being sent to school, as early marriage brings quick returns.</p> <p>Culture may hinder the parents from seeing a benefit from educating a young girl. Her education is seen as a delay to wealth accumulation.</p> <p>Practices</p> <p>Traditional ear piercing and stretching is a cultural practice that some Maasai parents fear to lose if their children obtain an education. Key informants told researchers that a big ear shows that a person is a good listener.</p> <p>Respondents reported that schools teach against FGM. Ear piercing and so education may affect the sustainability of such cultural customs among the Maasai.</p>	Cannot be applied on Kenyan perspective

Studies	Author	Where	Year	Key findings	Gaps
Effect of belief and culture in Education in Turkana	John Ekiro	Turkana, kaaleng division	2012	<p>Attitude</p> <p>Parents quite negatively opinionated on the issue of enrolling and keeping children in school as they considered being in school not beneficial to the child due to the constant movement.</p> <p>Parents would rather allow their children to be taught traditional life skills by the elders as they moved about with their animals in search of water and pasture.</p> <p>Girls are subjected to family chores hence sidelining them from joining ECDE centers and primary schools</p> <p>Girls themselves also have a negative attitude on education</p> <p>Women are seen to be inferior to their male counterparts hence they should not be educated.</p> <p>Practice/Behaviour</p> <p>Migration of parents together with their children from one place to another affected the enrolment and retention ratio in schools.</p> <p>Cultural practices and beliefs such as rite of passage like initiation, discrimination of the girl-child leads to absence of children in school and poor performance.</p> <p>Enrolment of boys in school was higher than that of girls because girls move with their parents to assist in domestic chores like baby seating and watering animals while on transit with their parents.</p>	<p>Does not capture parents knowledge and beliefs on education enrolment</p> <p>Only done in one division of a county</p> <p>Study is on a small scale</p>
Factors Affecting Primary School Enrolment and Retention of Pupils in Kotido District, Uganda	Victoria A. Namukwaya and Israel Kibirige,	Kotido district, Uganda	2014	<p>Belief</p> <p>A popular belief among the parents that educated girls become prostitutes.</p> <p>The Karamojong culture detests prostitution and therefore many parents shun enrolling girls to school for fear of identifying with prostitutes</p> <p>Practice</p> <p>'Kraal' system</p> <p>Nomadic pastoral lifestyle</p>	Does not apply to Kenyan perspective
Parent involvement in public primary schools in Kenya	Agustinho Mwai Kimu	Kenya	2012	<p>Knowledge</p> <p>Both teachers and parents acknowledged that more parental involvement was required for improving the quality of their children's education.</p> <p>Parents did not understand what parental involvement entailed and were unaware of the full benefits of involvement beyond activities such as fundraising for the schools, solving pupils' discipline problems and attending the occasional annual general meetings</p>	<p>A national perspective and not focused on KABP</p> <p>Why parents did not understand what parental involvement entailed</p>
Having Their Say: Parents Describe Why and How They are Engaged in Their Children's Learning	Karen L. Mapp	United states of America	2002	<p>Knowledge</p> <p>Parents understood clearly that their involvement helped their children's educational development</p> <p>Most of parents acknowledged that they were aware that their children should be in school as stipulated by the law but most enrolled their children to the school as a desire for a better future not just because the law says.</p>	Does not apply to Kenyan perspective

Studies	Author	Where	Year	Key findings	Gaps
Getting an education in rural Kenya: Findings based on the Kenya Financial Diaries	Jacobs Foundation	Kenya	2008	Behaviour/practice The provision of free primary education has encouraged parents to enrol and keep the children in school There has been an increased enrolment of children in schools as a result of the effort done by various donors.	A national perspective and not focused on KABP
Factors Influencing Children Enrolment in Preschool in Kenya	Komo et al	Thogoto and Karai Zones in Kikuyu District.	2013	Knowledge There was low enrolment rate of children in Early Childhood Education due to parents' ignorance on the importance of Early Childhood Education.	Small scale study carried out in a zone and findings cannot be generalized to the entire county why parents lack understanding and continued to ignore importance of Early childhood Education
Factors influencing girls' participation in free primary education: a survey of schools in Kapenguria Division-West Pokot District-Kenya.	Chepleting et al	West Pokot	2013	Knowledge Parents lack of knowledge on the importance of enrolling the children especially girls and keeping them in school Belief Belief that women do not require an education as they belong in the house supporting the family played a role in the higher dropout level for female students in the area Belief among the community that children are supposed to stay home and help their parents, this factor seemed to affect girls more than boys. Practice/behaviour There was high female dropout level in the area because parents and guardians pressure girls to marry because of dowry payments and having fewer dependents at home, early marriage and teenage pregnancy play significant roles in the high female dropout level in the area.	Done in only one county
Determinants of school enrolment among public day secondary school students in Butula district, Kenya	Were Andrew	Butula	2012	Practice/behaviour Parents are responsible for the payment of development fund, uniform, caution money, and Harambee fund. This situation has put pressure on the parents, as most schools sent home students who could not afford to pay the required amount of fees. The inability of the parents to pay fees was seen as a contributing factor to discontinuation of school rate. Strategic plan	A general study and not focused on KABP
Ministry of Devolution and Planning, Second Medium Term Plan, 2013–2017	Government of Kenya;	Nairobi	2013		
Determinants of Primary School Non-Enrolment and Absenteeism: Results from a Retrospective, Convergent Mixed Methods, Cohort Study in Rural Western Kenya	King et al	Western Kenya	2015	Knowledge Parents viewed education as a driver of the economy which has resulted in many parents sending their children to school. Some parents were not able to enrol and keep their children in school while others do not support education because they do not understand the value. Most community members support education, and those that who do not are ignorant about its value.	why some parents do not value and support education of their children A general study and not focused on KABP

Studies	Author	Where	Year	Key findings	Gaps
Situation Analysis on children and adolescents in Kenya.	Government of Kenya and UNICEF.	National	2014	Documented access barriers on basic education in Kenya	Not county focussed Study does not present the KABP component
National Adolescent and Youth Survey (Preliminary)	NCPD	National	2015	Documented barriers and causes of school drop-out in schools	-Study not focused on KABP component
Kenya Demographic and Health Survey (KDHS)	Kenya National Bureau of Statistics (KNBS) and ICF, Kenya, 2014	Kenya (National and County)	2014	Information on Gross Attendance and education levels	Does not capture information on parents' Knowledge, Attitude and Beliefs towards enrolling and keeping their children in school

2.7 Sanitary disposal of human waste



Boys toilet facility in Namukuse primary school, Turkana County in northern Kenya.

2.7.1 Overview

Sanitary disposal of human waste is the use of improved sanitation facilities that are likely to ensure hygienic separation of human excreta from human contact and which are not shared or public (WHO and UNICEF, 2015). These facilities include: Flush/pour flush; to piped sewer system; septic tank; pit latrine; Ventilated Improved Pit (VIP) latrine; Pit latrine with slab; composing toilet.

The Kenya National Environmental Sanitation and Hygiene Policy (2007) further defines improved sanitation as the availability and use of a simple pit latrine, ventilated improved pit latrine, pour flush latrine, or connection to septic tank, or a public sewer. Basic sanitation facilities are those that provide privacy and separates human excreta from human contact (Republic of Kenya, 2007).

In the Kenyan context, 72 percent of excreta disposal facilities are simple pit latrines which provide varied degrees of safety, hygiene, and privacy (GoK, 2007).

WHO (2015), estimated that in 2015:

- 68 percent of the world's population had access to improved sanitation facilities including flush toilets and covered latrines, compared with 54 percent in 1990.
- 2.4 billion people do not have basic sanitation facilities such as toilets or latrines.
- 946 million of 2.4 billion defecate in the open, for example street gutters, behind bushes or into open bodies of water.

KNBS and ICF (2014) estimated that in Kenya 24.7 percent of households were using improved sanitation facilities which was an increase from 22 percent estimated in 2010 (KNBS and ICF, 2010).

The health consequences of the use of unimproved sanitation facilities are quite severe, and it is estimated by WHO (2015) that 842,000 people in low- and middle-income countries die as a result of inadequate water, sanitation and hygiene each year—representing 58 percent of total diarrhoeal deaths and that 280,000 of these deaths are associated with poor sanitation.

In Kenya, of the approximately 80 percent of hospital attendance, about 50 percent of illnesses, are water, sanitation and hygiene related (GoK, 2007).

2.7.2 Policy and legal framework

Several policies and programmes have been set up to help reverse the sanitation crisis in the world. Globally, the Sustainable Development Goals (SDGs) adopted by the global community in September 2015 during the UN General Assembly and whose implementation worldwide commenced in January 2016 –Goal six is to “ensure sustainability and sustainable management of water and sanitation for all”. Target 6.2 of this goal states that “By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situation”.

Others include:

- **Millennium Summit in September 2000:** The largest gathering of world leaders in history adopted the UN Millennium Declaration, committing their nations to a new global partnership, where Millennium Development Goals were conceived in recognition of a global agenda to address the inequity of living conditions. Dependence on water and sanitation was a key component of all MDGs which created MDG 7 to halve the proportion of people without sustainable access to safe drinking water and basic sanitation by 2015.
- **Call to action on sanitation:** According to the call to action on sanitation issued by the Deputy Secretary-General of the United Nations in March 2013, open defecation perpetuates the vicious cycle of disease and poverty and is an affront to personal dignity. Those countries where open defecation is most widely practiced have the highest number of deaths of children under the age of five, as well as high levels of under nutrition, high levels of poverty and large disparities between the rich and poor. There are also strong gender impacts: lack of safe, private toilets makes women and girls vulnerable to violence and is an impediment to girls’ education (WHO and UNICEF, 2014).
- **National Environmental Sanitation and Hygiene policy:** This policy is devoted to sanitation and hygiene in Kenya. It recognises that healthy and hygienic behaviour practices begin with the individual. It increases the demand for sanitation, hygiene and waste management as one of its key components. The Policy provides direction on planning and implementing sanitation objectives in Kenya. It envisions creating and enhancing an enabling environment in which all Kenyans will be motivated to improve their hygiene behaviour and environmental sanitation.
- **Open Defecation Free (ODF):** The Government of Kenya, working through its Ministry of Health (MoH) launched the ODF Rural Kenya Campaign in May 2011, adopting Community Led Sanitation (CLTS) as the core strategy to achieve the objectives of ODF Rural Kenya. Since then 857 villages have been certified by a third party engaged by UNICEF, to have attained ODF status including two sub counties –Nambale and Nyando, which are reported to have attained ODF status.
- **Community-Led Total Sanitation (CLTS) programmes:** Introduced in Kenya by Plan Kenya in May 2007 and now being used by the Ministry of Health as an intervention that improves standards of sanitation and hygiene among various communities in Kenya. CLTS is an innovative approach which uses disgust, shame and fear as a force to change mindsets and trigger collective action.

- **Kenya Constitution:**Article 43 (1) (b) guarantees the right of every Kenyan citizen to reasonable standards of sanitation.

Indicators of sanitation

Sanitation is measured by using the following indicators according to (WHO and UNICEF, 2015):

Improved sanitation facilities: are those that are likely to ensure hygienic separation of human excreta from human contact. They include the following facilities –Flush/pour flush; to piped sewer system; septic tank; pit latrine; Ventilated Improved Pit (VIP) latrine; Pit latrine with slab; composing toilet.

Unimproved sanitation facilities: are those which do not ensure hygienic separation of human excreta from human contact. Facilities include pit latrines, without a slab or platform, hanging latrines and bucket latrines and also shared and public sanitation facilities.

In Kenya, improved methods of human waste disposal are dominated by covered latrines which are the main mode of human waste disposal in both rural and urban settings (KNBS and SID, 2013). Most of the excreta disposal facilities (72%) in Kenya are simple pit latrines providing varied degrees of safety, hygiene, and privacy which fall under basic sanitation because they can effectively separate human excreta from human contact as defined by the Kenya National Environmental Sanitation and Hygiene Policy (2007).

2.7.3 Knowledge, Attitude, Beliefs/norms and Practice on sanitary disposal of human waste

Knowledge on sanitary disposal of human waste

Community or individual knowledge on sanitary disposal of human waste is explained by their knowledge on causes, transmission and prevention of diarrhoea together with benefits of using latrines. A study conducted in Samburu East Sub-County by Waithaka (2015) found that out the 210 sampled respondents, 67 percent reported the correct causes and transmission of diarrhoea including using latrines. Those who mentioned incorrect causes and transmission such as-mosquito bites, witchcraft and rain were 33 percent. In addition, 60 percent of the respondents mentioned correct methods of diarrhoea prevention which included use of latrines compared with 40 percent who mentioned incorrect methods such as use of mosquito nets and washing clothes.

In Turkana, it was found that older women associated diarrhoea with witchcraft, hunger, bad teeth and breach of taboos or social norms and mentioned use of herbs as some of the ways of preventing it (UNICEF, 2015).

These findings indicate that although the knowledge on sanitary disposal of human waste was high among the respondents, there were still a large number of respondents without knowledge as explained by one female FGD discussant:

“we have no time to think about latrines and after all, we have a lot of bushes and gullies with plenty of fresh air, why would I want to enter a house to defecate?” .”

(Waithaka, 2015, pg 43-44).

Studies on knowledge of disposal of human waste are rare and only examine the knowledge on causes, transmission and prevention associated with sanitation related diseases such as diarrhoea. In addition, these studies did not examine the sources of knowledge on sanitary disposal of human waste.

Sources of information on knowledge on sanitary disposal of human waste enhance the use of various communication channels to increase knowledge and awareness of the people regarding the use of toilets/ latrines facilities. There is therefore a need to examine sources of knowledge of the respondents regarding sanitary disposal of human waste in order to devise appropriate communication channels to enhance communities' knowledge and awareness on sanitation issues.

Attitude on sanitary disposal of human waste

Waithaka (2015) in a study carried out in Samburu East Sub-County found that the Samburu community attach very low priority to sanitary disposal of human waste through the use of latrines. The low priority attached to the use of latrines was associated with cultural factors (89%) such as taboos, beliefs, migration and the pastoralist nature of the community –and others (11%). Also factors such as lack of tools, money and skills in the study area.

As explained by one female FGD discussant,

*“we have no time to think about latrines and after all,
we have a lot of bushes and gullies with plenty of fresh air,
why would I want to enter a house to defecate?, this is against my culture.”*

(Waithaka, 2015, pg 43-44).

It was also found that the pastoralist way of the Samburu community who often move from place to place in search of water and pasture for their livestock do not consider constructing permanent facilities a feasible priority –forcing them to resort to open defecation (Waithaka, 2015). For instance, the respondents attached more priorities to taking care of their livestock rather than just digging a pit latrine to what one FGD respondent considered *to just bury “one’s faeces”* (Waithaka, 2015, pg 44). Moreover, because the Samburu people are not farmers, it is difficult for them to own appropriate digging tools for latrine construction.

A study conducted by UNICEF (2015) found that latrines construction and consistent use was associated with health improvement, avoidance of shame, convenience, comfort privacy and security and ease to cleaning. The study also found that latrine use by children was viewed as offering them security and safety/ privacy as opposed to distant field or bush which does not give comfort to both the children and parents.

In addition, the study also found that latrine use offers an additional benefit for women such as providing a private, convenient and hygienic platform for them to dispose sanitary pads/materials, eliminating embarrassment that women would experience by management of menstrual material strewn all over the village. Latrine use is also associated with disposal of sanitary towels into a latrine with cleanliness, avoidance of witchcraft, and spread of diseases.

However, there were others who held the view that sanitary towels leave a bad smell when they are dropped in the latrines (UNICEF, 2015).

Among the Kikuyu community an improved excreta disposal facility enhances one’s image in the society and therefore it is culturally accepted that if one wants to build a house, one starts by building a latrine for use by the builders (WSP, 2004).

Very few studies have been carried out on the attitude on sanitary disposal of human waste using both qualitative and quantitative approaches. In addition, large scale surveys such as Kenya Demographic and Health Surveys do not collect data on respondents' attitudes on sanitation. There is therefore a need to undertake qualitative and quantitative studies on attitude towards sanitary disposal of human waste among the Kenyan communities in order to provide data and information that can be used to influence behaviour change with regard to positive attitude on sanitary disposal of human waste in Kenya.

Beliefs/Norms on sanitary disposal of human waste

Waithaka, (2015) found that among the Samburu community, open defecation was a norm as the community has practiced it for a long time as one FGD respondent put it – *“almost everyone in my community defecates in the open.”* This behaviour of the Samburu community with regard to the use of latrines has been influenced by a number of factors such as the pastoral nature of their lifestyle, cultural restrictions and beliefs and also health benefits of preventing diseases. Others held beliefs that latrines harbored evil spirits and associated the use of latrines with the abandonment of their strong culture (Waithaka, 2015, pg 44).

It was also reported that (Waithaka, 2015), there exist cultural restrictions among the Samburu community where young men (morans) are not required to be seen going into a latrine or the bush for defecation and also older men were not to be seen sharing latrines with women and their in-laws. For instance, *“culturally, it was an omen for Morans to be seen to go into defecation bushes or latrines least of all by women as this was viewed as a sign of weakness yet they were a symbol of strength in their community”* (Waithaka, 2015, pg 43).

A study conducted by UNICEF (2015) in Western Kenya found that the use of latrines was strongly influenced by the taboos and cultural beliefs in the area whereby it was a taboo for the mother-in-law to share a latrine with a son-in-law and also for a father-in-law to share a latrine with a daughter-in-law.

However, a few studies which have been undertaken in Kenya together with large scale surveys such as Kenya Demographic and Health Surveys did not collect data and information on beliefs/norms regarding the use of sanitary disposal of human waste by background characteristic of the respondents.

There is a need therefore to undertake qualitative and quantitative studies on beliefs/norms towards sanitary disposal of human waste among the Kenyan communities in order to provide data and information that can be used to influence practice on sanitary disposal of human waste in Kenya.

Practice on sanitary disposal of human waste

Households using improved sanitation facilities in Kenya were estimated at 24.7 percent in 2014, an increase from 22 percent estimated in 2010 (KNBS & ICF 2014; 2010). Majority of the improved sanitation facilities (72%) are simple pit latrines providing varied degrees of safety, hygiene, and privacy which fall under basic sanitation because they can effectively separate human excreta from human contact as defined by Kenya National Environmental Sanitation and Hygiene Policy (2007).

A study carried out in Samburu East county by Waithaka (2015), using a sample of 210 households found that majority of the respondents (93.3%) were not using latrines and only 6.7 percent were using latrines. However, the knowledge on sanitary disposal of human waste was very high as measured by their knowledge on causes, transmission (67%) and prevention of diarrhoea (60%) together with benefits of constructing and using latrines 78 percent. For those respondents who were using latrines, their motivation for constructing and using latrines was found to be mostly inclined towards the health benefits of preventing diseases.

The use of improved sanitation facilities among households was estimated at 42.3 percent in Kakamega and 12.3 percent, in Bungoma, in 2014 (KNBS, PSRI and UNICEF, 2014) and 44.5 percent in 2015 in Homa Bay County (KEMRI, 2015).

A study carried out by UNICEF (2015) in Western Kenya identified a number of motivations for construction and use of latrines such as, improved health, avoidance of shame, convenience, comfort, privacy and security and ease to clean while those which hindered the use and construction of latrines included poor local soil and ground conditions, expensive, lack of technical advice or knowledge and flooding especially in the sub-counties of Rachuonyo, Nyando and Kisumu West.

Similarly, Waithaka (2015), found that in Sumburu East Sub-County, use of latrines for sanitary disposal of human waste was associated with prevention of diseases, privacy, convenience, status/prestige, health education and influence from neighbours. The study also found that those who were not using latrines for sanitary disposal of human waste mentioned taboos, beliefs, lack of money and tools as their main barriers for not using and constructing latrines.

A study carried out in Samburu East sub-county (Waithaka, 2015) and in Western Kenya (UNICEF, 2015) found that use of latrines for sanitary disposal of human waste was associated with prevention of diseases, privacy, convenience status/prestige, health education and influence from neighbours. These studies also found that those who were not using latrines for sanitary disposal of human waste mentioned taboos, beliefs, lack of money and tools.

Children, especially those under-5 years of age were found to use latrines during the day due to a number of reasons according to UNICEF (2015) such as fear of the darkness; child being afraid of falling or slipping into the pit at night; the toilet being located far away from dwellings; parents' concern for their safety based on age, latrine too small hence children unable to use the pit latrine, or the pit hole being too big for children among others.

It has been found that some people are forced to defecate in the open even when their personal preference was to use a pit latrine, especially when at market places, travelling, when out grazing cattle, at the rivers or when in farms due to lack of latrines (UNICEF, 2015).

Apart from defecation, studies (UNICEF, 2015) found that latrines are used by women and girls for hygienic disposal of sanitary towels/pads. Latrines provide privacy and convenience for girls and women to change their sanitary towels/pads unlike in the bush where they can be seen by other people.

A baseline cross-sectional survey of 62 primary schools in rural western Kenya conducted to document the current WASH facilities and Menstrual Hygiene Management (MHM) resources available for menstruating girls in June 2012, showed that, those who disposed of sanitary pads in the latrines, were 6 schools (10%), carried them home, 6 schools (10%), burned in rubbish pit, 1 school (1%), unknown, 17 schools (27%), no answer provided, 32 schools (52%) Alexander *et al.*, (2012). The study also found that less than 25 percent of latrines had locks and only 16 percent were clean. This study demonstrates that the WASH conditions in the majority of rural Kenyan primary schools studied are insufficient for the MHM needs of menstruating girls.

An understanding of the motivators for use of latrines for sanitary disposal of human waste is very useful in developing behaviour change, communication messages for adoption of open defecation-free norm in a community. In addition, an understanding of key motivators for latrine use such as convenience, ease of cleaning, comfort and privacy are helpful in providing options and advice on latrine designs that satisfy the need of the community.

However, this information is lacking in the large scale studies such as Kenya Demographic and Health Surveys which have been carried out in Kenya.

2.7.4 Challenges

- Inadequate understanding of sanitation cross-linkages to health, limited infrastructure and social taboos pose major barriers to sustainable sanitation not only in Kenya but also in many countries in the world.
- There is lack of uniformity in the measurement of attributes such as knowledge, attitude, beliefs/norms and practice with regard to sanitary disposal of human waste in various studies which were reviewed.
- There is no single study which was undertaken in Kenya either at national or county level focusing specifically on sanitary disposal of human waste. Most of the studies which have been undertaken were focusing on the Water, Sanitation and Hygiene in general.
- Data and information on knowledge, attitude and beliefs/norms on sanitary disposal of human waste is lacking in the large scale surveys such as Kenya Demographic and Health Surveys in Kenya.
- County specific data and information on knowledge, attitude, beliefs/norms and practice on sanitary disposal of human waste focusing on the 25 GoK/UNICEF focus counties, where it existed was found to be very scanty.

2.7.5 Opportunities

Several development institutions and donor agencies and governments have put efforts to improve sanitation facilities and these have led to several opportunities created that have helped ease and improve sanitation facilities in the world and in Kenya these include:

- **Community-Led Total Sanitation (CLTS) programmes:** introduced in Kenya by Plan Kenya in May 2007 and now being used by the Ministry of Health as an intervention that improves standards of sanitation and hygiene among various communities in Kenya. CLTS is an innovative approach which uses disgust, shame and fear as a force to change mindsets and trigger collective action.
- **Open Defecation Free (ODF):** The Government of Kenya, working through its Ministry of Health (MoH) launched the ODF Rural Kenya Campaign in May 2011, adopting Community Led Sanitation (CLTS) as the core strategy to achieve the objectives of ODF Rural Kenya.
- **World Toilet Day Celebrations:** These celebrations have been instrumental in showing professionals in the sanitation sector what communities are able to do once their mindsets are transformed. They have also played a pivotal role in publicizing the CLTS approach and influencing communities in neighbouring villages to take up action to improve their sanitation.
- **National Environmental Sanitation and Hygiene policy:** this policy is devoted to sanitation and hygiene in Kenya. It recognises that healthy and hygienic behaviour practices begin with the individual. It increases the demand for sanitation, hygiene and waste management as one of its key components. The Policy provides direction on planning and implementing sanitation objectives in Kenya. It envisions creating and enhancing an enabling environment in which all Kenyans will be motivated to improve their hygiene behaviour and environmental sanitation.

- **Kenya Constitution:** Article 43 (1) (b) guarantees the right of every Kenyan citizen to reasonable standards of sanitation.
- **Devolved system of government** where services have been brought closer to the people through the creation of county governments through the promulgation of Kenya constitution 2010. This provides an opportunity for counties to prioritize sanitation issues in their integrated county development plans and earmark adequate funding for sanitation programmes.

2.7.6 Information gaps

The following gaps in data and information were identified in the studies which were reviewed:

- Respondents' sources of information on sanitary disposal of human waste were not examined/ available in both the quantitative and qualitative studies reviewed.
- Data and information on sanitary disposal by various background characteristic of the respondents such as level of education, ethnicity, religion among others was not examined in the large scale surveys such as the Kenya Demographic and Health Surveys.
- There is a very big gap between knowledge and practice. Studies have shown that the knowledge or awareness levels on improved sanitary facilities are there but there is a big gap between the knowledge and practice. However there is no information stating the factors influencing the gap between knowledge and practice on sanitary disposal of human waste.
- Population based surveys in Kenya such as Kenya Demographic and Health Surveys have not collected information on knowledge, attitude and behaviour on sanitary disposal of human waste in Kenya.
- Regarding KDHS, there is missing information on the level of hygiene of the sanitary facility, no questions were asked on the level of human contact with human excreta, and this limits the information on level of improved sanitary facility.
- MICS 5 data, done at county level has some information on use of improved sanitary facility but there are knowledge gaps, the information available is only on practice, the data does not show any level of knowledge on use of improved sanitary facilities.

2.7.7 Conclusion

Sanitation has been given low priority in development planning by the government of Kenya despite the fact that access to adequate sanitation is a key mechanism for improving the health and well-being of the world's most vulnerable. This is demonstrated by the inadequate existence of data and information on knowledge, attitudes, beliefs/norms and practices on sanitary disposal of human waste in many countries including Kenya. A few studies which were carried out on sanitary disposal of human waste in the country focused more on the practice rather than on knowledge, attitudes and beliefs/norms. In addition, quantitative surveys such as Kenya Demographic and Health Surveys lacks information on knowledge, attitudes and beliefs/norms on sanitary disposal of human waste in Kenya.

It is now clear that issues of sanitation have been given very low priority in the country and that is why few studies have been carried out to inform policy and programme on sanitation.

The popular slogan that “*water is life, sanitation is dignity*” needs to be taken seriously by policy makers and programme implementers by ensuring that Kenyans have access to reasonable sanitation which guarantees them their right of dignity as enshrined in the Kenya Constitution 2010.

2.7.8 Recommendations

The following are the recommendations arising from the findings:

- **There is a need to undertake studies on sanitation issues** especially on sanitary disposal of human waste using both qualitative and quantitative approaches –both at national and county level in order to provide missing data and information to inform policies and programmes in Kenya.
- **There is a need undertake a field study** in the 25 GoK/UNICEF focus counties to collect data and information on knowledge, attitude, beliefs/norms and practice on sanitary disposal of human waste which is currently inadequate.
- **There is a need to undertake further analysis of the existing data-sets** such as Kenya Demographic and Health Surveys in order to provide much needed data and information on sanitation including sanitary disposal of human waste in Kenya.
- **There is a need for all actors to devise proactive efforts to bridge the existing gap** between knowledge and practice pertinent to scaling up latrine use. Since use of latrines is the most common method of sanitary disposal of human waste by households both in urban and rural areas. Sanitation campaigns targeting areas with inadequate skills on latrine construction and low use of latrines can be conducted to promote the construction and use of latrine facilities focusing on latrine construction skills enhancement.
- **There is a need to identify champions among the households** with good latrine hygiene practices to become model homes for other community members to learn from and emulate the good latrine hygiene practices observed. Villages that shall be identified to have eliminated open defecation can be recognised and celebrated to motivate them to maintain their open defecation free status.
- **There is a need to create more awareness on the impact of open defecation.** There is need to motivate communities to construct and use latrines to prevent diarrhoeal diseases and scale up and sustain this motivation. The main motivation for using latrines was observed to be prevention of diarrhoeal diseases.
- **There is a need to equip the communities with latrine construction skills,** address social cultural barriers to latrine use and increase the participation of men in latrine related matters as they can be key champions and agents of change in promoting latrine use.
- **There is need to initiate research on effectiveness of sanitation** –Marketing approaches such as CLTS without the provision of subsidy as an approach geared towards up scaling sustainable latrine use.
- **There is a need for actors to consider the matter of menstrual hygiene management** and specifically disposal of MHM materials in the implementation of sanitation promotion campaigns.
- **There is a need to encourage the construction of public toilets in market places and also on farms.** This will assist those who defecate in the open when they are away from home.

2.7.9 Summary of reviewed studies on sanitary disposal of human waste

S/No	Title	Author & Year	Coverage	Key findings	Existing Gaps	Limitations	Policy Implications	Recommendations
1	Sanitation and Hygiene in Kenya: Lessons on What Drives Demand for Improved Sanitation, A Field Note	WSP (2004)	National	Cultural factors influence attitude and practice on the use of latrines among the Kikuyu community in Kenya	No data and information at the county level No quantitative data on KABP on sanitary disposal of human waste	Generalized findings on KABP on sanitation Lacks county specific data and information	Campaigns aimed at changing norms needs to supplement the existing Community-Led Total Sanitation (CLTS) initiatives	Change the perceived norm by creating the impression of normality through the use of mass media
2	Latrine Use and Associated Factors Among Rural Community Members in Samburu East Sub-County, Samburu County, Kenya,	Waithaka R.W (2015)	Samburu East County, Sample size 2010 households	There exist a gap between knowledge and practice on use of latrines Cultural beliefs, taboos and traditions and lack of latrine construction skills are main barriers for latrine use	Did not collect data and information on sources of knowledge Lacks data and information on type of acceptable latrines –separate for men and women, children and adults?	Sample size was very small-210 households Did not cover the entire Samburu county, only focused on Samburu East sub-county	Community cultural issues are hardly addressed in sanitation policies and programmes Prevention of diseases alone is not the only motivation for construction and use of latrines	There is a need to incorporate cultural issues in policy development and implementation
3	Kenya Demographic and Health Survey 2014	KNBS and ICF International 2014	National, Sample size, 39,679 households	24.7% households in Kenya are using improved sanitation facilities	No data and information on Knowledge, attitude and beliefs/norms No county specific data and information on KABP Lacks data and information on practice by background characteristics of the respondents	Lacks county specific data and information Sample survey hence information may not be representative of the total population	Inadequate data hinders development of key policy interventions	There is a need for further analysis of Kenya Demographic and Health Survey datasets There is a need to collect data on Knowledge, attitude and beliefs/norms
4	MICS, Turkana, Bungoma and Kakamega Counties 2013/2014	KNBS, PSRI and UNICEF, 2014	County Kakamega- sample size 1,500 households Turkana, Sample size, 1,680 households Bungoma, Sample size, 1,500 households	% estimated households using improved sanitation facilities in 2014, in Kakamega 42.3%, Turkana 12.3%, Bungoma, 49.7%	No data and information on Knowledge, attitude and beliefs/norms No county specific data and information on KABP Lacks data and information on practice by background characteristics	Sample survey hence information may not be representative of the total population	Inadequate data hinders development of key policy interventions	There is a need to collect data on Knowledge, attitude and beliefs/norms
5	Siaya County iCCM Endline Survey 2015	KEMRI, 2015	Siaya County, sample size, 1,688 households	44.5% of households were using improved sanitation facilities in Homa Bay county in 2015	No data and information on Knowledge, attitude and beliefs/norms	Data inconsistencies on % of households using improved sanitation facilities e.g three figures were give, 47.4%, 44.5% & 49%	Inadequate data hinders development of key policy interventions	There is a need to collect data on Knowledge, attitude and beliefs/norms

S/No	Title	Author & Year	Coverage	Key findings	Existing Gaps	Limitations	Policy Implications	Recommendations
6	Water, Sanitation and Hygiene Conditions in Kenyan Rural Schools: Are Schools Meeting the Needs of Menstruating Girls?	Alexander, K. T.; Oduor, C. Nyothach, E. Kayla F., L., Amek. N., Eleveld A., Mason, L., Rheingan, R., Beynon, C., Mohammed. A., Ombok M., Obor D., Odhiambo. F., Quick R., Penelope A and Phillips-Howard (2014).	Gem Sub-County, Siaya County, Sample Size, 62 primary schools	Six schools (10%) had girls disposing sanitary towels/pads in the toilets/latrines One school (1%) burnt sanitary pads in the rubbish pit Unknown and no answer were 49 schools (79%) WASH facilities are insufficient in majority of primary schools for the MHM needs of menstruating girls	Data on cultural attitudes and support for girls to deal with menstrual issues while in school and out of school was lacking	Small sample size that could not warrant statistical analysis Focus was on facilities provided by NGO's not those provided by government agencies	Menstrual hygiene management (MHM) has not been incorporated into the National Environmental Sanitation and Hygiene Policy 2007	There is a need to incorporate Menstrual hygiene management (MHM) into the National Environmental Sanitation and Hygiene Policy 2007
7	The Impact of Open Defecation Free (ODF) Environment on Community & The Sustenance of ODF Practices in Rural Areas Of Kenya – Impacts & ODF Sustainability Report	UNICEF, 2015	Seven Sub-Countries in Western Kenya, Busia, Kisumu West, Bondo, Rachuonyo, Nyando and Nambale covering a total of 42 Villages Sample size, 2,030 households	Motivations for use of latrines are improved health, avoidance of shame, convenience, comfort, privacy and security and ease to clean Barriers for use of latrines are poor local soil and ground conditions, expensive, lack of technical advice or knowledge and flooding Children under-5 years were using toilets during the day due to as fear of the darkness; child being afraid of falling or slipping into the pit at night; the toilet being located far away from dwellings; parents' concern for their safety based on age, latrine too small hence children unable to use or the pit hole being too big for children Lack of toilets in market places and farms often force people to practice open defecation Women and girls are motivated by privacy and convenience for use latrine for hygienic disposal of sanitary towels/pads	There are no clear indicators to measure knowledge, attitude, beliefs and practice	The study focused more on impact of ODF rather than KABP on sanitary disposal of human waste The study covered only seven districts in western Kenya	Demand creation through various strategies such as ODF and CLTS are essential for scaling up the up take of sanitation services both in rural and urban areas	There is a need to incorporate demand creation strategies in the existing National Environmental Sanitation and Hygiene Policy 2007

2.8 Rejection of child harmful practices

2.8.1 Overview

In Africa, as elsewhere, harmful practices exist, generally with some cultural, social or religious underpinnings. Common for most harmful practices is that they have devastating consequences on the child's life, development, health, education and protection. UNICEF country programme works to raise awareness of harmful traditional practices as a means of child protection; these particularly include Female Genital Mutilation/Cutting (FGM/C), early or forced marriage and child labour. The objective is to contribute towards reduction of or outright eradication of the prevalence of FGM/C and the rate of child marriage and make programmes and services available to women and girls to manage and mitigate health complications related to FGM/C and early marriage.

In many of the countries where child marriage is prevalent, other harmful practices such as FGM/C are also practised. In the Kenyan Maasai communities, girls—some as young as seven years of age, are considered mature after FGM/C has been performed and are quickly married in order to obtain a dowry (*World Vision, Before She's Ready: 15 Places Girls Marry Before 15*, London: World Vision, 2008). There is a high correlation between FGM/C and child and forced marriages. In communities where FGM/C is practiced, early marriage is prevalent.

The rejection of child harmful practices discussed in this section are: Female Genital Mutilation/Cut (FGM/C); Early marriages; Child labour; and Violence against children in Kenya.

2.8.2 Policies and legislation

Since the early 1990s, FGM/C has gained recognition as a health and human rights issue among African governments, the international community, women organisations, and professional associations. Global and national efforts to end FGM/C have resulted increasingly in legislation targeting excisors, medical professionals, and families who perpetuate the practice. Of the 29 countries, 25 now have laws or decrees related to FGM/C (PRB 2014).



Girls celebrate during the 2nd Annual National Children's Government Congress and the Day of the African Child in Nairobi, Kenya.

Several international human rights conventions on the violation of human rights have been enacted with Kenya being one of the signatories. They include: The 1979 Convention on the Elimination of Discrimination Against Women (CEDAW); Convention on the Rights of the Child (CRC) 1989; International Covenant on Economic, Social and Cultural Rights (ICESR); African Charter on the Rights and Welfare of the Child; Maputo Protocol to the African Charter on Human and Peoples' Rights on the Rights of the Women in Africa; African Charter on Human and People's Rights (the 'Banjul Charter'); The African Union declaration on the years from 2010 to 2020 to be the Decade for African Women; The 2012, 57th UN Convention on the status of women's—reiterated the need of states to develop policies and programmes to eliminate FGM/C as well as other forms of violence against women; The WHO 2010 Global strategy to stop health-care providers from performing female genital mutilation.

In Africa, 14 countries including Kenya have developed reproductive health policies touching on FGM/C (these countries include Djibouti, Egypt, Eritrea, Ethiopia, Gambia, Guinea, Guinea Bissau, Kenya, Mali, Mauritania, Senegal, Somalia, and Sudan).

The Government of Kenya recognises that FGM/C is a fundamental violation of the rights of women and girls. Decrees and bans against FGM/C were issued in 1982, 1989, 1998 and 2001. The Children's Act of 2001 prohibits FGM/C and other harmful practices that “negatively affect” children under 18 years of age—imposing a penalty of twelve months of imprisonment and/or a fine. Nevertheless, since the Act only applies to children and was not widely publicized by the government, its impact has been limited.

The prohibition of FGM/C Act 2011 stipulates that it is a criminal offence for a medical officer or related person to perform FGM/C without non-medical purposes and if in the process of committing an offence causes the death of another, that person shall, on conviction, be liable to imprisonment for life. This is intended to deter medicalisation of FGM/C which is thought by many as a safe way of performing the procedure, compared to the traditional method. Also, aiding and abetting female genital mutilation including conducting FGM/C in another country; use of derogatory language to mock girls and women in order to be cut; the use of ones premises and having knowledge of FGM/C performance and failing to report, is a criminal act and attracts upon conviction, imprisonment for a term not less than six months, or a fine of not less than fifty thousand Kenya shillings, or both.

The following policies and action plans were also set up to address FGM/C: Sessional Paper No. 5 on the National Population Policy for Sustainable Development (1999); The National Reproductive Health Policy Enhancing Reproductive Health Status for all Kenyans (2007); The National Plan of Action for the Elimination of Female Genital Mutilation (FGM/C) in Kenya (2008-2012); The Adolescent and Reproductive Health Policy and Plan of Action (2005-2015); Vision 2030 and the draft Reproductive Health and Rights Bill; The National Plan of Action on the Abandonment of Female Genital Mutilation in Kenya”; GoK, “The National Policy for the Abandonment of Female Genital Mutilation” Ministry of Gender, Children and Social Development, Nairobi, Kenya, June 2010.

With regard to child marriages, Article 1 of the UN Convention on the Rights of the Child—child marriage refers to any marriage of a person below age 18 (UN, 1989). The UN declares it a violation of children's rights and a direct form of discrimination because it deprives children, and particularly girls, who are the most affected, the right to health, education, development and fair treatment. Child marriage featured prominently in the Post-2015 Development Agenda. A high-level panel of eminent persons on the Post-2015 Development Agenda as well as the UN Women observed that ending child marriage is an important target under freedom from violence component of a global goal on achieving gender equality, women's rights and women's empowerment (Equality Now).

The United Nations Secretary General in his report entitled “A life of dignity for all: accelerating progress towards the Millennium Development Goals and advancing the United Nations development agenda beyond 2015,” stated that: “*The practice of child marriage must be ended everywhere*” (A/68/202, para. 85, 2013, available at (<http://www.un.org/millenniumgoals/pdf>). Similarly a report by the Human Rights Council Resolution, affirmed by over a hundred diverse countries, states that “*the persistence of child, early and forced marriage contributes to impairing the achievement of the Millennium Development Goals and sustainable and inclusive economic growth and social cohesion, and that therefore the elimination of child, early and forced marriage should be considered in the discussion of the Post-2015 development agenda*”. These sentiments have been repeated in other International Protocols and legislation which have been signed by countries that continue to tolerate child/early marriages such as Kenya.

For example there are a number of human rights protocols relating to marriage and covers issues of age, consent, equality within marriage, and the personal and property rights of women. They include; Article 16 of the 1948 Universal Declaration of Human Rights (UDHR) which states that men and women of full age have the right to marry and found a family and are entitled to equal rights as to marriage, during marriage and at its dissolution. It also states that marriage shall be entered into only with the free and full consent of the intending parties. Similar provisions are included in the 1966 International Covenant on Economic, Social and Cultural Rights and the 1966 International Covenant on Civil and Political Rights. Article 1 of the 1956.

Supplementary Convention on the Abolition of Slavery, the Slave Trade, and Institutions and Practices Similar to Slavery includes in the institutions and practices similar to slavery. Articles 1, 2, and 3 of the 1964 Convention on Consent to Marriage, Minimum Age for Marriage and Registration of Marriages states that no marriage shall be legally entered into without the full and free consent of both parties, such consent to be expressed by them in person as prescribed by law. State Parties to the present Convention shall specify a minimum age for marriage as not less than 15 years. Article 16.1 of the 1979 Convention on the Elimination of All Forms of Discrimination against Women prescribes equally for men and women the same right to enter into marriage, freely choose a spouse and to enter into marriage only with their free and full consent; among others. The 1990 African Charter on the Rights and Welfare of the Child states that child marriage and the betrothal of girls and boys shall be prohibited and effective action, including legislation, shall be taken to specify the minimum age of marriage to be eighteen years.

Apart from ratifying these conventions, Kenya has also enacted specific legislations on family laws which include; the Marriage Act 2014, Matrimonial Property Act, 2013 and the Protection against Domestic Violence Bill 2013. Marriage Act consolidates the various laws relating to marriage and divorce and minimum age at marriage. The Matrimonial Property Act makes provisions for the rights and responsibilities of spouses in relation to matrimonial property and for connected purposes while the Protection against Domestic Violence makes provision for the protection and relief of victims of domestic violence; to make provisions for the protection of a spouse and any children or other dependent persons.

Another harmful practice that is enshrined in international, regional and national conventions and legislation is child labour. The minimum Age Convention of the ILO (Convention 138, or C138) defined child labour as an economic activity performed by a person under the age of 15 years, and prohibited for being hazardous to the physical, mental, and moral well-being of the child as well as for preventing effective schooling. The UN Convention on the Rights of the Child, adopted by the General Assembly on 20 November 1989, also included several articles against economic exploitation and abuse of children. Among the human rights conventions of the United Nations (UN), the Convention on the Rights of the Child of 1990 enjoys a special status and popularity. A record number of countries participated in the Convention’s treaty-signing ceremony in January 1990, and the Convention broke UN records again by entering into force on 25

September 1990, less than a year after being adopted. By the year 2000, this Convention was closest to achieving universal ratification with 191 state parties (except the United States, which signed it but did not ratify it) and Somalia, which did neither.

Despite this high level of state support for the convention on children's rights, only a minority of the world's children fully enjoy the rights included in it, and many children are denied their childhood. While Article 32 of the Convention obligates states to protect children "from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development,"—millions of children are overburdened with adult responsibilities and work in hazardous conditions. After not being able to gather enough support for the Minimum Age Convention, the Convention is ratified by only 103 states because it is considered too complex and difficult to implement. The ILO later adopted a new convention, Worst Forms of Child Labour Convention (C182), in 1999, enforced on 19 November 2000, and acquired forty-nine ratifications. This convention prioritizes the struggle against the worst forms of child labour and calls for the elimination of child labour for all persons under the age of eighteen. Kenya has enacted the following relevant national legislation in relation to child labour:

- The Constitution of Kenya, 2010
- The Employment Act of 2007 that stipulates the general minimum age for admission to employment or work as 16 years
- The Children's Act, Act No. 8 of 2001 does not determine hazardous work although stipulates working age of 16 years
- Children's Act Cap 586 Laws of Kenya, 2001—Free and compulsory education for children ages 6-14.

2.8.3 Child harmful practices— Female Genital Mutilation

Knowledge, Attitude, Beliefs and Practices on Female Genital Mutilation/Cutting (FGM/C)

Knowledge

FGM/C, or excision, is a traditional practice that is harmful to the health of women and girls. The procedure is often performed by a local excisor in the family home, where sanitary conditions and sterile instruments are usually lacking. While FGM/C was once more of a rite of passage practiced on teenage girls, excision is now practiced on girls ranging in age from infancy to later marriage. According to recent data from the Kenya Demographic Health Survey (KDHS 2014), the proportion of women aged 15-49 who reported having heard of FGM/C increased slightly from 96 percent in 2008 to 97 percent in 2014 (KNBS and ICF Macro, 2014). Older men and women have heard of FGM/C more, compared to young men and girls aged 15-19 years 2015. Similarly, 98 percent of men reported having heard of any form of FGM/C.

UNICEF MICS (2011) data for Kisii and Nyamira counties indicated that nearly 94 percent of women reported that they had heard of FGM/C. Similarly results from MICS Survey carried out in the eastern region showed that in Moyale, 100 percent of women have heard of FGM/C. In Isiolo, even though 98 percent of women had heard of FGM/C, 70 percent had undergone the procedure with 11 percent experiencing a worst form of the cut (UNICEF, 2009). The same report showed that about 99.8 percent of women aged 15-49 years in Marsabit, had heard of FGM/C and that of the 93 percent of women who had heard of FGM/C in Kitui, 29 percent had been circumcised while 4 percent had undergone a worst form of the cut. Available data shows that the knowledge of FGM/C is high among the communities that practice it.

In a baseline survey conducted for girl-child empowerment, (ANTI-FGM, 2013) all the respondents (100%) confirmed that they had heard of, or are aware of FGM/C being practiced in their community. Asked whether they were aware of any health, psychological and social problems associated with FGM/C—81.3 percent and 81 percent of Abakuria and Abagusii respectively confirmed they were aware of the effects. The health, psychological and social problem effects mentioned by the respondents include excessive bleeding, painful menstruation, painful sexual penetration, and a combination of four or more effects.

Attitudes

A baseline study on girl-child empowerment revealed that among those who felt that the practice should continue stated that it improves marriage prospects, maintains a good tradition—as a learning opportunity for the girls, provides an important rite of passage, improves social acceptance and brings honour to the girl and her family. Among those who felt that the practice should be eliminated cited the following reasons: painful experience; heard messages on its negative effects; uncut girls also get married; affects the girls' educational opportunities; it had lost social significance; violates women's rights; has medical complications and is against religion. This study also revealed that the majority of respondents indicated that FGM/C was encouraged by the elders in the two communities. Hence, for the practice to be eliminated leaders and elders must be targeted.

Another aspect that fuels circumcision among the girls in these two communities is the stigma that they face. They are regarded as children and not considered for marriage; they are not respected by peers and are also shunned by peers. However it was reported that there was a noticeable change in attitude as more and more people abandoned the practice.

Beliefs

FGM/C is thought to be a process of initiating a girl into womanhood. FGM/C is also associated with maintenance of a girl's virginity and protection against promiscuity and immoral behaviour. For some ethnic groups, an uncut girl is considered to be sexually promiscuous and not marriageable. FGM/C is also related to sexuality and the aesthetic appearance of the female body—as uncut genitalia can be considered unclean or too masculine among some communities. Among the Embu, Kalenjin, Maasai and Meru, FGM/C is considered as a rite of passage, a necessary prerequisite for a girl to go through in order to become a responsible member of society. While among the Maasai and Samburu, FGM/C is strongly associated with marriage as it attracts a higher bride price. Among the Somali, FGM/C is seen to preserve a family's honour through the preservation of a girl's virginity and chastity. Other communities like the Kisii believe that FGM/C controls a girl's sexual desire and ensures marital fidelity, especially within polygamous marriages. Somali, Borana, Orma and Boni, believe FGM/C constitutes an Islamic requirement (Too Many Research, 2014).

At the national level, 6 percent of women and 9 percent of men believe that circumcision should continue. Among women, there has been some change since 2008-09 in the percentage who believe that the practice should continue (9%). There has been a slight decrease since 2008-09 in the proportion of circumcised women who believe that the practice should continue (from 29% in 2008-09 to 23% in 2014); the proportion has also decreased among women living in Nyanza (from 17% to 9%) and Nairobi (from 6% to 2%). There has been a slight increase since 2008-09 in the proportion of women with no education who believe that the practice should continue—from 34 percent to 40 percent (KDHS 2014).

In a qualitative study carried out among the Somali community (Guyo WJ *et al.*, 2005) focused mainly on social norms and beliefs in order to understand the reasons for the persistence of the practice and management of complications. In-depth Interviews and focus group discussions were carried out with

community and religious leaders, and recently with married and unmarried men and women; interviews with health providers, and an assessment of their clinics' readiness to offer safe motherhood and FGM/C-related services; and interviews with antenatal clients who had been cut.

The results from focus group discussions on various aspects of social norms and beliefs revealed that the practice is deeply rooted in the Somali culture. Several reasons were used to justify continuation of FGM/C by the Somali: a cultural tradition that brings honour for the family and the girl; a means for controlling female sexuality; a perceived requirement of Islam; a necessary condition for marriage; and genital beauty and cleanliness. The study also collected information on FGM/C complications and their management.

FGM/C is observed as a cultural rite of passage that enables a girl to be transformed into a marriageable woman as well as take on a Samburu/IL-Chamus identity distinct from other ethnic groups.

Multiple Indicator Cluster Survey (MICS) Results

One in five (20%) of women believe that FGM/C should be continued while 69 percent believe it should be discontinued. In Moyale 59 percent of women suggested that FGM/C should continue. The approval was high at 68 percent among poor women aged 35-39 who have no formal education (MICS 2008). In Isiolo 47 percent of women approved its continuation. This was mainly among uneducated older women of low wealth index. In Kitui However, only 10 percent of women approved the continuation of the practice with endorsement being high among women who are circumcised (22%) and those aged 35-39 who were poor and less educated (MICS 2008). In Bungoma 1.7 percent of women aged 15-49 approved of the FGM/C practice. In Kakamega 2.8 Percent of women aged 15-49 years state that FGM/C should be continued. In Turkana 5.9 percent of women age 15-49 years stated that FGM/C should be continued.

Practice

The proportion of women who reported having undergone a worse form of FGM/C (infibulations) or the removal of flesh from the genital area and sewing to close the genital area dropped from 13 percent in 2008 to 9 percent in 2014 (KNBS and ICF macro, 2015). FGM/C was more prevalent among rural women (26%) than urban women (14%). The proportion of women who reported having been circumcised also varied by ethnic groups. Majority of women in ethnic groups of Somali (94%), Samburu (86%), Kisii (84%) and Maasai (78%) were circumcised compared to 2 percent or less of women among the Luo, Luhya, and Turkana and Mijikenda/Swahili ethnic groups. In relation to age at circumcision, 2 percent of women are circumcised at less than 5 years of age, 27 percent at ages 5-9 and 43 percent when aged 10-14 years.

Further, 27 percent are circumcised at age 15 or older. Over time, there is a trend to circumcise girls at younger ages. About 40 percent of circumcised women aged 15-19 were circumcised when they were 5-9 years old compared with 17 percent of circumcised women age 45-49. Sixty five percent of Muslim women were circumcised at age 5-9 with 73 percent of Somali women being circumcised—than women from other religious groups. Urban women are more likely to be circumcised at age 5-9 (34%) than rural women (24%). About 78 percent of women in urban areas are circumcised by age 14, compared with 69 percent of those in rural areas. Women in the Coast region are most likely to have been circumcised when they were less than age 5 (22%). FGM/C is highest among girls in North Eastern (40%) whose mothers are either not educated (13%), are circumcised (9.6%) and poor (6%). The prevalence of FGM/C among girls aged 0-14 is highest among Muslim girls (19.8%), Somalis (36%) followed by Kisii (16%) (KNBS and ICF Macro, 2015). The practice is more common in rural areas at 39 percent versus 21 percent in urban areas.

Results from MICs indicate that in Nyanza there are two counties where the practice is very common—in Kisii and Nyamira—where 98 percent of women have undergone the procedure with 8 percent experiencing

a worst form (UNICEF, 2011). 90.6 percent of women in Marsabit had undergone the procedure and 2.3 percent experiencing a worst form of FGM/C. In Kitui, 2 percent of women approved the practice. In Bungoma only 2.1 percent of women aged 15-49 had undergone the cut. In Kakamega 1.2 percent of women aged 15-49 years reported to have undergone any form of FGM/C. In Turkana 3.2 percent of women aged 15-49 years reported to have undergone any form of FGM/C.

In a baseline study among the Abagusii and Abakuria those interviewed reported that 39.5 and 27.5 percent respectively of girls presented in the household had been circumcised while 34.2 percent among the Abagusii and 46.3 percent among the Abakuria reported that the girls had not been circumcised. Circumcision among the Abakuria is done by the traditional circumcisers while among the Abagusii it is done mainly by health personnel. Age at circumcision also varied among the two communities. Among the Abagusii circumcision occurs between ages 6 to 10+ years among the majority of the girls, while among the Abakuria it was reported that the girls are circumcised between the ages of 11 to 15+ years.

In a UNFPA (2008) baseline report on abandonment of FGM/C in Baringo and Samburu, the results revealed that FGM/C is still widely practiced among the Samburu and IL-Chamus of Baringo. Girls are increasingly cut at a younger age of below 14 years unlike in the past when they would be cut just before marriage when they were older than 14 years. Among the Samburu, FGM/C is largely still celebrated publicly at the girls home where a big party is held and presents given to the initiate while among the IL-Chamus, the ceremony has been dispensed with but the cut is still done more secretly. Girls are cut at their homes by professional traditional surgeons on invitation by parents who are the main decision makers on when a girl should be cut. Among the Samburu, such surgeons are still highly regarded and may double up as healers.

Medicalization of FGM/C

A trend which has been emerging as a result of stiff legislation and HIV/AIDS is the medicalization of FGM/C. WHO (2012) concluded that medicalization or use of health-care providers, such as physicians, nurses and midwives is increasingly replacing the use of traditional excisors. Although FGM/C is still carried out primarily by traditional excisors in most countries. In Egypt, girls are three times more likely to undergo FGM/C at the hands of a health-care provider than did their mothers (EDHS 1995). The statistics on medicalization of FGM/C at sub-national level in Kenya shows an increasing trend particularly among the Kisii. In 2003, 46 percent of Kenyan daughters had FGM/C performed by a health professional (up from 34.4 percent in 1998) although majority are still cut by traditionalists. However, the latest DHS puts the figure at 19.7 percent for girls aged 0-14 years and 14.8 percent for women aged 15-49 years (KDHS 2014). The increased medicalization of FGM/C is also confirmed by a study by the Population Council among the Abagusii in Nyanza Province, as well as by PATH and MYWO. Among the Abagusii, FGM/C has become a popular means of additional income for nurses and midwives (Population Council, 2004).

It is believed that medicalization reduces the risk of harm from FGM/C although there are no documented cases that medicalization leads to a reduction in the practice of FGM/C (Shell-Duncan 2001). Some medical providers do indeed use clean equipment and drugs to reduce pain, bleeding and infection. However, medical FGM/C cannot eliminate immediate risks, and cannot also reduce the long-term effects of FGM/C. WHO and other agencies believe that medicalization actually contributes to upholding the practice, by legitimizing it as a health procedure (WHO 2010).

The Kenya Ministry of Health reference manual for Health Service Providers developed in collaboration with the Population Council, contains recommendations to curb the sustained involvement of health personnel in the performance of FGM/C while the FGM/C Act of 2011 also prohibits medicalization but the practice continues (Ministry of Health, undated, KDHS 2014).

Approaches to ending female genital mutilation

A systematic review finds little evidence of the effectiveness of interventions to prevent FGM/C as factors related to the continuation or discontinuation of the practice vary across contexts. In Kenya, MICS (2008) and MIC (2010) reveal that older women who are less educated and from poor households approve continuation of FGM/C. The main factors supporting the continuation of the practice are tradition, religion and concern with reducing women's sexual desire, while health complications and lack of sexual satisfaction are less associated with support of the practice. A number of evaluations of anti-FGM programmes from many countries exist to provide guidelines for good practice. Several international and local organisations have adopted the following strategies but their implementation face challenges:

a. Understanding the social dynamics of decision-making related to FGM/C

Decision-making and practices in many communities involve more than just individuals and families as they are embedded in community or group dynamics. Interventions that target individuals, families or excisors alone are therefore unlikely to be effective (WHO 2012). In Kenya, the Anglican Development Services of Mt Kenya East (ADSMKE) work with communities in Tharaka Nithii and Meru to end all forms of violation of human rights including child labour, early marriages for girls due to FGM/C and other forms of violence that demean women. The organisation is therefore involved in promoting gender equality and women's rights. The organisation involves men, religious and community leaders such as the Njuri Ncheke in the fight against FGM. In 1956, Njuri Ncheke passed a declaration to stop FGM/C at Nchiru and reiterated the same in 2009 at Kinoru Stadium during the Kinoru declaration outlawing FGM/C (ADSMKE-FGM/C Hand book, undated).

b. Working with cultural and community practices and beliefs

FGM/C cannot be abandoned when programmes against the practice are perceived by the community as attacking and criticizing local culture and values—if driven by outsiders. Reinforcing positive cultural values through alternative rites of passage can be more effective at finding ways to signify a girl's coming of age without cutting. For example, The ADSMKE uses alternative rite of passage to initiate girls into adulthood by replacing outdated cultural practices in this case, FGM/C, with human rights centered approaches. This symbolic initiation process is used to move girls from childhood into adulthood without undergoing FGM/C.

Also, AID Kenya Foundation started anti-FGM/C campaigns in 2008 focusing on the Maasai in rural Narok and the Kisii by providing community dialogue, support and counselling for women and girls who have had FGM/C and vocational training for ex-circumcisers although a follow up by (28 Too Many research, 2014) found that majority of the community members still support the practice privately. And although, Bogoria Network Ministries (BNM) offers refuge to girls fleeing FGM/C and supports girls in paying school fees, it is faced with challenges of determining which girls are actually in fear of FGM/C (28 Too Many research, 2012).

c. Target local, national and international levels of influence

Legal sanctions against FGM/C are the most common type of intervention at the national and international levels but laws alone are not enough. Nevertheless, legislation creates an enabling environment for interventions at the local level, as illustrated by the FGM/C abandonment Act 2011 of Kenyan Laws. Although this law is in place in Kenya together with other international protocols and conventions on FGM, the practice continues and little is known whether or not the communities understand the existence of laws prohibiting FGM/C.

d. Use of a comprehensive rights based approach

Research underscores the importance of working with communities, long-term investment and a focus on human rights as understood in the local context, to support collective change (WHO 2012). However, a systematic review of interventions to prevent FGM/C concludes that rights-based messages produce varied results depending on context. For example, a local NGO called Coexist Initiative which operates in Kisii, Kuria, the Maasai and Samburu in the Rift Valley, the Banjuni and Rendile in the Coast, the Meru and Tharaka in Central province, and the Somali in North Eastern Kenya has adopted grass-root initiatives to FGM/C using a human rights-based approach. This involves emphasising the responsibilities of everyone in society to ensure women's and girl's rights and freedoms in the local context. Their FGM/C projects are participatory in nature and utilize the expertise and tools that are respected by the target community. However, their programmes mainly focus on men, boys and communities with the aim of building competences, raising the levels of awareness, influencing attitude/behaviour change and objectively providing information although their successes are less understood.

Opportunities

The Constitution states that every child in Kenya has the "right to protection from abuse, neglect, harmful cultural practices".

The initiation of the Joint Programme in Kenya since 2008 with a range of interventions. In 2014, all elements of the social change approach—including working with communities and their leaders, legal sanctions, information and education, alternative rites of passage, and media attention—could be seen working together simultaneously in Kenya and contributing to this rapid shift towards abandonment of FGM/C.

The United Nations International Day of Zero Tolerance for Female Genital Mutilation.

Challenges facing anti FGM/C campaigns

(Population Council, 2007) highlighted some major challenges to eradication of FGM. First, issues surrounding customs and traditions such as cultural norms and the difficulty with identifying appropriate entry points into communities and strong religious and cultural beliefs hinders anti-FGM/C campaigns. Second, the high level of illiteracy among older women who approve the practice, makes it difficult to disseminate information in the vast and inaccessible geographical areas and remote populations. Third, the issue of medicalisation of FGM/C makes abandonment of the practice more difficult and the many girls who wish to escape from FGM/C lack rescue homes. Fourth, lack of support from politicians in the FGM/C prone areas, lack of enforcing legislations and the inactive national coordination board of anti-FGM activities are great challenges to elimination of FGM.

Other reasons include reports that refugee communities (Somalis) sometimes target opponents of FGM, including NGO staff (Human Rights Report, 2011) and the entrenched positions of influential elders and traditional leaders in the communities' hampers eradication efforts. In 2011, for example, some community elders interfered with churches and NGOs that provided shelter to girls who fled homes for an alternative ritual to FGM/C (28 Too many research, 2014).

Summary, conclusions and policy implications

Although continued publicity of current FGM/C practices at international levels are important given support and resources, priorities on programmes for ending FGM/C and early marriages are given less attention than those related to health and poverty crises.

In Kenya, education is an opportunity in the elimination of FGM/C as majority of women who approve FGM/C are less educated and poor. Lack of basic education enables continuation of social stigmas surrounding FGM/C and women's rights. Keeping girls longer in school prevents them from acts of FGM/C and gives them an opportunity to pursue higher education and access employment opportunities in their later lives. Anti-FGM/C programmes need to focus on advocating for girl's education, but educating men and boys on FGM/C is equally crucial in support an end to FGM/C.

FGM/C, medicalisation and health education

Although medicalisation of FGM/C is considered to be safe, it potentially hinders elimination efforts. Health providers need to be better trained to handle and manage complications arising from FGM/C and on the consequences of their role in medicalised FGM/C. The health workers also need to be equipped on laws prohibiting medicalisation of FGM/C. More resources are needed for sexual and reproductive health education and research is needed on the psychological consequences of FGM/C.

FGM/C in the context of law, advocacy and lobbying

Advocacy and lobbying is useful in influencing and sustaining the recently enacted FGM/C Abandonment Act of 2011. The success of this law has not yet been fully assessed and it is recommended that prosecutions under this new law are necessary across a wide range of geographical regions.

FGM/C and the role of Faith-based Organisations

With over 80 percent of women of Somali religion undergoing FGM/C, the need to involve Somali Islamic leaders and other religious leaders in the fight against FGM/C is an important step in the abandonment of FGM/C.

Understanding social and cultural norms

Working with communities to understand their social dynamics and decision-making processes can provide opportunities for sharing information on abandonment of FGM/C.

Recommendations

Dramatically expand the body of evidence on the most effective and cost-effective approaches to ending FGM/C in different contexts.

Need for research that:

- Builds the picture of where, when, and why FGM/C is practiced through a series of explanatory analyses of existing survey data-sets, complemented by qualitative studies among various populations at different stages of abandoning the practice.
- Blends retrospective evaluations, cost analyses, and case studies of ongoing interventions with prospective implementation research and impact evaluations of new interventions, implemented as multi-site studies, to broaden understanding of the benefits and costs of a wide range of approaches to FGM/C abandonment.

- Brings an understanding of the wider impacts of FGM/C on the lives of girls, women, and their families, and the implications of sustaining or abandoning the practice of FGM/C—as well as other harmful practices such as early marriage and gender-based violence—on gender norms and relations.
- Improves research into FGM/C through developing and testing new or improved methods and measures and building the capacity of national researchers to design and implement these researches.

2.8.4 Child harmful practices—Early marriage of children

Knowledge, Attitude, Beliefs and Practices on early marriage of children

Child marriage refers to any marriage of a child younger than 18 years old, in accordance with article 1 of the convention of the right of the child. The right to protection from child marriage in article 16 of CEDAW states that; the betrothal and the marriage of a child shall have no legal effect and all necessary action including legislation, shall be taken to specify a minimum age for marriage (CEDAW, 1994). While marriage is not considered directly in the convention on the rights of the child, child marriage is linked to other rights such as the right to direct expression of views, the right to protection from all forms of abuse and harmful traditional practices such as FGM/C. Child marriage was also identified by the Pan African Forum against Sexual Exploitation of children (Birech 2013). In March 2014, parliament adopted the Marriage Act 2014 which introduces a uniform minimum age of marriage, set at 18, for both women and men (Kenya Law Reviews, 2014). More importantly, the new legislation applies to all forms of marriage including Islamic and customary marriages.

Knowledge

On their 18th birthday worldwide, about 250 million entered into union before age 15. Boys are also married as children, but girls are affected more. In Niger, for instance, 77 percent of women aged 20-49 were married before age 18 in contrast to 5 percent of men in the same age group. The same gender differences are also found among countries where child marriage is less common. For example, in the Republic of Moldova, 15 percent of women aged 20-49 were married before age 18 compared to 2 percent of men.

UNFPA (2012) estimates that one in three girls in low and middle-income countries (excluding China) will marry before the age of 18. One in nine girls will marry before their fifteenth birthday. In the least-developed countries the prevalence of child marriage is even higher—nearly one in two. If present trends continue, the number of child marriages each year, 14.2 million in 2010, will be over 14 percent higher by 2030, nearly 15.1 million. In South Asia alone, 130 million girls are likely to marry as children between 2010 and 2030.

In relation to marriage, girls are often married to slightly older men. They are more likely to be in polygamous unions. For example, in Mauritania and Nigeria, about 50 percent of adolescent girls aged 15-19 currently married, have husbands who are 10 or more years older than they are.

Early marriage is a demonstration of gender inequality, reflecting social norms that perpetuate discrimination against girls. Child marriage among girls is most common in South Asia and sub-Saharan Africa, and the 10 countries with the highest rates are found in these two regions. Niger has the highest overall prevalence of child marriage in the world. However, Bangladesh has the highest rate of marriage involving girls under age 15. South Asia is home to almost half (42%) of all child brides worldwide; India alone accounts for one third of the global total child marriages.

According to KDHS (2014), the proportion of women married by age 15 appears to be declining from 9 percent among women age 45-49 who were married by age 15 compared with 2 percent among those aged 15-19.

Beliefs

According to a study by Plan International, many girls in rural parts of Kenya are often perceived by their families as either an economic burden or valued as capital for their exchange value in terms of goods, money and livestock. To justify these economic transactions, a combination of cultural, traditional and religious arguments are often employed.

Practice

In Kenya, child marriage is not a new phenomenon. It is quite common especially among the pastoralist communities such as the Samburu, Maasai, and the Pokot (UNICEF 2001). An estimated 26 percent of girls are married before their 18th birthday in Kenya. Child marriage rates vary across regions, with the North Eastern and Coast regions having the highest prevalence rates, while the Central region and Nairobi have the lowest rates.

Education is a key driver, as 6 percent of women aged 20-24 with no education married as a child, in comparison to 6 percent of women with secondary education or higher. Women living in rural areas are twice as likely to be married under age 18 than women living in urban areas. This urban-rural divide has increased by 36 percent since 2003 (UNFPA, *Child marriage profile: Kenya, 2012*).

To measure early marriage, MICS establishes the proportion of women who were married before age 15, 18, and the spousal age difference of 10 years between the man and the wife. However, this data are collected at district level, and presents challenges in generating levels and trends in child marriage in Kenya. The results of child marriage from various MICS data are discussed here.

According to MICS 2008 and 2010, in Isiolo, about 14 percent of women aged 15-49 years got married before reaching 15 years, and 47 percent of women aged 20-49 years were married or were in union before their 18th birthday and 36 percent of women aged 15-19 years were currently married or in union by the time of the survey. Early marriage was more prevalent among women with low education and declined with increasing levels of education. The results also showed that the proportion of women married before reaching 15 years declined with increasing levels of household wealth index in Isiolo district.

In relation to age difference between husbands and wives, about 75 percent of the women aged 15-24 years were married or in union with a partner who was five or more years older. The proportion of women who were married or in union with a partner who was 0-4 years older was only 21 percent.

Factors associated with early marriage and societal challenges

UNICEF (2001) highlights several factors for early marriage. To begin with, the customs and traditions surrounding marriage determines the desirable age at marriage. The way in which a spouse is selected depends on society's view regarding the role, structure, pattern of life, and the individual and collective responsibilities of members of the family. Traditionally, families are characterized by extended relations, communal households, plural mating, authoritarian, young age at marriage, spouses chosen by elders, absorption of the newly-wed into an existing household, no non-household role or identity for women.

Next, child marriage is influenced by poverty. Poor families may regard a young girl as an economic burden and her marriage to a much older—sometimes even elderly man is seen as a survival strategy, particularly in some Middle Eastern and South Asian societies. In traditional societies in Sub-Saharan Africa, the bride's family may receive cattle from the groom, or the groom's family, as the bride price for their daughter. Due to tough economic times, men are postponing marriage and parents have become anxious about the danger of their daughters becoming pregnant outside marriage making early marriage an opportunity. Girls orphaned due to HIV/AIDS are also married early by their caregivers who find it hard to provide for them.

Also, for countries that experience conflicts, child slavery and traffic is on the rise and the rising numbers of children on the streets leads to child prostitution and child labour. Many children are also neglected and abandoned. In such situations, early marriage is likely to take place. Other pressures can promote early marriage in societies under stress. The fear of HIV infection and other pressures has encouraged men in some African countries to seek young virgin girls with a hope that they are not infected. Also, incidences such as rape, trafficking, domestic violence, sexual servitude and child abduction can also contribute to early marriage.

Early marriage is believed to be a protective measure. In this regard, a young girl is placed under male control because she is easily submissive and can work hard for her in-laws and other household members. Most parents feel that their girls will be safer with a regular male guardian. Further, it is thought that marrying girls early will help prevent premarital sex and also preserve her virginity. As a result, a girl may be secluded from social interaction outside the family and her dressing may be controlled. In some regions such as North-East Africa and the Middle East in particular, control may involve female genital mutilation (FGM/C) as a way of restricting sexual pleasure and temptation. In some cultures, parents may remove their girls from school as soon as they begin to menstruate for fear of the risk of exposure to male pupils and teachers.

The impact of early marriage

Early marriage can lead to misery among young girls. From a human rights view, early marriage raises three fundamental concerns. They include denial of childhood and adolescence, the curtailment of personal freedom and the lack of opportunity to develop a full sense of selfhood as well as the denial of psychosocial and emotional well-being, reproductive health and educational opportunity (UNICEF 2001). It is argued that lower levels of education are found among women who married in childhood. For example, in Malawi, nearly two thirds of women with no formal education were child brides compared to 5 percent of women who attended secondary school or higher levels of education (UNICEF 2013).

Girls in early marriages in developing countries have little or no access to contraception and delays in getting pregnancy may also not be tolerated by husbands. Since child brides are often unable to negotiate safer sex, they are left vulnerable to sexually transmitted infections, including HIV, along with early pregnancy. The pressure to become pregnant once married can be intense, and child brides typically end up having many children to care for while still young. In other cultures, girls are circumcised and left to experience pain and trauma especially for recent operations. Infibulation can result in pain during sexual intercourse and during child birth. In countries such as Bangladesh, Ethiopia, Nepal and Niger, girls who marry early are less likely to receive proper medical care while pregnant and end up delivering babies at home. The fact that these girls are not physically mature enough to give birth also places both the mother and the baby at risk during birth (UNICEF 2013).

Effects of early marriage on girls

According to UNFPA (REF) child/early and forced marriages affect the girl-child in the following ways:

- It compromises their health because they are thrust in the role of motherhood before they are physically or psychologically prepared for it.
- It makes them more likely to experience problems during pregnancy and childbirth.
- It makes them experience high levels of emotional stress because they cannot cope with their new roles as wives and mothers.
- It denies girls opportunities for education and personal development since motherhood and managing their homes become the focus of their lives.
- It places them at higher risk of contracting STIs (including HIV).
- Early marriage leads to early onset of childbearing which in turn leads to larger families, with serious effects on the health and well-being of the mother and family.
- Early marriage affects not just families, but society as a whole because girls are uneducated and ill-prepared for their roles as mothers and contributors to society; consequently, society must bear the costs from the individual to the national level.

Opportunities and taking action

A range of policy and programmatic actions are needed to reduce early marriage and its impact and actions to fulfil or restore the rights of those already married and should go hand-in-hand with preventive actions targeting those who have not entered into early marriages. Efforts should aim at the following:

- Create awareness by providing information to parents and young people with a view of empowering them to resist the practice.
- Governments and civil society institutions should work together by developing and implementing appropriate systems that prevents or discourages early marriages.
- Engage key actors like teenagers who are the target group, adult women and men, community leaders, politicians, policy-makers, academics, researchers, lawyers, the media, and national and international non-governmental and intergovernmental bodies in resisting the practice.
- Promote education at least to secondary level for both boys and girls.
- Use existing legal frameworks, constitution and policies to discourage the practice.

Conclusions/summary and policy interventions

From the literature summarized in the previous sections the following are the conclusions, summary and policy implications:

There are deficiencies in data collection systems on early or child marriage in Kenya. MICS data collects data on limited indicators hence a lot of information is left out on various aspects of child marriage including its impact on families, wives, husbands and the wider society, since the recorded impacts relates to the girls themselves.

Interventions required

As a way of maintaining sexual and reproductive health of boys and girls, there is need to ensure they learn about sex, reproduction and related risks at an early age. Also, provide education for all particularly up to secondary education level by persuading parents to keep their daughters in school for personal growth, family as well as the wider social and economic development including postponement of marriage. Further, provide support for psychological well-being and emergency assistance to girls and women in situations of extreme marital stress that may result in runaways. For example, many runaway girls and women in Kenya, Bangladesh, Ethiopia and India end up in urban slums and poor rural settings that expose them to greater life threatening risks. Most NGO's offering support to these groups are usually based in towns and cities although early marriage is more common in rural settings.

Early marriage is closely linked to poverty hence the need to provide training in livelihood skills, support for teenagers in the labour market and ensuring that marriage is not a pre-condition for eligibility for schemes such as micro-credit programmes and savings clubs. There is need to strengthen legal mechanisms and ensure complete registration of births and issue birth certificates to all children in order to help them defend themselves against age related rights abuses.

Marriage is regarded as a private and sensitive affair in many societies. In Asia and Africa, families do not discuss sexual relations even between husband and wife. However, lifestyle changes and HIV have begun to erode these norms. Young people are demanding the right to know about and talk about sexual matters and these efforts should be encouraged by all actors.

Information gaps

- There is lack of data on all aspects of early marriage for example information is asked of married women aged more than 15 years at different time points and in different districts. Need to perform regular studies within the same time period in early marriage in hot-spot counties.
- Available data have examined early marriage in terms of demographic trends, fertility, and educational attainment but very few studies have examined the practice from a human rights perspective, in terms of trends or its impact on wives, husbands, families, or the wider society. These gaps need to be filled since data must inform policies and programmes and provide a basis for effective advocacy.
- The absence of data on the psychosocial impact of early marriage on children, and the ways in which this interacts with wider social, political and economic consequences, is missing.

Recommendations for research

- There is need to disaggregate existing demographic data and use it to tell us more about the prevalence of early marriage.
- There is need to develop studies that examine trends, extent, impacts, and effective responses. This is because child marriage is likely to be under-reported in areas where it is known to occur, especially for children under 14, who are virtually invisible in standard data recording.
- Develop more indicators particularly in stressed, conflict populations, carry out standard surveys, and refine existing research methodologies to make them more useful in capturing necessary data.

- New methodologies are needed to enable NGOs with access to rural communities to conduct small-scale qualitative research, in which local people, including adolescents and young girls participate.
- Conduct research on prevalence of child marriage among subgroups at sub-national levels as marriage characteristics are submerged in national data, disaggregated by age and sex.
- Social and economic determinants influencing the age of marriage, particularly those that cause it to rise need to be examined in Kenya.
- Evaluate the impact of early marriage relating to psychosocial effects; social and economic impact on families and societies.
- Conduct more research in high stress situations brought about by war, HIV/AIDS, acute urban and rural poverty, and among refugee and displaced populations.

2.8.5 Child harmful practices—Child labour

Overview

The International Labour Organisation (ILO) defines working children as persons aged 5-17 who perform some non-schooling activities during the reference period. The activities of the working children could be for pay, profit or family gain. Child labour is often defined as work that deprives children of their childhood, their potential and their dignity and that it is harmful to physical and mental development. It refers to work that is mentally, physically, socially or morally dangerous and harmful to children; and interferes with their schooling by depriving them of the opportunity to attend school; obliging them to leave school prematurely; or requiring them to attempt to combine school attendance with excessively long and heavy work. The 2009 Census did not collect child labour statistics directly. Proxy indicators were however deduced. The indicators of child labour are mainly based on age, hours worked, in/out-of-school status, type of work and employer (Kenya, Census 2009).

According to Moyi (2010), there is no universally accepted definition of child labour. Definitions are varied and ambiguous. This is because child labour is a complex phenomenon (UNICEF (1997) and takes place along a continuum. At one end of the continuum, the work is beneficial, promoting or enhancing a child's physical, mental, spiritual, moral or social development without interfering with schooling, recreation, and rest. At the other end, it is thought to be destructive or exploitative. For example, during school holidays, children work long hours on farms as part of assisting their parents but this can be termed as child labour depending on the amount of time taken.

The prevalence of child labour remains high in Kenya. The Kenya Integrated Household Budget Survey (KIHBS) 2005-2006 survey found that 1.01 million children aged 5-17 years, were working for pay, profit or family gain. Furthermore, the survey established that there are 19,542 children working in conditions that fall within the definition of the worst forms of child labour. In 2012, research in the districts of Busia, Kilifi, and Kitui showed that between 46 and 64 percent of children had worked for economic gain at some point in their lives. Most of these children lived with their parents, indicating that parents are not able to protect their children from engaging in labour (ILO 2012). The majority of children work in the informal sector, for example, in subsistence and commercial agriculture, construction, mines or as domestic servants (ILO IPEC 2008).

As a result of child labour, many children in developing countries are neither enrolled in school nor engaged in paid employment. Although these children are not gainfully employed, many of them tend to work in more hidden forms of child labour, like work in the household, at the family farm or in the family business. These children and the fact that they might be involved in hidden forms of child labour has become more and more recognised although comparative research into the factors that influence participation of children in labour are largely lacking. It is widely accepted that work done at home is often not included in employment statistics making it difficult to know about children who perform these tasks. The few available statistics indicate that the percentage of children in hidden forms of labour varies among countries and regions and that up to one quarter of school-aged children may belong to this group, majority being girls (Webbink et al., 2010; MICS 2008).

Knowledge, Attitude, Beliefs and Practices on Child Labour

Child labour constitutes both moral and economic concerns such as:

- Stealing the childhood of millions of children in the world.
- Exploiting children because they are paid at the lowest rates.
- It is preferred by employers for being cheap.
- The widespread use of child labour results in lower wages for all labourers.
- Children usually work under the worst working conditions, and these unhealthy, unsafe, dangerous, and poisonous work environments cause physical deformations and long-term health care problems in children.
- Child labour perpetuates poverty because child labourers are deprived of education or healthy physical development and are likely to become adults with low earning prospects.
- Countries that allow child labour are able to lower the labour cost, thus, they not only attract investors but also benefit from “unfair trade” due to their low production cost.

International Conventions and local policy frameworks

The minimum Age Convention of the ILO (Convention 138, or C138) defined child labour as an economic activity performed by a person under the age of 15 years, and prohibited for being hazardous to the physical, mental, and moral well-being of the child as well as for preventing effective schooling. The UN Convention on the Rights of the Child, adopted by the General Assembly on 20 November 1989, also included several articles against economic exploitation and abuse of children. Among the human rights conventions of the United Nations (UN), the Convention on the Rights of the Child of 1990 enjoys a special status and popularity. A record number of countries participated in the Convention’s treaty-signing ceremony in January 1990, and the Convention broke UN records again by entering into force on 25 September 1990, less than a year after being adopted. By the year 2000, this Convention was closest to achieving universal ratification with 191 state parties (except the United States, which signed it but did not ratify it) and Somalia, which did neither. Despite this high level of state support for the convention on children’s rights, only a minority of the world’s children fully enjoy the rights included in it, and many children are denied childhood. While Article 32 of the Convention obligates states to protect children “*from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child’s education, or to be harmful to the child’s health or physical,*

mental, spiritual, moral, or social development,” millions of children are overburdened with adult responsibilities and work in hazardous conditions. After not being able to gather enough support for the Minimum Age Convention, the Convention is ratified by only 103 states because it is considered too complex and difficult to implement. The ILO later adopted a new convention, Worst Forms of Child Labour Convention (C182), in 1999, enforced on 19 November 2000, and acquired forty-nine ratifications. This convention prioritizes the struggle against the worst forms of child labour and calls for their elimination for all persons under the age of eighteen. Kenya has enacted the following relevant national legislation in relation to child labour:

- The Constitution of Kenya, 2010
- The Employment Act of 2007 that stipulates the general minimum age for admission to employment or work as 16 years
- The Children’s Act, Act No. 8 of 2001 does not determine hazardous work although stipulates working age of 16 years
- Children’s Act Cap 586 Laws of Kenya, 2001 – Free and compulsory education for children ages 6-14.

Rationale for child labour

UNICEF opposes child labour not only for being exploitative but also for endangering children’s physical, cognitive, emotional, social, and moral development; and proposes a more comprehensive approach to the problem (UNICEF 2009). The eradication of child labour is also part of the Millennium Development Goals and Sustainable Development Goals on education, poverty eradication and enhancement of gender equality and health.

Practices on child labour

I. Global trends in child labour

According to ILO – IPEC (2013), an estimated population of 144.1 million children aged 5-14 years were in employment in the world in 2012, majority being boys. In the age group 5-17 years, the total child population in employment was estimated at 264.4 million. Boys tend to be more involved in employment than girls (148.3 million for boys versus 116.1 million for girls). Regionally, Asia-Pacific region has the largest number of children in employment (64.4 million), followed by Sub-Saharan Africa (57.6 million), Other regions (13 million, of which 7.1 million were from the Middle East and North Africa) and Latin America and the Caribbean (9 million).

II. Levels, trends and differentials in child labour in Kenya

a) Characteristics of children aged 5-17 years by regions

According to the Kenya 2009 census report, the population of children aged 5-17 was 13.2 million or about 34 percent of the total population. Male children accounted for 51.7 percent while females accounted for 48.3 percent. Majority of the children, representing 85.9 percent, were living in the rural areas. Regionally, Rift Valley Province recorded the highest number of children at 3.6 million which was 27.1 percent of the total population, followed by Eastern at 14.8 percent and Nyanza at 14.7 percent. The number of children aged 5-17 rose by 31.8 percent between 1999 and 2009, with the highest increase in North Eastern where it tripled from 346,002 in 1999 to 1.05 million in 2009. During the ten-year period, the proportion children to

total population remained the same in Coast province, but declined in Central Province from 12.4 percent in 1999 to 9.8 percent in 2009.

b) Status of working children aged 5-17 by economic activity

Based on the 2009 Kenyan census report, of the 4.55 million children, 387,815 (8.5%) worked for pay, 53.3 percent worked in own family agriculture holding and 16.2 percent were in own family business. In all economic activities, nationally and in rural areas, boys were the majority, while girls were the majority in urban areas. Although there were 4.55 million working children, not all could be considered child labourers. However, those who were working for pay (8.5%) can be considered child labourers. Majority of the working children (30.4%) were in Rift Valley Province while Nairobi had the least (2.6%). Eastern Province was second highest (14.7%) followed by North-Eastern (13.7%). Analysis by age group indicated that majority of the working children were in age group 5-9 (45.4%), followed by those in age group 10-14 (37.7%). Similarly, MICS (2008; 2010) collected information on child labour in various districts of Kenya at different time points. Results indicated that 9 percent of children aged 5-14 were engaged in child labour in Isiolo District, Marsabit (26%) Moyale (3%) compared to 16 percent of the children in Kitui District (MICS 2008). In Nyanza, nearly 66 percent of children aged 5-14 years were involved in child labour. Siaya had the highest number of children in labour (75%) compared to 59 percent in Kisumu (MICS 2010). More specifically, one percent of children aged 5-14 were involved in paid or unpaid work outside the household in Isiolo, 6 percent were engaged in household chores while two percent were engaged in family businesses. Females participated more in family business (19%) and household chores (10%) in this district. In Moyale, the prevalence of child labour was quite low but in Kitui, child labour was more prevalent particularly in household chores for both boys and girls.

c) Characteristics of working children by economic activity, sex and province

In all major economic activities, males were the majority. In all provinces, except Nairobi, majority of the working children were engaged in own family agriculture. MICS data also shows that more females (10.8%) compared to males (6.5%) were involved in child labour in Isiolo district. Females were engaged mainly in child labour due to their participation in household chores for 28 hours or more in a week. Also, there were more female child labourers (27%) than males (24%) in Marsabit. Similarly, the proportion of females in child labour was 4 percent compared to 3 percent of males in Moyale. And in Kitui, about 10 percent of girls and 9 percent of boys participated in household chores for more than 28 hours. An ILO report of 2002 also indicated that among working children 5-14 years, approximately four out of every five were employed in the agricultural sector, 2.3 percent were employed in the industrial sector and the remaining 15.4 percent were working in services. A similar pattern was observed among the age sub-categories 5-9 and 10-14. Girls were more likely than boys to be employed in services (23.2% vs. 8.7%) and less likely to be employed in the agricultural sector (76.5% vs. 87.2%). Similarly, the report showed that most working children 5-14 years of age were employed as unpaid family workers (88.5 percent in the case of boys and 84.2 percent in the case of girls). Girls were more likely to work as paid employees than boys (14.3% vs. 10%), while fewer working girls (0.2%) than boys (0.7%) were self-employed. Further, the ILO report showed that on average, girls tended to work more hours per week than boys (35.5 hours per week in the case of girls vs. 31.9 hours per week in the case of boys) ILO – IPEC 2002.

d) Education attainment of working children

The 2009 Kenya Census collected information on education attainment of the working children. Overall, 50.2 percent were of primary school level, 30.0 percent never attended school, 15.2 percent were of pre-primary level of education and only 2.3 percent had secondary education. Out of the 4,552,276 working children, more than half (59%) were currently attending school, 29 percent never attended school, while 10

percent dropped out of school. District level analysis from MICS surveys also indicated that of 79 percent of the children aged 5-14 years attending school, 9 percent were involved in some form of child labour in Isiolo district and that 47 percent of child labourers were also attending school. In Marsabit, of the 70 percent of children aged 5-14 years attending school, 26 percent were involved in child labour activities but, in Moyale, about 3 out of four (78%) of the children aged 5-14 years attending school—a negligible percentage child labourers. On the other hand, about half (53%) of the children classified as child labourers are attending school. Similarly, in Kitui, a small proportion (16%) of children aged 5-11 years were involved in child labour, hence were student labourers, while majority (95%) of the older children (12-14 years) were also involved in child labour (MICS 2008). In Nyanza region, of the 96 percent of the children 5-14 years of age attending school, 51 percent were involved in child labour activities (MICS 2010).

e) Working children in school

In Isiolo, more girls (48%) than males (46%) of child labourers attend school and this proportion also decreases with age group from 51 percent among age group 5-11 to 43 percent in age group 12-14. In contrast, more boys (51%) compared to 42 percent of girls who attend school were child labourers in Marsabit. Child labour also declined from 49 percent among age group 5-11 to 40 percent in age group 12-14 in this district. Also, boys (63%) were more likely to be child labourers in Moyale, than girls (46%) and the proportion also declined with age group from 58 percent in age group 5-11 to 40 percent in age group 12-14. A similar number of boys and girls attending school in Kitui were also child labourers at 95 percent and also declines with age group (MICS 2008).

f) Characteristics of child labourers and schooling

Among children 5-14 years, economically active children were less likely to attend school than those who were not (52.8% vs. 71.5%). This is majorly for children in the 5-9 and 10-14 age groups, with 51.6 percent of economically active children between 5-9 years attending school. In relation to household income, children coming from the poorest households were less likely to be engaged in the labour force without attending school than children in households with the highest levels of per capita expenditure (1.1% vs. 4.1%). These findings were consistent among both boys (1.5% vs. 3.3%) and girls (0.7% vs. 4.9%). Only 65.9 percent of children from the lowest-expenditure households attended school without participating in the labour force, as compared to 70.2 percent in the richest households (ILO 2002).

Working children by main employer

Analysis of working children by main employer indicates that 40.2 percent of working children were self-employed in the informal sector. Majority of those in the informal sector were in own-family agriculture holding and in own-family business. The *Jua Kali* (informal) sector and small-scale agriculture absorbed about 46.8 percent of working children (Kenya Census, 2009).

Hours Worked

The average hours worked by children aged 5-17 by province according to census shows that average hours worked by children was 36.3 hours per week and children in urban areas worked longer hours (45.0) compared to those in rural areas (36.0). In all age categories, children aged 15-17 worked longer hours than those in other age-groups. Children in North Eastern worked longer hours than those in other provinces. At the National level, average hours worked for male children were higher than those for females.

Working children with disabilities

Census also collected information on working disabled children. The total number of working children aged 5-17 with disabilities was 127,966, of whom 54.9 percent were male and 45.1 percent female. About 8.4 percent of children with disabilities worked for pay, 15.9 percent in own family businesses

and 51.8 percent worked in own family agriculture holding. More boys than girls participated in various economic activities in both rural and urban areas.

Working orphaned children

Information collected on working orphaned children showed that 13 percent of Kenya's 13,198,251 children aged 5-17 were orphaned and working. Of the working orphaned children, 61.7 percent were homemakers while 18.8 percent worked in own family business. Only 8.4 percent of orphans worked for pay and 0.2 percent were volunteers, while 0.5 percent were full time students and 1.6 percent were interns on apprenticeship. Working status of orphaned children by residence and economic activities shows that higher proportions of working orphaned children were in rural areas. The highest proportion was for those who were working in own family business where 87.8 percent were in rural areas, followed by those who worked for pay in which 79.5 percent were in rural areas. There were more volunteers than those seeking work in urban areas compared to rural areas.

g) Factors associated with child labour

According to Moyi (2010), national economic and social policies shape household life and experiences of children. For example, the Poverty Reduction Strategy Paper (PRSP) was a government policy aimed at fighting the rising poverty levels in Kenya. Despite government efforts to fight poverty, poverty has continued to persist. The introduction of free primary education was meant to ensure that all school going children are kept in school. Although the enrolment and transition rates have increased over time, child labour is on the rise and it continues to deny many children an opportunity to attend school due to persistent poverty. The majority of the poor children in Kenya live in rural areas or in urban slum settlements with limited access to productive resources and social services. The major characteristics of child labour are low wages, long hours of work and in many cases, physical and sexual abuse. The growing number of working children in Kenya is linked to many factors including, economic stagnation, poverty, war, famine, orphanhood, and the rapid spread of HIV/AIDS. It is argued that poverty is the main reason children work (Arat 2002). Other factors include deficient economic and educational policies for child labour (Moyi 2010). However, little empirical studies have been conducted to evaluate causes for regional variations in child labour in Kenya. There is therefore need to undertake studies that explore variations in child labour with a view of understanding associated factors.

h) Hidden forms of child labour

The definition of child labour and the hidden forms of child labour presents challenges in understanding the magnitude of child labour in the country and comparative research into the factors that influence hidden forms of child labour are poorly understood. Webbink *et al.*, (2010) highlights that hidden forms of child labour include, housework (such as shopping, collecting firewood, cleaning, fetching water or caring for children, digging land) and family business work (including activities as farm work, grazing animals, working in a family owned shop or workplace and work in the street). The prevalence of hidden forms of child labour based on household and community context (county) are poorly understood. For example, work done at home is often not included in employment statistics, hence limiting our understanding of the factors responsible for children to perform these tasks, especially from a child's perspective. Various MICS reports have shown variations among districts and school-aged children, mostly girls but the determinants of child participation in hidden forms of labour are less understood. Given the scale of this problem, it is important to gain insight into the determinants of child participation in hidden forms of child labour with a view of developing policies aimed at reducing it.

Limitations in addressing child labour

Poverty is associated with child labour in Sub-Saharan Africa including Kenya. For example, children from poor families tend to work more as labourers and are less likely to be enrolled in school. When parents cannot afford to pay for schooling, paid labour becomes an alternative as children perform housework or work on family businesses rather than attending school. Also, possession of land and livestock can be associated with higher levels of child labour. If households are rich in land or livestock, there is a higher labour demand within the family and children are more often required to help at home. Both boys and girls can help in herding animals. On the other hand, owning large animals like oxen may reduce the household's workload and child labour because they can be used for efficiency by promoting techniques such as ploughing and earning income to a family. Similarly, the demand for child labour at home might increase with farm size to the point that parents can afford to hire labourers. As a result, children's engagement may decline, hence the effect of wealth in the form of land or livestock possession on family business work might be nonlinear. Another important dimension of child labour relates to wealth and acquisition of basic services like electricity and tap water. Without such services, household chores are more time-consuming, thus creating a higher demand for child labour. Without a refrigerator to preserve food, for instance, groceries have to be done daily, and children may be responsible for the extra shopping. Fetching water often is a time-consuming activity that is reduced substantially if water is available at the premises. Empirical evidence suggests that children, especially girls, are more involved in housework when there is no tap water (Moyi 2010). Education levels of parents especially mothers also influences child labour. It is expected that educated mothers are less likely to engage their daughters in child labour.

Information gaps

- Need to clearly define what constitute child labour because the term child labour is interpreted differently by different people.
- There is limited understanding of parents and children's knowledge, attitudes, beliefs and practices regarding child labour. There is need to conduct surveys that examines parental and child perspectives on child labour to better understand the dynamics of child labour.
- There are limited empirical research studies that show how children's labour is distributed across and within households. For example, it is not clear whether labour is evenly spread (Andvig 2001).
- The social norms for child participation in the labour market are weakly related to schooling making it difficult to know how much labour interferes with schooling.
- Comparative studies that examine factors which influence participation of children in hidden forms of child labour are largely lacking.
- Little empirical studies have been conducted to evaluate causes for regional variations in child labour hence need for regular national surveys on child labour.

Opportunities and challenges

Although the Constitution of Kenya, 2010 is an important step towards elimination of child labour, its enforcement especially at family and household level can be a challenge. Children are obligated to assist their parents and parents consider giving children work as a preparation for responsible upbringing.

- Even though the Employment Act of 2007 stipulates the general minimum age for admission to employment or work as 16 years, census and MICS data shows that children continue to be involved in child labour. This means that implementation of this Act is weak and there are no follow-up mechanisms.

- While the Children’s Act, Act No. 8 of 2001 does not determine hazardous work and although it stipulates working age of 16 years, many under age children continues to participate in child labour. Also, the children’s Act Cap 586 Laws of Kenya, 2001 gave way for free and compulsory education for children ages 6-14 but many children are still not accessing education and are engaging in child labour.

Conclusion, recommendations and implications for policy

Owing to the challenges and weaknesses in existing laws and the fact that existing opportunities does not discourage child labour, it is evident that the real causes of child labour have not been addressed. As discussed earlier, poverty remains the greatest motivation for child labour and efforts to eradicate it needs to be scaled up. While several laws have been enacted to eradicate the practice of child labour, the practice still continues. This means that implementation remains a challenge. While it is difficult to police the practice of child labour at household or community level, increasing awareness and involving communities in eradication efforts can be an important step towards its elimination. Also, there is need to allocate resources to the various actors involved in fighting child labour and strengthening the capacity of various actors through education and training.

2.8.6 Child harmful practices— Violence against children in Kenya

Overview

According to a United Nations (2006) study on violence against children it was noted that no violence against children is justifiable; all violence against children is preventable. This study on violence against children (the Study) confirms that such violence exists in every country of the world, cutting across culture, class, education, income and ethnic origin. In every region, in contradiction to human rights obligations and children’s developmental needs, violence against children is socially approved, and is frequently legal and State-authorized. In this study it was also stated that violence against children takes a variety of forms and is influenced by a wide range of factors, from the personal characteristics of the victim and perpetrator to their cultural and physical environments. However, much violence against children remains hidden for many reasons. One is fear—many children are afraid to report incidents of violence against them. In many cases parents, who should protect their children, remain silent if the violence is perpetrated by a spouse or other family member, a more powerful member of society such as an employer, a police officer, or a community leader. Fear is closely related to the stigma frequently attached to reporting violence, particularly in places where family “honour” is placed above the safety and well-being of children. In particular, rape or other forms of sexual violence can lead to ostracism, further violence, or death.

A number of studies have documented a range of violence incidents against children. A study by WHO (2006) estimated, through the use of limited country-level data, that almost 53,000 children died worldwide in 2002 as a result of homicide. Reporting on a wide range of developing countries, the Global School-based Health Survey found that between 20 and 65 percent of school-aged children reported having been verbally or physically bullied in the 30 days prior to the survey. Bullying was also frequent in industrialized countries (C. Currie *et al.*, 2004). In another report WHO estimates that 50 million girls and 73 million boys under 18 years experienced forced sexual intercourse or other forms of sexual violence during 2002. Global Trends by ILO estimated that, in 2004, 218 million children were involved in child labour, of which 126 million were in hazardous work. Estimates from 2000 suggest that 5.7 million were in forced or bonded labour, 1.8 million in prostitution and pornography, and 1.2 million were victims of trafficking. However, compared with estimates published in 2002, the incidence of child labour has diminished by 11 percent and 25 percent. Fewer children were found working in hazardous occupations.

Policies and Protocols

Kenya being a signatory to the UN Convention on the Rights of the Child, (UNCRC) and the African Charter on the Rights and Welfare of the Child (ACRWC) is expected to be committed towards response and prevention of all forms of violence against children. Yet it has been difficult to translate this national imperative to the actual protection of children from sexual, physical and emotional violence (UNICEF, Kenya Country Office *et al.*, 2012). A survey funded by UNICEF and carried out in collaboration with the U.S. Center for Disease Control and Prevention, the Kenya National Bureau of Statistics, crucial stakeholders and partners from across the government and the non-governmental sector in 2010 termed as the Kenya Violence against Children Survey (KVACS) documented the magnitude of a range of violence against children in the country. Findings from the household-level survey of more than 3,000 young people indicated that violence against children was rampant in Kenya.

The report showed the levels of a different range of violence against children prior to age 18 as reported by 18 to 24 year-olds (lifetime experiences) during childhood. According to the report, 32 percent of females and 18 percent of males experienced sexual violence. 66 percent of females and 73 percent of males experienced physical violence and 26 percent of females and 32 percent of males experience any violence as a child. 13 percent of females and 9 percent of males experienced all three types of violence during childhood. It was observed that most disturbing is that violence against children does not appear to be random or uncoordinated, or perpetuated by strangers: abusers are not only known to their victims but often have close, personal ties. This means that a child is most often beaten, slapped or hit by a parent. A child is most often sexually abused by a romantic partner or boyfriend or girlfriend, or even a family member. The consequences of this violence can be lasting and enduring for both the victims and communities as a whole. The report also noted that victims of childhood violence are more likely to engage in risky behaviours such as drug and alcohol abuse, sexual relationships with multiple partners and unprotected sex. Young women are more likely to become pregnant with unwanted pregnancies and the risks of exposure to sexually transmitted diseases, such as HIV/AIDS, are considerably higher. The report calls for increased efforts to protect children against violence at home, at school and in the community.

Knowledge, Attitude, Beliefs and Practices on violence against children in Kenya

Knowledge/Awareness

A baseline study commissioned by the Department of Children Services (DCS) and UNICEF in 2011, to assess Knowledge, Attitude and Practice (KAP) in Nairobi, Mombasa, Malindi, Kisumu, Garissa, Eldoret and Nakuru in order to establish communities' knowledge, attitude and practices on prevention and response to child abuse, exploitation, violence and separation from family as well as awareness on alternative family care. The findings revealed that knowledge and awareness on child protection (*violence, abuse, exploitation, neglect and family separation*) was low with a recorded spontaneous awareness level of 6 percent and 33 percent when prompted among primary care givers across the 7 districts. Despite associating child abuse with child labour, majority of the survey participants cited *sexual abuse (defilement, incest, sodomy)* and physical abuse (*torture, corporal punishment at home and school, slapping, kicking, caning*) as two of the main forms of child abuse.

Attitude

The 2011 study also revealed that negative attitudes among communities in child protection, increases the level of child abuse, exploitation and violence. Certain forms of violence against children, mainly child marriages and female genital mutilation were highlighted as generally acceptable in some regions.

Practice

The report shows that three out of every ten females and nearly two out of every ten males aged 18-24 reported at least one experience of sexual violence prior to age 18. Seven percent of females aged 18-24 reported experiencing physically forced sexual intercourse prior to age 18. Of females whose first sexual encounter occurred before age 18, 24 percent reported that it was unwilling, meaning that they did not want it to happen and were forced, pressured, tricked or threatened to engage in sexual intercourse. In the 12 months prior to the survey, about 11 percent of females and 4 percent of males aged 13-17 experiences some type of sexual violence. Females and males aged 18-24 who experienced any type of unwanted sexual touching prior to age 18, most often reported that the first incident occurred in school. Among females aged 18-24 who experienced physically forced sex prior to age 18, the home of the perpetrator was the most frequently reported location of the incident(s). Among respondents aged 18-24 who experienced any sexual violence prior to age 18, the time of day most frequently mentioned for both females and males were in the evening and in the afternoon. Among respondents aged 13-17 who experienced at least one incident of sexual violence in the 12 months before the survey, females most often reported that the violence occurred while travelling on foot and males most often reported that the violence occurred while at school.

a) Physical and emotional Violence

During the year preceding the survey, approximately half of all females and males aged 13-17 experienced some type of physical violence. About one-quarter of females and one-third of males aged 18-24 years reported experiences of emotional violence prior to age 18. It is important to note that such violence rarely occurs in isolation. Most of the respondents who experienced sexual violence, were also physically or emotionally abused (UNICEF *et al.*, 2012).

b) Societal norms and practices used to justify violence against children

According to the summarized version of the VAC study societal norms and practices that lead to acceptance of violence against children include:

- Discipline vs. punishment and the value of discipline, resulting in a physically violent response such as striking with an object, hitting, kicking or other physical abuse.
- Exploitation of children in the informal workforce; use of child labour.
- Normalization of Female Genital Mutilation, and the secret practice of FGM/C despite existing laws banning it.
- Attitudes towards physical, mental or emotional disabilities.
- Exploitation of children through forced marriage/indentured servitude.
- Bullying, including harassment, insults and name-calling.
- Rising trend of incomplete families either through death, divorce and remarriage.
- Historical suspicion of multiple births that leads to abandonment and stigmatization.
- The widespread availability of pornography.
- The lack of a comprehensive judicial response to child prostitution.
- Societal mythology related to the treatment or cure of HIV/AIDS.
- Intolerance of homosexuality.

Challenges

The Kenyan legal framework provides a mechanism for addressing SGBV, however, the levels to which the frameworks respond to the plight of the survivors of SGBV is debatable. The legal and policy framework mostly focuses on bringing of the accused person to ‘justice’ without a corresponding obligation of alleviating the conditions of the survivor of SGBV. In fact, the survivor of SGBV is more of an alien to the criminal justice system because the offence is perceived by the system to have been committed against the state, not against the survivor of the SGBV as an individual (Aura, R. 2012). With regard to violence against children, an *ad hoc* and non-systematic child protection system, surrounded by budgetary constraints and inadequate staff and institutional capacity, has led to a dismal performance to addressing violence against children in Kenya (<http://reliefweb.int/report/kenya/violence-against-children-can-stunt-kenya-s-next-generation> 2014. Accessed on 30.03.16).

Opportunities

The Bill of Rights in the Constitution of Kenya 2010 under Chapter 4 thus gives guarantees for a wide range of rights and fundamental freedoms. The Constitution provides the greatest opportunity to the people of Kenya to advocate for their rights founded on the provisions of the Constitution and also welcome in a new era of institutional overhaul. The Constitution states that every child in Kenya has the “right to protection from abuse, neglect, harmful cultural practices, all forms of violence, inhumane treatment and punishment, and hazardous or exploitative labour”.

On 7 May 2014, GOAL, Plan International and CESVI launched their integrated programme “Actions for Child Protection—Violence against Children,” funded by the European Union. The programme aims to contribute to the eradication of all forms of violence against children in Kenya, including mental, physical, sexual and neglectful abuse through the detection, protection, prevention and responding to any form of violence against children, and rehabilitate child victims of violence.

Information gaps

i) Legislation and policies

- Lack of prioritization enforcement and judiciary on child protection.
- Shortage of resources to implement and monitor laws and policies.

ii) Quality and availability of services

- Services exist in an *ad hoc* and non-systematic manner also coupled with this, are issues of budgetary constraint.
- Social norms and lack of awareness prevent delivery of services and awareness about existence of services.
- Shortage of one-stop-shops (Child Protection Centers) to provide VAC services.

iii) Coordination of child protection

- No structured reporting mechanism for reporting violence.
- Haphazard referral mechanism across service providers to respond to violence or assist victims of violence.

- No monitoring and evaluation framework to track service provision and use.
- No comprehensive training and certification in child protection.

iv) Circumstances under which violence occurs

- Socio-economic concerns and pressures.
- Traditional and religious values allow the use of violence as discipline.
- Inadequate public education on child protection and the consequences for violence against children.
- Breakdown in the moral/social fabric of society.

Recommendations

A wide range of recommendations/actions were made in the VAC study (UNICEF *et al.*, 2012) pertaining to key areas of intervention to alleviate violence against children these included:

- Sensitization of legislature on importance of moving pending legislation into law.
- Sensitization of the committee on the implementation of constitution on the importance of prioritizing child protect.
- Development of harmonization strategy that will ensure that every time a bill is introduced, that child protection components are included.
- Review of penalty structure for perpetrators of violence against children.
- Development of capacity building tools at the national level that can be adaptable across the sectors of law enforcement and at various levels (regional, district, local).
- Development of Monitoring and Evaluation tools for child protection laws and policies.
- Development of resource mobilization strategy to promote inclusion of child protection in law reform agenda by partners as well as by government.
- Evolve the GoK's community strategy for engaging the health sector in the protection, promotion, prevention, early identification of and referral to services for children who experience violence.
- Mainstream child protection within the devolved county-level government to respond to children's issues.
- Strengthen NCCS/AAC to enhance coordination of services at all levels (local, regional, national).
- Mainstreaming child protection across the relevant line ministries to prioritize budgetary allocations for prevention and response services.
- National awareness campaign about service provision and service use for childhood emotional, physical and sexual violence.
- Scale-up establishment of Child Protection Centers as a one-stop-shop at county and sub-county levels for rescue of children in need of care and protection.
- Establish a child protection management information system that allows for monitoring and evaluation and overall tracking of how cases of violence against children are processed and resolved.

- Develop records and data framework that can be routinely and easily updated to provide at-a-glance snapshot of existing and available services, government and non-government stakeholders and community support.
- Establish coordination mechanism that provides guidance to non-government actors about proper reporting procedures and monitoring techniques.
- Systemize response mechanism to coordinate and align children’s activities into county government plans and programmes.
- Develop strategic and transparent partnerships and networks to support children’s programmes, and link with existing programming in HIV/AIDS and other health issues.
- Develop framework for community and county level referral networks to increase access to essential services for children and for households; use that framework to establish standard and effective complaints, reporting and coordinating mechanisms and procedures to address and act on child protection issues.
- Support intensive human resource and capacity development among law enforcement, health care and education professionals to improve the quality of referral, monitoring and protection services throughout the Republic of Kenya.
- Ensure key interventions that support the development of child protection handbooks or other printed reference materials to guide engagement with children.
- There are considerable opportunities to fill the gaps and address the weaknesses in the services available to both victims and potential victims of violence as well as the perpetrators. This will require the following:
 - Scale-up establishment of Child Protection Centers as a one-stop-shop at the community level for rescue of children in need of care and protection
 - The evolution of the GoK’s community strategy for engaging the health sector in the protection, promotion, prevention, early identification of and referral to services for children who experience violence
 - Mainstream child protection within the devolved county-level government to respond to the priorities and policies established in the GoK’s community strategy
 - The strengthening of NCCS/AAC to enhance coordination of services at all levels (local, regional, national)
 - Mainstreaming child protection across the relevant line ministries: MGCSD, Education, Health, Labour, Immigration, Justice and Constitutional affairs, Youth and Sports -- to prioritize budgetary allocations for prevention and response services
 - Establish a child protection management information system that allows for monitoring and evaluation and overall tracking of how cases of violence against children are processed and resolved
 - Develop records and data framework that can be routinely and easily updated to provide at-a-glance snapshot of existing and available services, government and non-government stakeholders and community support

- Establish coordination mechanism that provides guidance to non-government actors about proper reporting procedures and monitoring techniques
- Systemize response mechanism to coordinate and align children’s activities into county government plans and programmes
- Develop strategic and transparent partnerships and networks to support children’s programmes, and link with existing programming in HIV/AIDS and other health issues
- Develop framework for community and county level referral networks to increase access to essential services for children and for households; use that framework to establish standard and effective complaints, reporting and coordinating mechanisms and procedures to address and act on child protection issues
- Support intensive human resource and capacity development among law enforcement, health care and education professionals to improve the quality of referral, monitoring and protection services throughout the Republic of Kenya
- Ensure key interventions that support the development of child protection handbooks or other printed reference materials to guide engagement with children
- Expand the national Child Helpline for safe and actionable responses to the threats of, or actual, emotional, physical or sexual violence against children as well as providing counselling and support to possible perpetrators of violence against children
- Expand parenting education and involve children in the design of positive, non-violent relationship materials
- Encourage the development of parent support groups at the community level with engagement from religious and community leaders who have been trained in facilitating such groups
- Address the barriers and stigma that prevent children from seeking care/help while also addressing the barriers and stigma that have been conduits for violence against children
- Create community early warning systems to protect children in all areas of their lives while also creating community systems to support parents as they cope with the challenges of daily life.

2.8.7 Summary of reviewed studies on rejection of child harmful practices

Title	Author & Year	Coverage	Target Group	Sample	Key Findings	Key Gaps
Domestic violence and female genital mutilation in Kenya: effects of ethnicity and education COUNTRY PROFILE: FGM IN KENYA MAY 2013	Simister J., 2010, Kenya 28 Too Many in country Research, 2012 and 2014	National	Women and Men	Data for this paper are based on three national household surveys in Kenya namely DHS (2003), Afrobarometer (2003), Work, Attitudes and Spending (2004). No sampling done. Study uses reports, findings and tools from other studies to report on FGM/C status of 28 countries	There is a strong link between Female Genital Mutilation (female circumcision) and mother's education level and more education is associated with less violence FGM prevalence shows a declining trend in Kenya with wide regional variations. Among women (aged 15-49 years) it was 27.1% (DHS 2008-09), from 37.6% in 1998, and 32.2% in 2003. FGM/C lowest in western (0.8%) to over 97% in the north-east (DHS 2008-09).	Qualitative research is suggested for future studies of similar nature in order to show to gain more insight on the reasons why education is a strong predictor of FGM/C and Studies focusing on improvements in managing health complications of FGM, tackling the issue of medicalization of FGM, and research and funding on the psychological consequences of FGM.
Female Genital Cutting Prevalence.	Population Reference Bureau, 2014.	Africa		An analysis of global levels, trends and differentials in FGM/C using various DHS survey data and MICS	Mixed outcomes. Overall declines in percent of women cut in some countries while others shows that abandonment of FGM/C is being held and others have little or no apparent change. Focusing on national estimates can hide regional variations. FGM/C often is reflected in ethnic and social interactions of communities across countries.	No suggestions on areas of further research
A statistical Exploration	UNICEF 2005		Women 15-49 years	The analysis is based on women aged 15-49 and their daughters using household survey data from Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS).	Despite a general global declining trend in FGM Kenya is depicted as a country where FGM/C is practiced only among certain ethnic groups and prevalence rates are intermediate (Group 2, where prevalence ranges from 25 – 79 percent). According to the 2003 DHS, 32 per cent of women 15-49 years have undergone FGM/C; the 1998 DHS reported a similar figure, 38 per cent although sub-national data reveals significant regional variations	Need for research at sub-national levels. Need for research among migrants. Due to migrations, many countries are becoming increasingly urbanized and the influx of girls from the rural areas, where prevalence levels are generally higher into urban areas may obscure the urban rural differences in prevalence. Research across ethnic groups will enhance important insight into the tenacity of the practice and people's resistance to change efforts, and it can help to explain why the practice may even spread in certain situations
Factors determining whether Ethiopian women support continuation of female genital mutilation	Masho SW, Matthews L, 2009	Ethiopia		Ethiopia Demographic and Health Survey data were used	Young women aged 20 – 24, being Muslim, un educated and having no exposure to mass media, and living in rural areas were more likely to be associated with continuation of FGM	
Female genital mutilation – the facts.	PATH 2011	Global		Report compiled data on global FGM/C trends from multiple sources such as DHS data, MICS, and reports	Report shows that FGM/C is practised because it is a "good tradition, a religious requirement; a rite of passage to womanhood; ensures cleanliness; prevention of promiscuity among girls; preservation of virginity; better marriage prospects; enhancement of male sexuality; prevention of excessive clitoral growth; and facilitation of childbirth by widening the birth canal.	

Title	Author & Year	Coverage	Key Findings	Key Gaps
Global consultation on female genital mutilation/cutting: Technical Report	United Nations Population Fund, 2008	Global	Two main national household surveys were used, namely the DHS by ORC Macro and the Multiple Indicators Cluster Survey (MICS) by UNICEF. The FGM/C modules were harmonized and the data were comparable.	Further research needed on detailed desegregation of data by socioeconomic variables and at the sub-national level in order to strengthen the design and impact of programmatic interventions and advocacy efforts at the subnational level Studies on an in-depth analysis of trends is needed at the local level to identify factors associated with changes in prevalence; the social dynamics that may determine the change and the lessons learned
Eliminating female genital mutilation: an interagency statement	World Health Organization, 2008.	Global	National averages hide the often marked variation in prevalence in different parts of most countries. FGM/C is supported by both men and women, usually without question, and anyone departing from the norm can face condemnation, harassment, and ostracism. FGM/C is a social convention governed by rewards and punishments that perpetuates its continuation. It is difficult for families to abandon the practice without support from the wider community as it is often practiced even when it is known to inflict harm upon girls because the perceived social benefits of the practice are deemed higher than its harm	
Global strategy to stop health-care providers from performing female genital mutilation.	WHO 2010	Global	In this report, data from elsewhere shows that more than 18% of all girls and women who have been subjected to FGM/C in the countries from which data were available have had the procedure performed on them by a health-care provider with wide variations between countries being noted such as from less than 1% in several countries, to between 9% and 74% in six countries. Health-care providers who perform FGM/C are themselves a part of the FGM/C practising community in which they serve. Hence, the reasons why they agree to perform FGM/C are often the same as those that motivate those requesting it Some health-care providers consider FGM/C to be medically indicated for most women, while others see the practice as harmless. Some health-care providers, who do not themselves support FGM, still consider it their duty to support the patient's socio culturally motivated request for FGM. Others see it as a form of harm reduction, considering that, by performing it, they help to prevent the expected greater dangers if the procedure were to be carried out by traditional practitioners. Other health-care providers are motivated by the opportunity for financial gain	Studies investigating a possible association between female genital mutilation and obstetric fistulas are required in Kenya. More research is needed to estimate whether medicalization is observed among migrants, refugees and asylum seekers from FGM/C practicing communities. A qualitative study among healthcare workers may provide greater insight

Title	Author & Year	Coverage	Key Findings	Key Gaps
The medicalization of female "circumcision": harm reduction or promotion of a dangerous practice	Shell-Duncan B., 2001	Clinic and hospital-based case control data	<p>A greater proportion of women report hemorrhage following clitoridectomy and infibulations.</p> <p>Arguments for opposing medicalization of female "circumcision" were critically evaluated and evidence to support staunch opposition to medicalization were not sufficient. The implementation of medicalization as a harm-reduction strategy may be a sound and compassionate approach to improving women's health in settings where abandonment of the practice of "circumcision" is not immediately attainable.</p>	<p>Few studies give detailed comparison of certain short- and long-term health consequences of FGM/C broken down by type of genital cutting. The available information on long-term and obstetrical complications is quite sparse. While many of the complications, such as recurrent urinary tract infection, do not occur in high frequency, there is not a clear pattern of lower frequency among less severe forms of circumcision. Many reported conditions, such as chronic pelvic and urinary tract infections, may arise from factors other than genital cutting, and without further information, it is impossible to determine whether reported conditions are circumcision-related. So, better information is needed in order to evaluate the potential impact of medicalization.</p> <p>Information regarding training of the circumciser, location of the operation and medical support is lacking and yet these contribute to major variations in hemorrhage during FGM.</p>
Medicalization of Female Genital Cutting Among the Abagusii in Nyanza Province, Kenya.	Njue, C. et al. 2004.	The study used mix methods approach to assess the knowledge, attitudes and practices of health providers and the community in on medicalization of FGM/C in Kisi	<p>FGM/C is a means of fulfilling customs and traditions that are deeply entrenched, especially among the older generation. Girls are circumcised at early age when they are not aware of their rights to refuse.</p> <p>Financial gains or other material gifts are perceived to be the primary incentive for medical staff agreeing to cut girls. Also, pressure from the medical staff's community especially relatives, to respond to requests as a way of fulfilling culture</p>	
An update on WHO's work on female genital mutilation	WHO 2011	studies using mixed methods were used and use of DHS and MICS data sets	<p>Studies indicate that the practice of FGM/C has changed in a number of ways and notes that the practice is declining. FGM/C of the mother is also a risk factor for the infant and the risk varies with the type of FGM.</p> <p>There are observed variations in age groups where data shows that women aged 15–19 years are less likely to have been subjected to FGM/C than are women in older age groups</p>	<p>Need to study and deeply understand the motivations and processes of decision-making in communities. Need for research on health care, health effects, including psychological and social consequences of FGM, in order to improve the quality of care and effectiveness of preventive efforts in a wide variety of contexts.</p>
Population Council, Contributing towards efforts to abandon Female Genital Mutilation/ Cutting in Kenya. A Situation Analysis	Population Council 2007	The study used detailed literature review to understand the political, social, cultural and economic environment related to the practice, the reasons for the practice and trends in the practice over time, key intervention strategies and approaches that have been used against the practice, current knowledge gaps and research needs. Information was obtained from searches through electronic database at national and at community level), project documentation such as reports, evaluations, information and educational materials, and government policy and legislative documents	<p>Findings generated for all aspects of FGM/C based on previous reports. The report shows prevalence rates which are declining over time. It also captures the main reasons for FGM, efforts to discourage the practice, government efforts and development partners and other organizations role in supporting the abandonment of FGM</p>	<p>Understanding the broader social and cultural context of FGM/C: FGM/C cannot be isolated from the broader social and gender inequalities that exist within a community, and so it is essential to understand this context before developing programmatic approaches.</p> <p>Application of culture-specific understanding of FGM/C: Much is known about the practice, including why different communities are practicing FGM/C, but this culturespecific knowledge is frequently not used when strategies are developed and/or applied. For example, the Alternative Rite of Passage approach has sometimes been used even when FGM/C is not a central element of the group's rite of passage</p> <p>Limited knowledge on the psychological consequences of FGM/C: Research on the psychological aspects of FGM/C, including its effect on girl-child education and early marriage is needed to increase understanding of the ways in which FGM/C affects girls, and women, psychologically. Such knowledge is important not only to assist in developing appropriate counselling services to address psychological problems, but also to provide information that could be used within anti-FGM/C messages.</p>

Title	Author & Year	Coverage	Key Findings	Key Gaps
Multiple Indicator Cluster Survey 2008, Nairobi,	Kenya National Bureau of Statistics and UNICEF, 2008	Eastern Region (Isiolo, Moyale, Kitui, Marsabit)	The sample for the Multiple Indicator Cluster Survey (MICS) is designed to provide estimates on a large number of indicators on the situation of children and women at the district level	Data is collected at different time points making it difficult to generate trends Fewer variables included hence need to refine methodology on data collection to include more variables such as those on effects of FGM, health consequences and psychological effects among others
Multiple Indicator Cluster Survey 2011.;	Kenya National Bureau of Statistics and UNICEF, 2011	Nyanza region, Kisii, Nyamira, Migori, Homabay, Siaya	A national representative sample survey	FGM trend declines over time. Data allows generation of levels, trends and differentials over time.
Kenya Demographic and Health surveys	KDHS (2003, 2008, 2014			
Factors Influencing the Practice of Female Genital Mutilation in Kenya: A Case Study of Gachuba Division, Nyamira County	Moranga, Bosibore, Everline, 2014	Gachuba Division, Nyamira County		The study sought to examine the persistence of FGM/C among the Kisii. The persistence of FGM/C was attributed to traditional / cultural beliefs. Findings indicate there is a high level of awareness on the law concerning the practice of FGM.

2.9 Birth of children 0-1 year registered

2.9.1 Overview

The United Nations defines civil registration as:

“... the continuous, permanent, compulsory and universal recording of the occurrence and characteristics of vital events ... as provided by decree, law or regulation, in accordance with the legal requirements in each country”
(UN, 2001).

Registration of births is a continuous, permanent and universal recording within a civil registry of the occurrence and characteristics of births, in accordance with the national legal requirements (UN, 2014).

Registration of births is not a new concept in Africa as it dates back into colonial history in most African countries although their civil registration systems remain weak. In the recent past, there has been renewed interest in revitalizing civil registration systems in Africa. For example, ministers responsible for civil registration met in February 2015, in Yamoussoukro, Côte d'Ivoire and agreed to launch a Decade of Civil Registration and Vital Statistics (CRVS) with the goal of “leaving no child out” and “no country behind” in the effort to register all births and vital events in Africa (AU, 2015).

2.9.2 Rationale for birth registration

It is important that every birth be registered. This importance is underscored in various international conventions and charters, which provide that every child has a right to an identity and a nationality (UN, 1989). Among these conventions are: (i) Convention on the Rights of the Child (1989); (ii) Convention on the Elimination of All Forms of Discrimination against Women (1979); (iii) International Covenant on Civil and Political Rights (1966); and (iv) Convention on the Reduction of Statelessness (1961). As a member state of the United Nations, Kenya has an obligation to adhere to the above international conventions.

Birth registration is the starting point to ensure that children enjoy these rights. A birth certificate is issued after birth registration and is a legal document of identification to prove one's status as a person who can exercise rights and demand protection under the law. In addition, a birth certificate facilitates access to other legal documents such as national identity cards and passports which are concretely attached to particular rights and benefits such as opening a bank account and international travels (Plan, 2014). Birth registration opens the door to healthcare, education and other social benefits. This is especially where individuals are required to produce a birth certificate to prove that they are eligible to access services that are only available to people of a certain age, nationality or other identifying characteristic. For instance in Kenya, children need a birth certificate to enrol in schools as well as to register for national exams (Nyamongo, 2014).

Governments use vital statistics generated from civil registration for planning and resource allocation. Birth registration data, as part of a civil registration system, provides information about the age, sex and distribution of the population, which is useful for the effective planning of services such as health and education. Disaggregating birth registration data according to demographic characteristics can reveal disparities and vulnerabilities in the population, which can assist governments to ensure that direct interventions are targeted towards those most in need. Such data can enable planners predict population patterns accurately and allow for better allocation of resources and service delivery in the future, as well as enabling governments to monitor the effectiveness and impact of various programmes.

In general, the significance of birth registration can be broadly categorized into two: to provide for the legal protection of citizens and realization of human rights; and to generate requisite demographic data for

planning, implementation, monitoring and evaluation of policies and programmes. It is noteworthy that the United Nations contends that of the three main sources of vital statistics (population census, demographic surveys and civil registration), civil registration is the only effective means of obtaining a continuous flow, which is so essential for juridical, medical, and administrative purposes (UN, 2015).

2.9.3 Civil registration in Kenya

The civil registration system in Kenya can be traced way back to the colonial era. In 1904, births and deaths registration was compulsory for whites only, followed by Asians in 1928. By 1963 after independence, the exercise was compulsory for all residents in Nyeri and Nairobi, then Bungoma and Nakuru districts in 1965-1966, then rolling out to the rest of the country by 1971.

Currently, civil registration is carried out by the Civil Registration Services (CRS), under the Citizens and Management Services, and is part of the Ministry of Interior and Coordination of National Government. The department is responsible for registration of births and deaths and custody, preservation and security of birth and death records in the country. The department also issues certificates for all births and deaths registered in the country and generates and disseminates vital statistics data from the registration records (Nyamongo, 2014).

2.9.4 Policy and legal framework

A legal framework for civil registration plays an important role in delivering the basic human rights set out in United Nations declarations, covenants and resolutions. These include the right of all individuals to be registered, the right to be given an identity from birth to death, the right of a child to know the names of their parents, the right to non-discrimination by reason of birth, and the right of a child to a nationality.

The Constitution of Kenya, 2010, recognises the civil registration function as a primary basis for establishing Kenyan citizenship by recording the occurrence of a birth to give a child its conclusive identity, which includes name, parentage, and nationality. Chapter 3 of the Constitution of Kenya, 2010, deals with matters of citizenship. Article 14 specifies the two ways to acquire citizenship—by birth or registration. Article 12 (1) (b), read together with Article 14.1, effectively entrenches the importance of civil registration as a foundation to establish Kenyan citizenship. Article 53 (1) (a) of the above constitution expressly provides for registration to fulfil the first right of every child born in Kenya. In addition to the entitlement provision, this constitution provides a chapter on the Bill of Rights, which provides fundamental rights and fair administrative action in service delivery. These entitlements and fair administrative actions are guaranteed only where an effective civil registration system exists.

The legal mandate to carry out registration of births and deaths is governed by the Births and Deaths Registration Act, Chapter 149 of the Laws of Kenya as enacted in 1928 and revised in 1972 (NCRL, 1972). The Act provides for compulsory registration of all births and deaths occurring in the country irrespective of nationality. The same Act also provides for the registration of births and deaths of Kenyan citizens occurring in foreign countries.

The Kenya National Bureau of Statistics (KNBS) operates through an Act of Parliament—the Statistics Act No. 4 of 2006 (NCRL, 2006). KNBS is mandated to collect, compile, analyze, publish and disseminate statistical information. Part of its mandate is to analyze, publish and disseminate vital statistics generated by the CRS.

2.9.5 Programme on birth registration

As required by the Births and Deaths Registration Act, births are supposed to be registered immediately they occur. This implies that they should be registered wherever they occur. Since births occur either in a health facility or at home, the CRS uses two local agents to register births: health providers (for births that occur in health facilities) and assistant chiefs (for births occurring at home). For births occurring outside health facilities, parents of a new born have the onus of notifying their respective assistant chief of the occurrence of such birth before it is registered. Consequently, the extent to which such births are registered is greatly influenced by the goodwill and cooperation of the public that provides the requisite information.

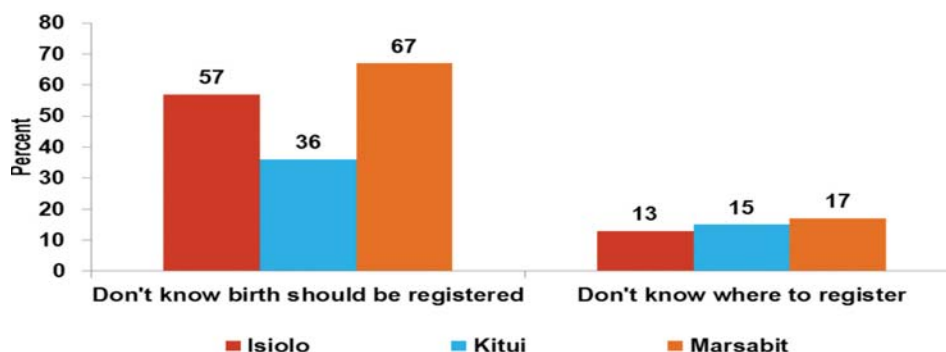
2.9.6 Knowledge, Attitude, Beliefs and Practices on Birth Registration

Knowledge on birth registration

Civil registration, being a passive system, implies that the level of registration coverage of births wholly depends on the awareness of the general public whose responsibility it is to report. It is not just the mere existence of compulsory registration that the public needs to be aware about, but even more crucial is the awareness of practical benefits accruing from registration, particularly to the individual.

The 2008 Multiple Indicator Cluster Survey in the then Eastern province collected information on knowledge about birth registration. Results pertaining to three UNICEF counties in this region indicate existence of gaps in knowledge both on compulsory registration and the registration process as shown in Figure 2.17.

FIGURE 2.17: Percentage distribution of mothers of children aged 0-59 months by reason for non-registration, 2008



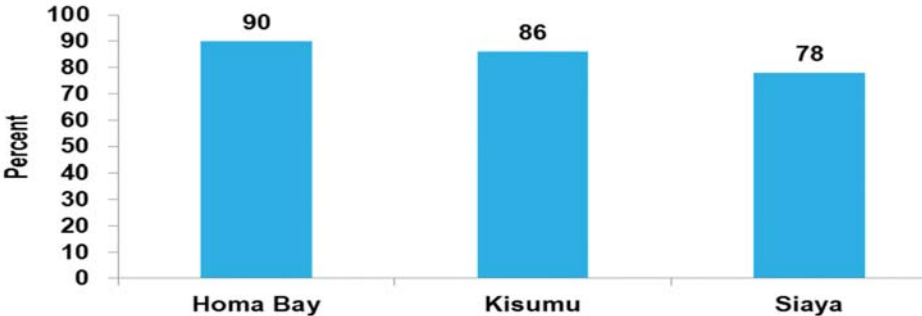
Sources: Isiolo, Kitui, Marsabit District Multiple Indicator Cluster Surveys, 2008

That between 36 percent and 67 percent of mothers or care givers whose children were not registered, do not know that births should be registered is indicative of a huge knowledge gap. In addition about 15 percent of mothers or caretakers whose children were not registered, do not know where to register a birth (KNBS, 2009).

The Civil Registration Services Strategic Plan 2013-2017 notes that one of its threats is a 'non-responsive citizen arising from illiteracy, negligence, apathy, or lack of awareness of the needs and benefits of immediate registration of births and certification which leads to persistent low registration coverage' (Republic of Kenya, 2015). According to the Baseline Assessment of Capacity to Undertake M&E Functions of the Civil Registration Department Report (2013), one of the main reasons for not registering a birth is lack of awareness.

The 2011 Multiple Indicator Cluster Survey in the then Nyanza province also collected information on knowledge about birth registration. Results pertaining to three UNICEF counties in this region indicate the existence of gaps in knowledge on the registration process as shown in Figure 2.18. The proportion of mothers or caretakers whose children were not registered, and who do not know how to register their births increases from 78 percent in Siaya County, to 86 percent in Kisumu County, and eventually to a high of 90 percent in Homa Bay County.

FIGURE 2.18: Percentage distribution of mothers of children under age 5 whose births were not registered and who do not know how to register their births, 2011

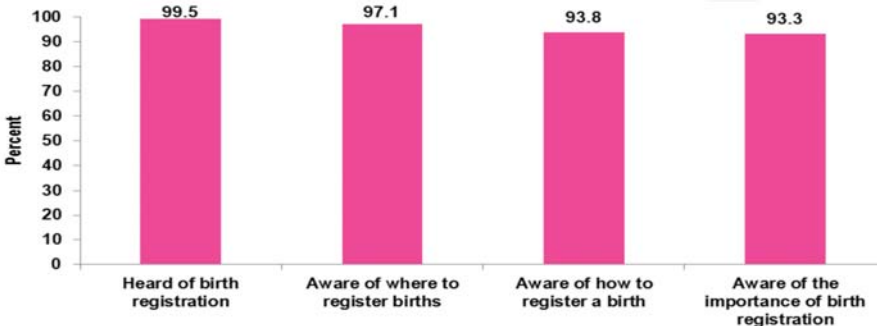


Source: Nyanza Province Multiple Indicator Cluster Survey, 2011

Similar knowledge gaps were evident in findings of the 2014 MIS in Kakamega and Turkana Counties. While the proportion of mothers or caretakers whose children were not registered, and who do not know how to register their births was 34 percent in Kakamega County and 76 percent in Turkana County.

A survey on knowledge, attitudes, and practices (KAP) pertaining to registration of births and deaths in Kilifi County (RoK, 2015) found that knowledge about birth registration is very high (see Figure 2.19). On all the four important fronts of knowledge on birth registration (compulsory registration, where to register, registration process, and importance of registration), at least 90 percent of the respondents confirmed that they were knowledgeable. In spite of this apparent high level of knowledge on birth registration, a sizeable proportion of births (16%) were reported as not having been registered—suggestive of other reasons for non-registration. However, it is noted that the study does distinguish between awareness and knowledge since the two terms are used interchangeably.

FIGURE 2.19: Percentage distribution of mothers of children under age 5 by knowledge on birth registration, 2015



Source: CRS/UNICEF 2015

In similar KAP studies in Turkana and Homa Bay Counties, knowledge on birth registration was reported to be equally high—77 percent in Turkana County and 91 percent in Homa Bay County. Slightly more than half (54%) of the respondents in Turkana County confirmed that they were knowledgeable about the registration process. As is the case in Kilifi County, the high level of knowledge on birth registration in these two counties does not translate in high birth registration coverage. Various reasons were advanced for non-registration of births in Homa Bay County, the main one being lack of awareness.

The following quote illustrates this issue:

“The main problem that may be contributing to low turnout of birth registration is that people are in the dark about it. Most of the people here have a difficult time knowing the difference between a notification form and the certificate itself”.

(Male informant, Mbita)

A focus group in Turkana Central noted that low birth registration is as a result of several factors. They identified ignorance, which they linked to low levels of education in the community, as the main reason.

Attitudes on birth registration

Attitude towards birth registration is one of the possible reasons why high levels of knowledge on birth registration do not translate into corresponding high birth registration coverage. In the Kilifi County KAP study, 15 percent of births of the respondents who knew the importance of birth registration were not registered. Twelve percent of these respondents contended that it was not necessary to register births. From the qualitative data, respondents perceived registration of births as expensive both in terms of travel and opportunity cost, has little or no immediate benefits to individuals and it is therefore not a priority.

In the Homa Bay County KAP study, most parents were linking birth registration to national school examinations. This is one of the reasons why there was delayed registration as explained by a male Assistant Chief in Mbita:

“The attitude of people here is the last minute rush for the document. In January when schools open and pupils are registering for new schools or for national exams, parents flock in my office for registration of their children”.

Along the same line of perception, a male FGD participant in Kasipul, Homa Bay County noted that:

“People find the usefulness of a birth certificate at class seven, otherwise before that, it’s purposeless to get it”.

Another factor mentioned which hinders registration of births in Homa Bay County concerns children born to single women (especially adolescents) who are faced with the problem of identity since community members reported that a child should have three names including that of a father. In situations where the child’s father’s identity is obscure, it becomes difficult to notify such birth.

A study by the World Vision (2013) in Kenya, found that costs both direct as well as opportunity costs associated with birth registration, lower the value attached to birth registration. Moreover, registration agents, assistant chiefs in particular, often feel that registration of births is not their core duty. In addition, it established that parents do not report births due to lack of direct benefits associated with birth registration (World Vision, 2013).

A UNICEF (2002) study avers that birth registration is often seen by many people as an alien concept inherited from the colonial era, rather than as an important service. In addition, some communities are reported to be reluctant to reveal the birth of a baby to strangers because of fear of witchcraft and because it breaks a traditional taboo on the counting of children. The same study notes that the value of birth registration is often neglected in the face of problems that are more immediate and tangible and the long-term potential of birth registration to ease such problems is frequently overlooked. It is often seen as nothing more than a legal formality, with little relevance for the development of the child, including access to health care and education services.

Beliefs/Social norms on birth registration

Religion and cultural factors exert some influence over birth registration. In certain cultures and population groups, more emphasis and value may be placed on traditional customs or practices (such as naming ceremonies) than the formal process of birth registration. Elsewhere, children born out of wedlock must not be exposed to the public before they are one year old (Nyamongo, 2014). In other communities, birth registration is equivalent to counting children which is forbidden as it is taboo.

According to the Baseline Systems Assessment Report on National Civil Registration and Vital Statistics System in Kenya (GoK, 2013), the main reason for not registering a birth is the belief that registration is not necessary. In addition, religious beliefs have been cited as some of the barriers to the registration of vital events including birth registration in Kenya (Republic of Kenya, 2015).

In the Homa Bay County KAP study, it was reported that religious beliefs were a major hindrance to birth registration, particularly for children who are born at home. Respondents identified beliefs propagated by certain religious sects such as Nomiya Church, Msanda Holy Ghost Church and Repentance and Holiness Church which place restrictions on their followers—thus constraining birth registration.

In Turkana County, a KAP study found that respondents held a belief that registering a child was a bad omen as this was against the Turkana culture and it could lead to the death of the child.

Practice in birth registration

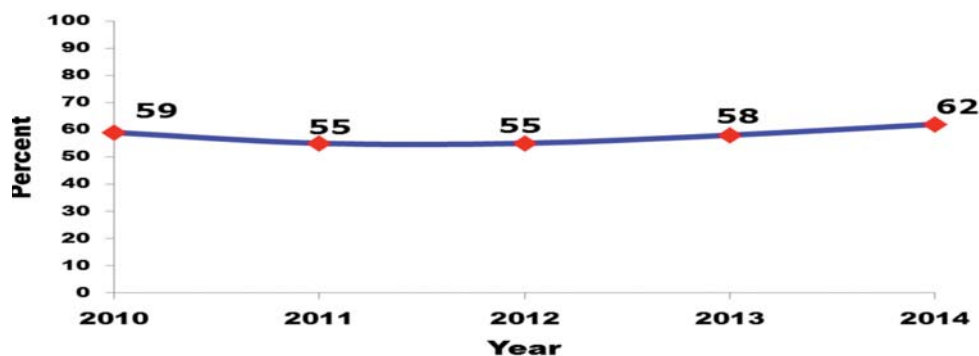
a. Levels and trends in birth registration

The Civil Registration Services keeps track of the monthly number of births registered country wide. Subsequently, these figures are compiled annually and used to estimate the completeness of birth registration. The level of completeness of birth registration is expressed as a “coverage rate”, which is important for two reasons: (1) it alerts the reader to discrepancies in coverage and provides a caution in the interpretation of statistics, and (2) it provides an objective baseline that can be used to measure against and to evaluate future progress in completeness.

The coverage rate is basically the percentage of registered births out of the total number of ‘expected births’. Although the denominator ideally should be the total number of births which occurred, the actual number of such births is usually unknown and hence has to be estimated as ‘expected births’. The number of expected births is obtained by multiplying the age-specific birth rates of women in reproductive age (15-49 years) with the corresponding projected female populations by age as estimated from the 2009 Kenya Population and Housing Census.

Figure 2.20 shows the trend in birth registration coverage in Kenya for the period 2010 to 2014. The coverage in 2014 is 4 percentage points higher than it was in 2010. In 2011 and 2012, the coverage dropped to 55 percent followed by a rise in subsequent years.

FIGURE 2.20: Birth registration coverage (%), Kenya, 2010-2014



Source: Kenya Vital Statistics Report, (2014)

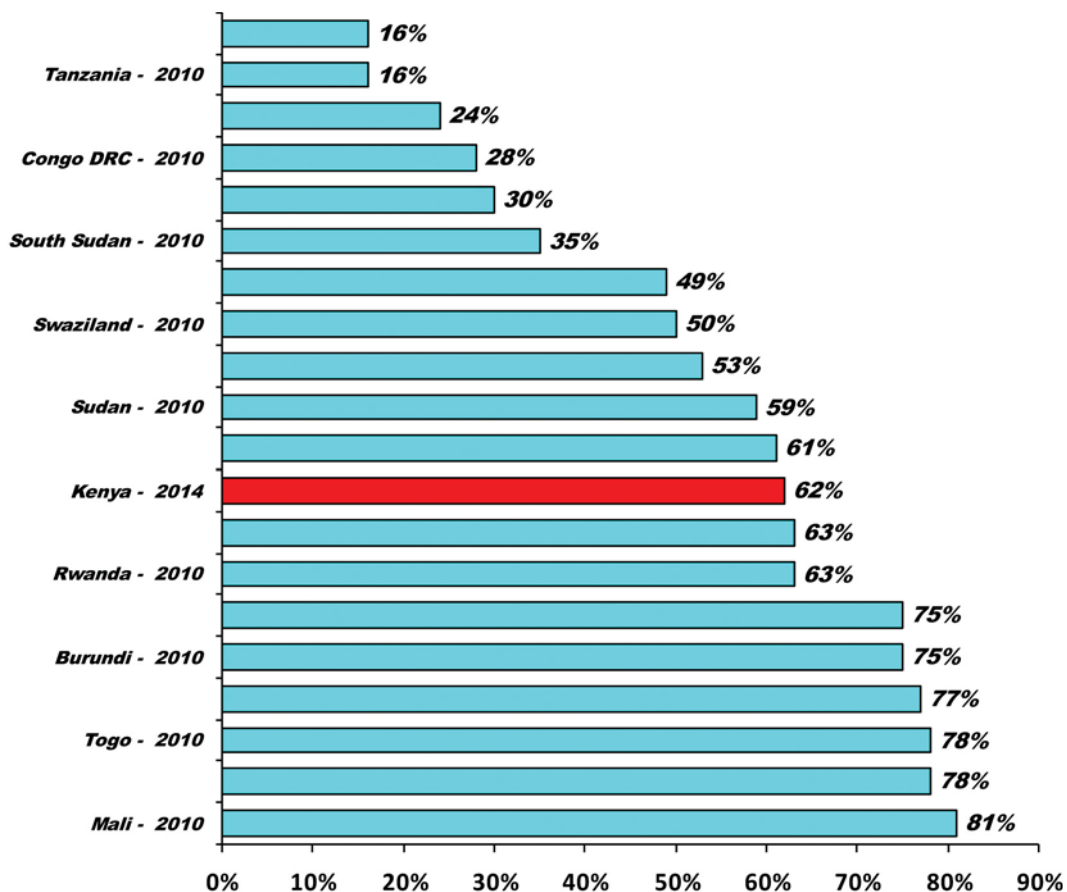
The proportion of births reported as registered in the 2014 Kenya Demographic and Health Survey is slightly higher at 68 percent. The difference may be attributed to how the numerators and/or denominators in the two sources are generated as illustrated in the following Table 2.24.

TABLE 2.24: Attributes associated with the numerator and denominator of the registration coverage rate

	Civil Registration Services	KDHS
Numerator	Based on actual number of births registered	Based on reports of number of births registered
	Based on children age 0-6 months	Based on children age 0-59 months
Denominator	Based on expected births	Based on actual number of births occurred
	Based on projected ASFRs and WRA	

Figure 2.21 shows a comparison of the birth registration coverage in Kenya against other 19 countries in sub-Saharan Africa which had similar data as of 2010. Kenya's performance places it at ninth position amongst the best. Thirty five percent of these countries had a birth registration coverage of below 50 percent, another thirty five percent with a coverage of between 50 percent and 70 percent, while the remaining thirty percent had a coverage of over 70 percent.

FIGURE 2.21: Birth registration coverage for select SSA countries

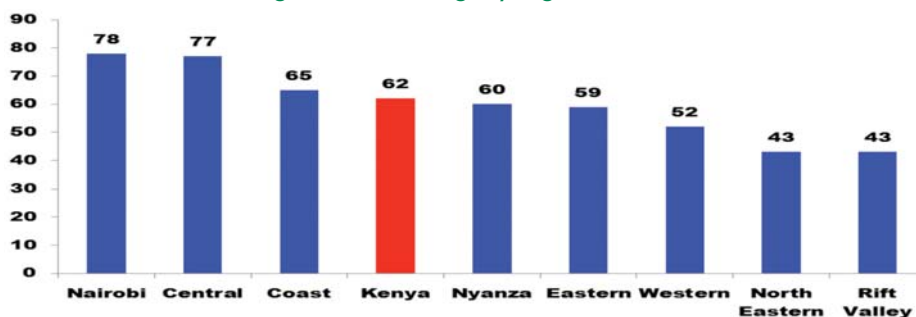


Source: UNSD; Kenya data from CRS (2014)

b. Differentials in Birth Registration

Regional variations in the birth registration coverage are apparent as depicted in Figure 2.22. While Nairobi region reported the highest coverage of 78 percent, North Eastern and Rift Valley regions had the least at 43 percent. The disparity in the regional birth registration coverage is glaring given that 5 out of the 8 regions had coverage rates below the national level.

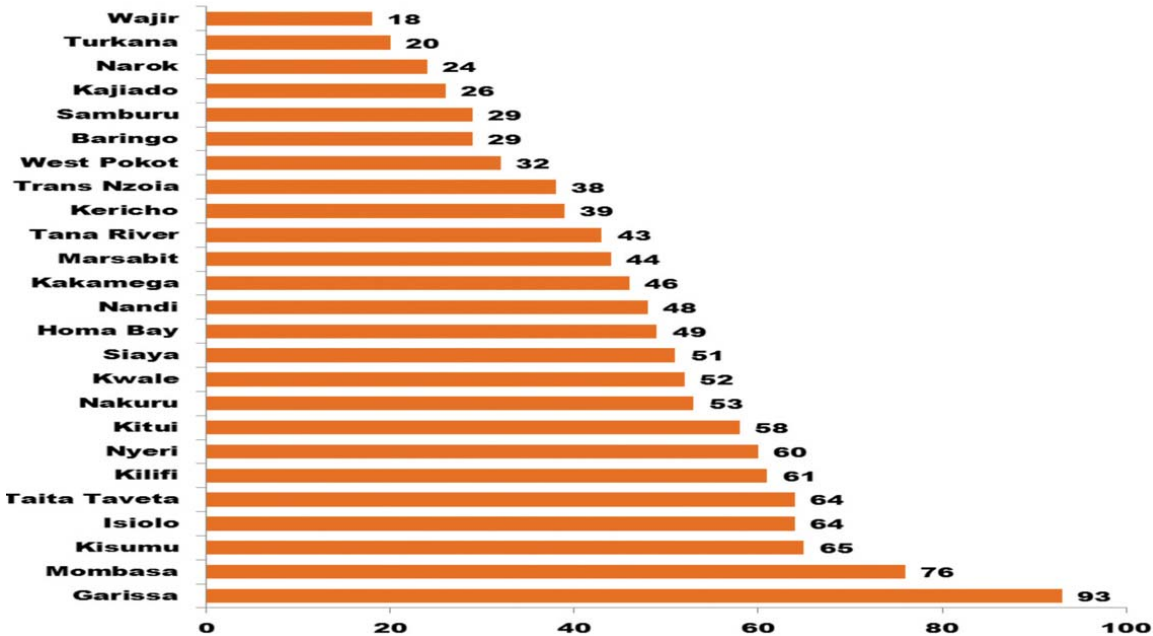
FIGURE 2.22: Birth registration coverage by region, 2014



Source: CRS, 2014

The birth registration coverage in UNICEF focused counties also shows regional disparities as illustrated in Figure 2.23. Slightly more than half (56%) of the 25 counties had a birth registration coverage of below 50 percent. On the other hand, only 5 of the 25 counties had their registration coverage below the national level. Although Garissa County reported the highest proportion of births registered in 2014, this figure should be treated with caution. Garissa County is attributed to effective birth registration of the special population in refugee camps, yet this population is not part of the base population used by KNBS to project the county population. This is to say that the refugee camps are a major contributor to the numerator, without their proportionate contribution to the denominator.

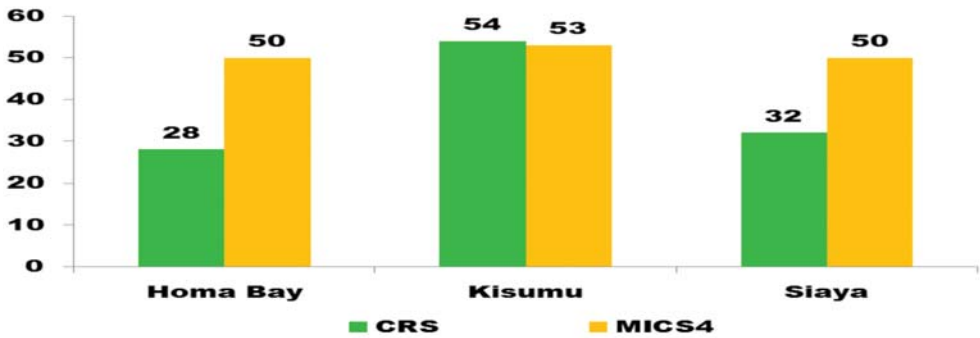
FIGURE 2.23: Birth registration coverage within UNICEF focused counties, 2014



Source: CRS, 2014

A comparison in the birth registration coverage in three UNICEF focused counties within the Nyanza region using data from CRS and MICS4 is shown in Figure 2.24. Unlike in Kisumu County, the coverage in both Siaya and Homa Bay Counties from MICS4 is higher than the coverage from CRS. The probable explanation for the difference is thought to be similar to that cited earlier between CRS and KDHS data—Attributes associated with the numerator and denominator in the two data sources.

FIGURE 2.24: Comparison of birth registration coverage in the common counties, CRS and MICS4, 2011



Source: CRS and MICS 2011

c. Differentials in birth registration coverage by background characteristics

Table 2.25 shows differentials in birth registration coverage by the key background characteristics. The gap between the proportion of registered male births (51%) and that of female births (49%) is very small. Although small, this gap corresponds to the fact that, biologically across all societies, more male than female children are born.

Given that registration of births occurring in health facilities does not require notification by their parents (unlike those occurring at home), birth registration coverage in health facilities is expected to be higher than that of births occurring at home. The registration coverage in health facilities in 2014 was 87 percent compared to only 27 percent for those occurring at home. It is noteworthy that approximately 13 percent of births occurring in health facilities were not registered.

It is apparent that children born of married women are more likely to be registered in comparison to those born of single mothers. This is due to cultural, religious, and social factors that make communities relate the birth of children to married couples (CRS, 2014).

TABLE 2.25: Birth registration coverage by background characteristics, 2014

Background characteristic	Percent
Sex	
Male	51
Female	49
Place of occurrence	
Health facility	87
At home	27
Marital status	
Married	88
Not married	12

Source: CRS, 2014

d. Barriers to birth registration

A number of factors influence birth registration. These include: Government commitment, A country's legislative framework and whether or not existing infrastructure can support the logistical aspects of birth registration, especially in remote areas. The value that individuals and families place on registering a child is equally important, along with the barriers they may face in doing so. These can include costs related to registration fees, travel, and time spent going to registration centres. Lack of adequate knowledge of the legal framework, how to register a birth, and the benefits that accrue from registration can present yet another major obstacle to the fulfilment of a child's right to identity (UNICEF, 2013). The following are some of the bottlenecks to birth registration in Kenya.

Low priority accorded to the registration

The United Nations advocates that civil registration has two basic functions—a legal function that provides identity and registers vital events, and a statistical function in generating national vital statistics data. These two functions should be viewed as being of equal importance. Although the need for registration of births and deaths has been recognised by the Government and research institutions in Kenya, it is not given sufficient priority. The fact that there is hardly a need for vital records for any governmental function, civil registration is given low priority by the government. Both the relatively low budgetary support extended

to registration services and the lack of seriousness the government accords registration matters are clear manifestations of the low priority. This has affected the functioning of all elements of the system including untrained and/or under-trained registration staff, non-provision of supplies—shortage of registration forms, and equipment—lack of transport for monitoring, hence adversely affecting the registration performance (Jarabi, 2012).

According to a study by Plan International, civil registration data is not used for planning, policy development or resource distribution in Kenya because birth registration rates are low and the systems in place are unreliable (Plan, 2014).

Structural arrangement of the system

Kenya's birth registration system is passive with the local registration agents (assistant chiefs) waiting for the public to walk in and file notification of occurrence of births. Thus, the registration system is dependent on the goodwill and cooperation of the general public and health facilities that provide the requisite information. While conditions in urban areas are relatively more conducive to this type of system, the same cannot be said of the rural areas. Here, difficulties of distance, terrain and/or transportation that do exist, act as barriers to the informants to travel to the registration offices (Jarabi, 2012).

Mother's level of education

Mother's level of education has consistently been shown to influence the health and well-being of her family. This applies to birth registration as well. Mothers with some schooling are more likely to know how to register a child than their uneducated peers, and the proportion of registered children is highest among those whose mothers have at least secondary education. MICS and DHS survey's findings have confirmed a direct relationship between mother's level of education and the level of birth registration (KNBS, 2014; KNBS, 2013).

Poverty levels

According to a study (UNICEF, 2013), birth registration rates in most regions tend to be highest among the richest 20 percent (quintile) of the population. This is consistent with the findings of MICS and DHS surveys in Kenya. Findings of the two surveys indicate that increase in level of income is directly proportion to increasing levels in birth registration.

Place of residence

A significant barrier to birth registration is the distance to the nearest registration facility. Accessibility is influenced by location and terrain, existing infrastructure and the availability of transportation. The greater the distance to the registration centre, the higher the financial and opportunity costs for the family. Globally, children living in urban areas are one and a half times more likely to be registered than their rural counterparts. However, as overall levels of birth registration increase, disparities due to place of residence diminish, as demonstrated in regions with the highest level of birth registration.

2.9.7 Opportunities

Despite the many barriers to birth registration, there are some opportunities to increasing levels of birth registration in Kenya. These are as follows:

1. Birth registration is an internationally recognised human right and an important fundamental child right. Governments have no choice but to honour the obligation by creating an enabling environment for their citizens to enjoy this right. The international community is keen to help governments develop their civil registration system. The Government of Kenya should take advantage of already available support by UNSD, UNICEF, WHO, and UNFPA. At the regional level,

AU Ministers responsible for civil registration are already entering into dialogue geared toward improving civil registration of vital statistics systems in Africa. Since 2015, the ministers aim to ensure 100 percent birth registration in all countries in Africa. Kenya being a member of the AU should ensure it benefits from this initiative.

2. The relevant provisions in the Constitution of Kenya 2010 that recognises the civil registration function as a primary basis for establishing Kenyan citizenship opens a window for improving the effectiveness of the current civil registration system.
3. The current devolved system of governance in Kenya provides a conducive platform through which the tenets of an effective civil registration system can be entrenched at the county level. A clear understanding and appreciation of the value of an effective civil registration system by the counties will be a valuable avenue through which the counties should create a budget line in support of the system.

2.9.8 Limitations of the study

The main limitation of the four quantitative studies is that they did not collect any information on the barriers to birth registration. Three of the four that were both quantitative and qualitative were KAP studies with a common limitation that each covered only one county. This limitation notwithstanding, two of these (KAP of Homa Bay and Turkana) studies have other issues:

- a. They lack ownership given that neither UNICEF (who provided technical and financial support) nor CRS (the potential consumer of the information) has owned the reports—apparently, they are still owned by the common consultant who undertook the research;
- b. They reflect definitional problems in the usage of the terms ‘notification’, ‘registration’ and ‘certification’;
and,
- c. Results of attitudes and practices are not clearly identified and articulated.

Based on this review, it recommended that:

- a. UNICEF should support intensive qualitative studies to identify main barriers to birth registration;
and,
- b. CRS should liaise closely with its partners so that they collect data that will enhance the department’s goal of achieving universal registration coverage.

2.9.9 Conclusion

Although the civil registration system in Kenya has been in operation for a long time, it still remains ineffective. It is yet to attain the minimum threshold of 90 percent registration coverage as recommended by the United Nations.

The utility of the civil registration system to the people of Kenya has not been enhanced by specific policies which would enforce the production of documents on births. For example, a personal identification number to be issued at registration of birth and to be used for all identification purposes throughout one’s life. It is evident that there are counties where public awareness is high and yet registration remains incomplete.

This is caused by lack of motivation for one to register a birth. In present Kenya, there are no incentives to motivate the public to register. Rural populations are most affected as benefits of birth records are not immediately self-evident since the prevailing socio-economic environment has virtually very few, if any, uses of such records.

The progressive insistence on availability of such documents, combined with the accessibility and efficiency of the system, would help in improving the situation in a reasonable time. The practical uses of vital records by individuals are very important, since these uses will act as incentives for civil registration and therefore lead to complete registration coverage.

Likewise, the demand and intensive use of vital statistics generated from the civil registration system in population, public health and other programmes will justify the improvement of a reliable registration system. Other than civil registration, there exists no single source or approach that adequately serves the needs for vital statistics for a variety of uses. The primary source of vital statistics is, and will be, a sound civil registration system whose steady improvement over the coming years should not be lost sight of amidst efforts, in the short term, to fill the serious data gaps with approximate estimates. To attain complete coverage and reliability in civil registration and vital statistics, the focus of development of future programmes should be directed to implementation of comprehensive long-term reforms that include a comprehensive review and revision of their structural arrangements, management, operation and maintenance aspects.

2.9.10 Recommendations

Drawing from the findings of this study, the following recommendations are made:

Policy provisions

Other than the Births and Deaths Registration Act, there is no official national policy on civil registration in Kenya. Without a strong policy and its accompanying legal framework, efforts towards revitalizing the civil registration system may not yield the intended fruits. The CRS should lobby for enactment of the draft Bill on civil registration in the shortest time possible.

Standing committee of ministers

Civil registration is a cross-cutting exercise that involves different sectors within the public service. These may include ministries of health, interior, justice, planning amongst others. To give civil registration the priority and status that it deserves, a standing committee of ministers, comprising representatives from each of the key agencies involved, should be revived. This committee will be responsible for all policy matters and in so doing, it should ensure strong and continuing central and county government commitment towards: 1) sufficient and continuing budgetary support; 2) cooperation of various ministries involved; and 3) appropriate legislation being in place.

Public interest in civil registration

There is the need for a long-term, continuous information, education and communication programme to ensure that both the policy and decision-making officials at the governmental level and the population at large are fully informed about the purpose, requirements and benefits of civil registration. A well-informed population will contribute spontaneously to the timely and accurate registration of vital events as they occur. The general public must be made to know and appreciate the advantages to be derived from civil registration by the individual, family and community. Hence, in addition to the general national uses of

registration records, the benefits accruing to the individual, family and community need to be articulated. Apart from the enlightenment campaigns for the adult population, there is also need to target the school population whereby an education programme on civil registration is integrated in the formal curriculum at the basic level. The crucial task of motivating the public to register their vital events is the formulation of messages that should satisfy the perceived needs of the people. But since these needs do not exist now, they have to be created—hence the need to explore and identify as many incentives as possible.

Monitoring and evaluation

Regular supervision and control of the civil registration exercise is an indispensable ingredient of an efficient system. An effective monitoring and evaluation component is crucial in enabling one to assess both the administrative and statistical performance of the registration exercise vis-à-vis the preset targets for achievement. It is also through the monitoring and evaluation process that current registration coverage is determined. Whether in a passive or an active notifier system, it is inevitable that local registry staff make field visits to registration centres to supervise the registration exercise. This calls for some form of reliable means of transport depending on the prevailing physical environment.



Newborn baby at Pumwani Maternity Hospital in Nairobi, Kenya.

2.9.1.1 Studies on birth registration

Author, date and country	Area studied	Design, sample size	Key Findings	Report deficiency
Civil Registration Services, Kenya, 2015	Knowledge, Attitudes and Practices on Civil Registration	Mixed method: Desk review, quantitative n=420; qualitative FGDs n=6, IDIs n=xx; KIs n=10; and stakeholder assessment, n=2	<p>There is high awareness (99.5%) on birth registration.</p> <p>Birth registration coverage in 2015 was 85 per cent.</p> <p>Main barriers to birth registration: poorly developed registration systems with insufficient personnel and registration materials; long geographical distances to the nearest registration centres; long queues/overnight stay for the services; and costs associated with birth registration e.g. fines for late registration.</p> <p>Birth registration was regarded as expensive both in terms of travel and opportunity cost, has little or no immediate benefits to the individuals and not a priority</p> <p>Babies who die immediately after home delivery are viewed as bad omen and not registered</p>	The study focused on a single county - Kilifi
Kenya National Bureau of Statistics, 2015, Bungoma, Kakamega and Turkana Counties Multiple Indicator Cluster Survey, 2013-14 Draft Report, Nairobi, Kenya	Measures of key indicators on the situation of children & women, including Birth Registration	Quantitative analysis on n=2,714 children (Kakamega -806; Bungoma -846 and Turkana -1062)	<p>Birth registration coverage varies across counties as follows: Bungoma 59.4 percent, Kakamega, 37.2 percent and Turkana 41.8 percent</p> <p>The proportion of children whose births were not registered because their mothers/caretakers did not know how to register births: Bungoma 39.6 percent, Kakamega, 53.3 percent and Turkana 27.1 percent</p>	No information on barriers to births registration
CRD, UNICEF & UNFPA, Kenya, 2014	Knowledge, Attitudes and Practices on Civil Registration	Mixed methods: quantitative n=397 & qualitative KIs n=9, IDIs n=10, FGDs n=5	<p>Phones have the potential for greater use including enhancing communication between registration agents and those seeking services. Use of mobile phones should provide an efficient mechanism for seeking information as it helps save time and money.</p> <p>Births registration is high, but actual acquisition of birth certificates is low; the main reason being lack of knowledge and commitment among parents.</p> <p>Chiefs are the most preferred agents of registration.</p> <p>The main reasons for non-registration: lack of knowledge on birth registration; lack of commitment among parents; marital status (children born of single mothers suffer identity issues); religious beliefs; long geographical distances to the nearest registration centres; and costs related to registration process</p>	The study focused on a single county - Homa Bay Lacks ownership; Reflects definitional problems; Attitudes and Practices not clearly identified and articulated
Prof. Isaac Nyamongo, Kenya, 2014	Knowledge, Attitudes and Practices on Civil Registration	Mixed methods: Desk review, quantitative n=405; & qualitative FGDs n=5, IDIs n=10 & KIs n=9	<p>There is potential for greater use of mobile phones in enhancing communication between registration agents and those seeking services. However, mobile telephone use is limited by poor network</p> <p>High knowledge (75%) on birth registration does not match practice</p> <p>The main barriers to registration of births: lack of knowledge regarding birth registration; long geographical distances to the nearest registration centres (which is worsened by the nomadic lifestyle)</p>	The study focused on a single county - Turkana Lacks ownership; Reflects definitional problems; Attitudes and Practices not clearly identified and articulated
Kenya National Bureau of Statistics (KNBS) and ICF, Kenya, 2014	Demographic and Health	Quantitative analysis of n= 19,954 children	67% of births were reported as having been registered nationally Only about 24 percent of children were reported to have a birth certificate	Missing information on birth registration by one-year (data collected for children under-5 years). No information on barriers to birth registration

Author date and country	Area studied	Design, sample size	Key Findings	Report deficiency
Plan International, India (Maharashtra and Uttar Pradesh States only), Kenya, Sierra Leone and Vietnam, 2014	Birth Registration	A desk review, quantitative, n=119; qualitative FGDs n=41	The study's main focus was on the role of birth registration on children's rights protection; an analysis of what is expected versus findings for the four countries.	This study did not give findings on knowledge, attitudes and practices on birth registration in Kenya
Kenya National Bureau of Statistics, 2013. Nyanza Province Multiple Indicator Cluster Survey 2011, Final Report. Nairobi, Kenya	Measures of key indicators on the situation of children & women, including Birth Registration	Quantitative analysis on children: Siaya n=801, Kisumu n=765, Homa Bay n=911	Proportion of children under-5 registered: Siaya – 50%; Kisumu - 53%; Homa Bay – 50% Proportion of children under-5 not registered because their mothers/caretakers did not know how to register a birth: Siaya – 78%; Kisumu - 86%; Homa Bay – 90%	No information on barriers to birth registration
Kenya National Bureau of Statistics, 2009. Eastern Province Multiple Indicator Cluster Survey 2008. Nairobi, Kenya	Measures of key indicators on the situation of children & women, including Birth Registration	Quantitative analysis on children: Kitui n=1,238, Isiolo n=1,072, Marsabit n=1,097	Proportion of children under-5 registered: Kitui – 36%; Isiolo - 19%; Marsabit – 27% Proportion of children under-5 not registered because their mothers/caretakers did not know the birth should be registered: Kitui – 36%; Isiolo - 57%; Marsabit – 67% Proportion of children under-5 not registered because their mothers/caretakers did not know where to register a birth: Kitui – 15%; Isiolo - 13%; Marsabit – 17%	No information on barriers to birth registration

2.10 Children and adolescent participation in decision-making



12 year old Clinton Chase speaking to primary school students during the 2014 Annual National Children's Government Congress in Nairobi Primary School, Kenya.

2.10.1 Overview

Definitions

Article 1 of the Convention on the Rights of the Child defines a child as “every human being below the age of eighteen years” unless under law applicable to the child. The Kenya Children Act defines a child as “any human being under the age of eighteen years”.

In the African traditional context, childhood is conceptualised differently and is dependent on cultural diversity (Moses, 2008). It is not defined in terms of a fixed age but it depends on other factors. For example the ability to perform certain feats and particular functions such as initiation rites are more important considerations in African communities (Omari and Mblinyi, 2000). The definition of a child is therefore a communal assessment and not calculated in terms of age by birth but by the role the child can play or plays in the society at any given stage.

Adolescent participation can be defined as adolescents partaking in and influencing processes, decisions and activities (UNICEF, 2001). Adolescence (the second decade of life) is a phase separate from both early childhood and adulthood. It is a transitional period that requires special attention and protection. Physically, children go through a number of transitions while they mature. It is known that the brain undergoes quite substantial developments in early adolescence, which affect emotional skills as well as physical and mental abilities. Adolescence is also when gender norms are solidified, rejected or transformed. As adolescent girls and boys grow, they take on additional responsibilities, experiment with new ways of doing things and push for independence. It is a time in which values and skills are developed that have great impact on well-being (UNICEF, 2013).

In practice, children's participation is a highly contested term (Macer and Macer, 2014). There are several definitions for participation: The term describes a spectrum of activities that are variously framed as a ladder (Hart, 1992) or pathway (Shier, 2001). UNICEF (2002) defines participation as a process of sharing decisions which affect one's life and the life of the community in which one lives. Feinstein *et al.*, (2004) defines it as the involvement of girls and boys in the decisions and actions that affect their lives, the lives of their families and community and the larger society where they live. Beers (2002) on the other hand, defines children's participation as a process in which children display best their abilities, by expressing their ideas, viewpoints and having their problems solved, suitable to children's ages and bio-psychological levels of development. Roger Hart (1992) defined participation as *the process of sharing decisions which affect one's life and the life of the community in which one lives*. He further identified models on non-participation and models of genuine participation and put this on a ladder of participation.

The Kenya National Council of Children's Services (2007) defines child participation as a process of child development that provides an opportunity for children to be involved in decision-making on matters affecting their lives, and to express their views in accordance with their evolving capacities.

International Commitment to promoting child participation

The Convention on the Rights of the Child (CRC) adopted by the United Nations general Assembly in 1989 opens the door to children participation. The Convention recognizes the rights of the child defined as persons below the age of 18 years. The right of children to be heard constitutes one of the fundamental values of the ACRWC and the UNCRC, and the degree and modality of participation varies in accordance with a child's age and capacity. Adolescents up to eighteen years of age though not defined in the convention are also holders of all the rights enshrined in the convention; they are entitled to special protection measures and their best interests must be considered in policies affecting them.

Article 12 recognizes the child's right to participate and be heard at all levels. State parties are therefore obliged to ensure that children are listened to and their views sought and considered in matters that affect their lives. The article does not give children the right to autonomy, right to control all decisions or right to override the rights of their parents.

In Kenya, the elder members of the society have traditionally taken the decisions concerning children and although changes have taken place and children's views are slowly being taken into consideration, this is still minimal. Deeply rooted traditional attitudes, lead many people in society to fear that if children are allowed to freely express their views they will get out of control and be unmanageable (Save the Children, 2006).

The term participation does not appear in article 12 and the convention does not define the concept of participation but it has been widely adopted as the language that describes the process of respecting the rights of children to express their views. However, children have always participated in many ways within societies and the term participation is now widely used for the process of children expressing their views and having these taken seriously, hence the need to explore the different practices and terminologies with regard to children participation. UNICEF (2003) points out that children's participation is nothing new and that children have always participated in life: in the home, in school, in work, in communities and in wars. Children are often highly involved in the practical aspects of family and community life, though their participation may not always be recognised.

Article 13 gives children the right to freedom of expression including freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of the child's choice. **Article 15** is concerned with children's right to freedom of association and peaceful assembly.

African states developed the African Charter on the Rights and Welfare of the Child (ACRWC) that takes into consideration socio-cultural and economic realities of the African experience. The charter was adopted in 1990. In the ACRWC, Article 31, responsibilities of the child in the African context are articulated. Given the Charter's emphasis on African traditions and values, it would be important to reach consensus or elaborate children's rights within the Kenyan cultural context.

The progress of these two international treaties has been constrained by a number of factors which have prevented their positive impact on the lives of African children from being as significant as had been anticipated. Most notably, the CRC stands accused of attempting to impose Western ideals on African societies, while the ACRWC has witnessed poor ratification by African countries. (Ensor and Reinek, 2014). Furthermore, the lack of sufficient support may also be attributed to the fact that international human rights and norms in general, and children's rights in particular do not acknowledge African traditional values (Kaime, 2009).

2.10.2 Legal and policy frameworks for promoting children and adolescent participation

This section contains policies, laws and other measures that the State has adopted in order to give effect to the convention as well as on the progress made to ensure enjoyment of the rights. The section illustrates how the participation of children and young people in decision-making has been defined, adopted and developed within policy in Kenya.

Kenya became a signatory to the United Nations Convention on the Rights of the Child (UNCRC) in 1990 and was the 20th member state to ratify the instrument. This was a major milestone in the promotion and protection of children's rights and welfare in Kenya.

The domestication of these international conventions is interpreted into the Children Act of 2001 and the Constitution of Kenya 2010. The promulgation of the Constitution in 2010 was a major milestone for the children of Kenya, as it recognizes some fundamental human rights, in keeping with the UNCRC, the ACRWC and other international and regional treaties. It sets the overall policy and legislative framework on the rights of all children in Kenya. The Constitution (Article 10) allows citizen participation, which includes children. Article 53 of the constitution is a sound foundation for streamlining the rights of children in Kenyan law both now and in future. The same Article 11 53(2) puts emphasis on the best interest of the child in all matters and encouraging participation of the child to have his/her views considered.

The enactment of the Children Act 2001 led to the incorporation of the provisions of the UNCRC and the African Charter on the Rights and Welfare of the Child (ACRWC) while also taking cognizance of other Human Rights instruments that relate to children. Duties and responsibilities of the child are spelt out in (Section 21). Further, the Act states that in any matter of procedure affecting a child, the child shall be accorded an opportunity to express his or her opinion, and that opinion shall be taken into account as may be appropriate, considering the age of the child and the degree of maturity Section 4(4).

Under Vision 2030, the social pillar emphasizes a just and cohesive society. The children's issues are addressed in the gender, youth and vulnerable group's sub-sectors.

The National Children Policy incorporates child participation as an integral component, on its own and as a means to achieving other rights. The policy highlights participation rights to be implemented through the following proposed measures:

- i. Provision of appropriate and accurate information at all stages in their growth to enhance their participation in regard to expression of opinion.
- ii. Provision for appropriate forums to promote association and expression of opinion for all categories of children, at all levels, with proper representation by region, age and gender.
- iii. Popularization of the already existing child participation guidelines to the public.

The government has created institutions with specific mandates to lead the implementation of policies and programmes aimed at fulfilling children’s rights to participation such as the National Council for Children Services (NCCS). The Council’s mandate is to safeguard and promote the rights and welfare of children and is responsible for ensuring that Kenya realizes its international obligations relating to children.

Programme of Action to operationalize the World Summit Declaration and Plan of Action for Survival, Protection, Development and Participation of Children was developed in the 1990s. Further, the government in 2008/10 developed guidelines for child participation in Kenya.

Guidelines for child participation in Kenya recognize that meaningful children’s participation ought to take place at various decision-making levels that include; home, school, community, national, regional and international platforms. The guidelines address rules to be followed in the process of child participation such as mutual respect for the views of all children indiscriminately, access to information, equal rights to participation and use of appropriate methodologies to enhance child participation.

Standing orders and the Charter for Children Assemblies were developed in 2008/10 and the Department of Children’s Services in the year 2010/2011 established the Kenya Children Assemblies (KCA). County Children Assemblies in all the 47 counties in Kenya were launched and operationalized over the same period.



A primary school boy casts his vote for the National Children’s Government during the 2014 Annual National Children’s Government Congress in Nairobi Primary School, Kenya.

Other efforts include establishment of students' councils in secondary schools and children governments in primary schools to enhance child participation in management at school level. Other institutional activities are led by the Ministry of Education, Science and Technology (MoEST) through provision of extra-curricular activities to help children participate and harness their talents through sports, music, drama and music. School provides a good opportunity for children and adolescents to be involved in decision-making and this can promote transparency and interaction between staff and the pupils or students.

The National adolescent sexual and reproductive health 2015 promotes adolescent participation in key decision-making around policy, advocacy, budgeting, planning, research and implementation processes.

In Kenya, the common forms of participation of children are institutional-based participation, national consultations including children and youth, and events-based participation with little participation in decision-making at family level (UNICEF 2014). The success of this kind of participation is yet to be measured. For example, it is unclear how many schools have children assemblies, how many schools elects their own leaders and how much have these efforts influenced decision-making at school or national level.

2.10.3 Literature review

The review endeavoured to find out knowledge, attitudes, beliefs and practices with regard to children and adolescents participation in decision-making in institutions, at the community and public spheres. The review targeted children aged 0 to 18 and adolescents defined by United Nations as young people aged 10 to 19. It is important to point out that the studies reviewed did not have a clear distinction between children and adolescent which presented a challenge when analysing the issues separately.

The degree to which children should have a voice in anything is a subject of strongly divergent opinion. Involvement by children in decision-making is most likely to be successful when they see the topics or issues as real and relevant to them. Just like adults, they are most likely to offer reliable information when they are talking about events that are part of or related to their own interests or part of their everyday experience (Solberg, 1996).

Garbarino *et al.*, (1989) points out that while most topics can be discussed given the appropriate setting and careful planning, it is important to remember that many ethnic groups restrict communication about some topics. For example, there may be taboos on children and young people talking about sexual matters with people outside the family, even with adults of the same sex.

2.10.4 Knowledge, Attitudes, Beliefs and Practices

Knowledge

Kenya Human Rights Commission (2012) KAP study among pupils in schools drawn from Nairobi, Taveta, Isiolo, Wajir, Marakwet counties and Ugenya sub-county showed that 25 percent of school children felt that children do not have a role to play in community decision-making. The study further revealed that school children are aware that boys and girls are differently disadvantaged, some exclusively gave boys the right to decision-making (7% were of the opinion that rights to decision-making are an exclusive right to boys).

With regard to knowledge on whether children have a right to participate in decision-making, the same study indicated that less than two thirds (62%) knew that all children have a right to participate in decision-making. In Nairobi, Marakwet, Taveta, Isiolo and Wajir—71 percent, 52 percent, 80 percent, 65 percent and 63 percent respectively knew that children have a right to participate in decision-making. The lowest proportion was recorded in Ugunja, where only 41 percent felt that all children have a right to decision-making.

Attitudes

In Kenya there are negative attitudes about child participation (NCC, 2014). The country has over forty tribes with rigid cultural norms, any new ideas introduced to encourage behaviour change are labelled as alien or neo-colonialism. These kinds of attitudes affect any process intended to encourage children and adolescent participation at the family or community level, church/mosque or school NCCS (2014).

Practice

The Convention on the Rights of the Child recognises children as autonomous beings and guarantees them participation rights. It is worth noting that, in many African traditional societies, the autonomy of the child is often heavily constrained (Chirwa, 2002). From an early age, children are taught to defer and revere the elderly (Rwezaura, 1989). Thus, the relationship between children and adults is characterised by enormous respect and, in turn, is reinforced by the ethic of dominance (Rwezaura, 1989).

According to Akaranga and Ongong'a (2013), among the Maasai, children cannot contribute when "adults" are making a decision. They may be seen but not necessarily heard. In addition, the tradition upon which the patriarchy bases its power does not allow for matriarchal open participation without explicit sanction by the male folk and this disadvantages the women and girls. The girls are for example commonly booked for marriage before the rite of initiation and the age of the groom-to-be, is never considered. Once the girl's parents make the decision, it is final and binding.

Kostelny *et al.*, (2014), points out that among the Kisii, children are mostly defined in terms of their dependency, as being under the care of one's parents or as being unable to make decisions or meet their basic needs.

Notions of the child and childhood are generally premised on the idea that it is only adults who know what is best for children as noted by Chirwa (2002). Hence, children are normally considered to be deficient in their decision-making capabilities and deserving of protection and consequently decisions concerning children are often made by a group of male elders. With respect to female circumcision, Ncube (1998) further notes that the issue of the girl-child having a right to decide whether or not she wants to undergo circumcision, or expressing her views—does not arise. Among the Samburu for example, clan elders decide on the time for boys' circumcision. The ceremonies are conducted in big manyattas on a group of boys of varying ages (predominantly teenagers), all of whom will then graduate to becoming warriors. Furthermore, the time of circumcision for girls is typically decided by the father. After her first menstrual period, the mother advises the father that she has come of age and is ready for circumcision (AusAID, 2012).

Kinai (2014), study on parent-adolescents relations and adolescent participation in family decision-making in Nairobi and Makueni counties, sheds light on adolescents' self-confidence and self-reliance in decision-making and the extent of adolescents' participation in decision-making in their choice of clothing, subjects, career and when spending their pocket money.

The study targeted 827 adolescents and 562 of their parents (433 adolescents and 248 parents from Nairobi County and 394 adolescents and 314 parents from Makueni County). The results indicated that adolescents' participation in decision-making was only with regard to choice of clothing (58.4 %) school subjects (74.8 %) career (79.1%), and spending pocket money (71.9%).

The study recommends the need to educate parents on the importance of allowing adolescents' participation in decision-making.

Mulwa *et al.*, (2015) conducted a study in Eastern region, of Kenya to identify the key decision makers in selected management tasks in secondary schools as perceived by students. The target population for the

study was the 12th grade (form four) students in all the public secondary schools in the 13 districts of Eastern Kenya. There were a total of 28,441 12th grade (form four) students in the region in 596 secondary schools (Ministry of Education, 2013). A sample of 720 students was selected through multi-stage sampling.

According to the students opinions, the principals dominated the decision-making process. Students were however found to be key decision makers in curriculum and instructions, mainly attributed to the fact that majority of them are allowed to determine their future professions through choosing subjects that will drive them to their desired careers. Students were not key decision makers in students' management and welfare.

The most commonly used structure for students' involvement in decision-making was the prefects system where 63.4 percent of the students reported it as the most commonly used in their schools. Students' council where student leaders were re-elected by their peers was not very common as it was only selected by 13.9 percent, as the structure for students' involvement in their schools. Other structures accounted for 4.6 percent only. One of the other structures that were specified was the use of suggestion boxes where students were required to write their inputs and drop in the box and were later collected by either teachers or prefects and passed to the authorities for action.

Mulwa and Maiyo (2010) study on participatory decision-making in secondary schools in Mwala division also found that majority of the students (40%) were never involved in decision-making.

Although children are often involved in the practical aspects of family and community life in Kenya, their participation may not always be recognised. Even when this is recognised it is unlikely that children will be included in family, or other local decision-making processes. At the level of the state for example, the right to elect representatives and vote on policies is not usually extended to those under 18 years of age. The 2009 Situation Analysis of children acknowledged that child participation is yet to be practised in Kenyan society including within the family, the community and amongst policy-makers, as well as children themselves (UNICEF and Government of Kenya 2010).

2.10.5 Types of participation

The concept of child participation is not well established in the Kenyan society and culture hence there is still a long way to go before children's views are heard and taken into account within learning institutions and the family (Save the Children, 2006). Nevertheless, children in Kenya are free to join clubs, associations and societies in school, which provide them with the opportunity to express themselves and articulate their opinions.

Child participation related activities in Kenya were pioneered by organisations working in the children sector in the early 1990s including Save the Children, World Vision, among others. The activities started as Child Rights Clubs (CRCs) also known as Rights of the Child (ROC) clubs which acted as avenues for children to learn about their rights. ROC clubs are a common feature in many parts of the country, a situation that has contributed to the increased awareness on child participation in Kenya.



Newly elected Children's President Rukia Abdullahi gives a speech during the 2015 Annual National Children's Government Congress in Nairobi Primary School, Kenya.

Institution-Based Participation

Children assembly

The Children Assembly was established by the Department of Children's Services (DCS) to promote child participation in decision-making on matters that affect them. It also enhances and strengthens child participation in all processes; provide an opportunity for children to be involved in decision-making; and enhance cooperation and information-sharing. Guidelines for Establishment and Management of Children Assemblies and a Children Assemblies Charter which outlines the procedure of conducting business in the Assemblies have been developed.

There are 47 County Children's Assemblies and one Kenya Children Assembly. The County Assemblies meet during the holiday and during the National Children Assembly annual event where each county is represented. During the assemblies, children come up with county-specific action plans whose implementation progress is reported in the subsequent annual meeting.

Student's councils

The Kenya Secondary School Student Council (KSSSC) was formed in 2009 with a view to making secondary school governance more participatory. It is an umbrella body for the Kenya's student councils. KSSSC was conceived against the background of finding a solution to students' indiscipline in the schools. Under this arrangement, students are expected to be part and parcel of decision-making to ensure their interests are adopted in the administration of schools. Interactive forums between the students and school administrators are supposed to be created where issues affecting students are discussed before they degenerate into full-blown school riots.

Event-based participation

Several children events are commemorated in Kenya with country wide activities. These include Day of the African Child, International Day of the African Child, and World Day Against Child Labour among others. Children participate in the planning as well as the actual events of the days. These events have been commendable and attract much needed media attention; they are nevertheless event based and their impact on child participation is unlikely to be measured as there are no clear indicators on what constitutes participation.

Secondary school students are also active in engaging in public debate on national issues especially during the annual Kenya National Schools Drama Festival. This activity has been part of the school calendar since its inception in the 1950s. Students have taken advantage of the platform provided through the festival to articulate their concerns on national issues.

Non-state actors in child participation

There are several local and international non-governmental organisations that support children's participation. Save the Children for example has been instrumental in setting up Child Rights Clubs in some schools to build young people's awareness of their rights and to give young people the chance to discuss issue that affect them. The organisation considers children's participation as willing involvement of all children, including the most marginalised and those of different ages and abilities, in any matter concerning them directly or indirectly. Children's participation is a way of working and an essential principle that cuts across all Save the Children programmes and takes place in all arenas, from homes to government and from local to international levels.

Plan International has Msingi Bora Clubs that foster children participation in a number of schools across counties in line with their vision of a world in which all children realise their full potential in societies that respect people's rights and dignity and believes that children should be encouraged to express their own priorities alongside those of the adults.

The Scouts and the Girl Guides have also been very useful in promoting adolescents participation in national governance matters and has prepared them for leadership through a value system and discipline necessary for leadership.

Barriers to child participation

The existing literature points to the following factors particularly challenging the likelihood of children and adolescents being given the opportunity to participate in decision-making:

Inequality: Traditionally children are regarded as having a lower social status than adults and this limits the opportunities children and young people have to participate in decision-making as equals. Girls and young women in most cases are not given the same opportunities as boys and young men, and all the challenges listed apply even more to them. They are discriminated against by adults because they are young, and by boys and young men because of their gender. Participation of children is challenged as elitist and interpreted as an intrusion into the jurisdiction of the family head and a threat to parental authority.

Practice: Robinson and Kellett (2004), point out that there is an adult characteristic of having power over children. This unequal power relationship is sustained by a belief that adults have greater experience and superior knowledge. Furthermore, according to Harber and Trafford (1999), in the African culture, children are not allowed to make decisions with adults and are excluded from the consultative process.

Lack of proper documentation: In spite of efforts being made in children participation in the country, there is lack of adequate and proper documentation of the gains, challenges and good practices to learn from.

2.10.6 Existing data and information gaps

- There is a general lack of case studies that shed light on knowledge, attitudes, beliefs and practices with regard to children and adolescent participation in decision-making especially in Kenya—focus on adolescents is especially lacking.
- There is scarcity of data on child participatory practices within Kenya. This calls for extensive mapping of actors in children participation indicating where and how participation is taking place.
- Monitoring and evaluation on nature, quality, and impact of participation is limited. Universally acceptable indicators to measure the scope, that is, what is being done, quality (how is participation being done and whether it complies with agreed standards)—what has been the impact is lacking.
- There is lack of impact assessment on child participation outcomes. Though the Government of Kenya has for example been supporting children assemblies by availing funds and facilitating exchange programmes for children to express themselves, no evaluation has been undertaken to assess their impact in terms of influencing policy or community respect of the children's opinion.
- Successes and progress made on child participation programmes have not been effectively examined and documented. For example, it is unclear how many schools have children assemblies, how many schools elects their own leaders and how much influence these efforts had on decision-making at school or national level and whether the process of child participation is standardized.

2.10.7 Opportunities

The legal and policy framework with regard to children participation in Kenya has improved in recent years. Notable is the enactment of the Children Act of 2001 that domesticates the Convention on the Rights of the Child and the Constitution of Kenya 2010. The Government has created institutions with specific mandates to lead the implementation of policies and programmes aimed at realizing children's rights to participation.

Avenues for child participation are available. These include children assemblies, student councils and clubs in schools. These avenues for dialogue and participation need to be strengthened.

The National Child Participation Guidelines in Kenya provide detailed guidance on enhancing child participation in programmes involving children.

2.10.8 Recommendations

- **Conduct more robust KABP studies** on children participation especially qualitative in nature to fill in the data gaps.
- **Establishment and support of a national data collection system** to enable tracking of children participation efforts in a more standardized manner.
- **Develop clearly defined indicators on child participation** that will help track child participation efforts.
- **Strengthen county and local mechanisms** for participation through continued support to the county children assemblies. Institutionalize child participation to supplement school based participation at all levels especially at the counties.

2.10.8 Studies on children and adolescent participation in decision-making

	Title	Authors	Geographic Coverage	Target Group & Sample Size	Key Gaps
1	Community-based child protection mechanisms in Kisii/Nyamira Area: A rapid ethnographic study in two rural sites in Kenya	Kostelny, K., Wessells, M., & Ondoro, K.	Kisii County and Nyamira County,	Approximately 8,400 people in the four villages in Kisii and Nyamira	Focus is on two counties
2	Cultural practices that hinder children rights among the digo community – msambweni district, Kwale county, 2010 (Qualitative study)	Save the children, Finland and Kenya alliance for advancement of children (KAACR)	Msambweni District, Kwale County	Children and community members (parents) sample size not indicated	Methodology not clearly explained Information is County specific Targeted children and parents
3	Equality knowledge, attitude and practice (KAP) study, 2012 (Mixed study)	Kenya Human Rights Commission		Quantitative Self – filling interviews n= 844 Qualitative FGD = 24 KII =24	No focus on beliefs
4	Participatory Governance in Secondary Schools: The Students' Viewpoint in Eastern Region of Kenya, 2015	Mulwa <i>et al</i>	Public secondary schools in the 13 districts of Eastern Kenya.	12th grade (form four) students n= 720	Results represent students in eastern region No specific focus on KABP
5	Participatory decision-making in secondary schools: case of students' involvement in Mwala division, Kenya	Mulwa David and Julius Maiyo	Mwala division	Public secondary schools students n= 80	Limited in scope and area of coverage
6	African traditional cultural conundrums which make women prone to HIV/AIDS infections: a case of the maasai of Kenya, 2013 (mixed study)	Stephen I. Akaranga and Jude J. Ongong'a	Kajiado County	n = 180	County focus
7	The State of the World's Children 2003. New York: UNICEF	UNICEF	Global		
	The State of the World's Children 2013. New York: UNICEF	UNICEF	Global		
8	Maternal and child health baseline survey among Maasai and Samburu nomadic pastoralist communities in Laikipia and Samburu, Kenya, 2012 (quantitative study)	AusAID	Laikipia and Samburu	n=800	Focus on cultural and gender issues impacting on health
9	Parent-adolescents relations and adolescent participation in family decision-making in Nairobi and Makueni counties, Kenya Kinai, T. K, 2014	Kinai, T. K.	Nairobi and Makueni counties	n= 827 adolescents n= 562 of their parents	Focus on two counties

CHAPTER THREE: CONCLUSION AND RECOMMENDATIONS

3.1 Conclusion

Overall, evidence from the literature reviewed showed that there are few quantitative studies on knowledge, attitudes, beliefs and practices at national and county levels. Qualitative studies on these aspects are mostly on a small scale and cannot be generalized to the country or even counties themselves. A few studies which were carried out in the country focused more on the practice rather than on knowledge, attitudes and beliefs/norms. Moreover, most of the qualitative studies focus on communities and therefore may not be applicable to county specific, especially in those counties that are cosmopolitan in their ethnic distribution. Finally, both the qualitative and quantitative studies reviewed were not focused on the key behaviours hence most gaps in information and data on the key behaviours.

3.2 Recommendations

Based on the findings of this study, the following broad recommendations are proposed:

- **Conduct more qualitative and quantitative studies in the area of knowledge, attitude, and beliefs and practices** especially at county and national levels. This will help to accurately inform policies and programmes at both levels. The frameworks for conducting qualitative and quantitative studies on the 10 key behaviours is provided in annex I and II.
- **Undertake study(ies) on social determinants of the key behaviours** in the country (Kenya) using a mixed methods approaches. An effort should be made to focus more comprehensively on identifying various beliefs and social norms and how they influence behaviours.
- **There is need to agree on common measures (indicators)/concepts to be applied** in the 10 key behaviours to aid data collection, analysis and for comparison purposes.
- **Sensitize community leaders and members of the public** on the importance of observance of the key behaviours.
- **Programmes on advocacy and behaviour change communication should be designed** to address socio-cultural barriers to improvement of the key behaviours.
- **Government should work towards equity in geographical distribution of facilities**—especially for underserved counties, to provide services related to the key behaviours.
- **There is need to unify the source of data for the 10 key behaviours** so that there is no variation of the data (not clear).

- **There is also need to undertake further analysis of the existing datasets** such as Kenya Demographic and Health Surveys among others in order to provide much needed data and information on the key behaviours.
- **There is need to have some coordinating mechanisms** for departments and institutions implementing programmes touching on the 10 key behaviours—to enhance synergies in service provision.
- **There is need to develop a research database** to serve as repository for organisations/ individuals conducting research in the key behaviours to deposit their research findings to guide future researches on the same.

ANNEXES

ANNEX I

Quantitative study sampling framework

Introduction

The KABP Study will be a population-based, cross-sectional survey aimed at producing estimates at each of the 25 UNICEF programmatic counties. The survey will be conducted on a sample of households selected from these 25 counties as shown in table A1.

TABLE A1: List of counties

1	Nyeri	14	Homa Bay
2	Siaya	15	West Pokot
3	Kisumu	16	Baringo
4	Turkana	17	Samburu
5	Trans-Nzoia	18	Marsabit
6	Nandi	19	Isiolo
7	Kericho	20	Kitui
8	Nakuru	21	Wajir
9	Narok	22	Mandera
10	Kajiado	23	Tana River
11	Makueni	24	Taita Taveta
12	Garissa	25	Kakamega
13	Kilifi		

Sample Design

The survey will use a two-stage stratified cluster sample to produce reliable estimates for most of the indicators in the counties of interest. The design will use a representative probability sample to produce these estimates for the twenty-five counties. It is proposed that the survey utilizes the fifth National Sample Survey and Evaluation Programme (NASSEP V) household-based master sampling frame which is created and maintained by the Kenya National and Bureau of Statistics (KNBS). This is the frame that the Bureau currently operates to conduct household-based surveys in Kenya. The development of the frame started in 2012 and it contains 5,360 clusters split into four equal sub-samples. It is based on the list of Enumeration Areas (EAs) from the 2009 Kenya Population and Housing Census. The Kenyan Constitution, passed in 2010, introduced a devolved system of government in which 47 counties were created. During the design of the frame, each of these counties was stratified into urban and rural strata, apart from Nairobi and Mombasa counties which have urban areas only, resulting into 92 strata.

The primary sampling unit (PSU) for the KABP will be a cluster. The survey clusters will be selected from NASSEPV by the Kenya National Bureau of Statistics. In each of the selected clusters, a uniform sample of 35 households will be selected using equal probability systematic sampling method.

Proposed Sample Size

In order to produce reliable estimates for each of the twenty-five counties, it is important to have a representative sample in each of these counties. A total sample size of 22,890 households is proposed for the survey. The sample size was calculated to give representative estimates of various indicators for the 25 counties that are the main domains of interest. The table A2 below shows the distribution of the sample in the twenty-five counties.

TABLE A2: Distribution of households and clusters by urban and rural residence according to selected counties

S/No	County	Households			Clusters		
		Rural	Urban	Total	Rural	Urban	Total
1	Nyeri	700	245	945	20	7	27
2	Siaya	770	105	875	22	3	25
3	Kisumu	350	420	770	10	12	22
4	Homa Bay	805	140	945	23	4	27
5	Turkana	770	140	910	22	4	26
6	West Pokot	700	70	770	20	2	22
7	Baringo	665	105	770	19	3	22
8	Trans-Nzoia	595	175	770	17	5	22
9	Nandi	805	140	945	23	4	27
10	Samburu	1,015	245	1,260	29	7	36
11	Kericho	490	350	840	14	10	24
12	Nakuru	490	525	1,015	14	15	29
13	Narok	700	70	770	20	2	22
14	Kajiado	490	490	980	14	14	28
15	Marsabit	1,190	315	1,505	34	9	43
16	Isiolo	455	420	875	13	12	25
17	Kitui	735	140	875	21	4	25
18	Makueni	805	140	945	23	4	27
19	Kakamega	700	140	840	20	4	24
20	Garissa	700	245	945	20	7	27
21	Wajir	735	140	875	21	4	25
22	Mandera	910	210	1,120	26	6	32
23	Tana River	665	140	805	19	4	23
24	Kilifi	525	280	805	15	8	23
25	Taita Taveta	595	140	735	17	4	21
Total		17,360	5,530	22,890	496	158	654

ANNEX II

Qualitative study sampling Framework

Framework for KABP Qualitative Research

A. Data collection tools

In collecting the qualitative data, the following tools should be used:

- a. Focus Group Discussions guides (Caregivers, Fathers, Adolescents)
- b. Key Informant Interview guides (Policy makers and Opinion leaders)
- c. In-Depth Interview guides (Service providers)
- d. Observations guide— for observations of breastfeeding and complementary feeding practices at every opportunity in selected few households

The development of the above tools will be based on the gaps identified in the literature review on KABP study on child survival, protection and development.

B. Sample

FGDs criteria and modules

1. Women/caregivers with children below age 5 (2 FGDs)

- a. Hand washing at critical times
- b. Sleeping under ITN
- c. Parents enrolling their children in school and keeping them in school
- d. Birth of children 0-1 year registered
- e. Sanitary disposal of human waste
- f. Rejection of child harmful practices (FGM/C)
- g. Children and adolescent participate in decision-making

2. Women/caregivers with children 0-24 months (2 FGDs)

- a. Hand washing at critical times
- b. Care Seeking
- c. Appropriate feeding practices
- d. Full immunization of children by 1 year of age
- e. Sanitary disposal of human waste

3. Adolescents (10-14, 15-19) (2 FGDs)

- a. Children and adolescent participate in decision-making

4. Males— Fathers of Children below age 5 (2 FGDs)

- a. Hand washing at critical times
- b. Sleeping under ITN
- c. Care seeking
- d. Parents enrolling their children in school and keeping them in school
- e. Birth of children 0-1 year registered
- f. Sanitary disposal of human waste
- g. Rejection of child harmful practices (FGM/C)
- h. Children and adolescent participate in decision-making

In constituting the FGD participants, there is need to include PWDs, marginalized, and minorities.

In summary:

TABLE A3: FGD participants

	Type of FGD	No. of FGDs
1	Women/caregivers with children below age 5	2
2	Women/caregivers with children 0-24 months	2
3	Adolescents (10-14, 15-19)	2
4	Males – Fathers of Children below age	2

Criteria for KIIs and IDIs

1. Policy Makers and Community Leaders

- Identification based on relevance
- Relevant questions from the 10 behaviours

2. Service Providers

- Identification based on relevance (e.g. Health, Education, Registration)
- Relevant questions from the 10 behaviours

C. Teams and cluster counties

A total of 12 teams are recommended for the KABP field work as shown in the table A4 below:

TABLE A4: Teams recommended for the KABP field work

Team	Cluster Counties
1.	Garrisa, Wajir
2.	Isiolo, Marsabit
3.	Kitui
4.	Trans Nzoia, West Pokot, ,
5.	Nandi, Kericho, Baringo,
6.	Kajiado, Narok, Samburu
7.	Kakamega
8.	Kisumu, Siaya, Homa Bay
9.	Nyeri, Nakuru
10.	Mombasa, Kwale, Taita Taveta,
11.	Tana River, Kilifi
12.	Turkana

The above allocation of teams is based on the language that is predominately spoken in the counties.

D. Survey pre-test

A survey pre-test needs to be conducted before commencement of data collection. This should focus on the following for each of the data collection tools:

1. Flow of questions
2. Relevance of the questions
3. Whether or not the questions are clear and unambiguous
4. Time taken to administer each type of tool

E. Research assistants

The recruitment of research assistants should be done carefully to ensure the success of the survey. The preferred qualifications for the research assistants are as follows:

1. University degree (Sociology, Anthropology)
2. Age 30 years and above

F. Data capture, transcription, entry and management

The data from the survey needs to be handled in a manner that will ensure highest integrity. For this to happen, the following steps should be followed:

1. Capture data using both notebooks and digital voice recorders
2. Transcribe the data
3. Translate the data into English
4. Enter the data and clean it up using an appropriate software e.g. Nvivo
5. Analyse the data

ANNEX III

List of Contributors

A. List of authors on child survival, development and protective behaviours

Name	Title
Lawrence Ikamari	Hand washing at critical times
Francis Kundu	Sleeping under ITN
Alfred Agwanda	Care Seeking: a) pregnant mothers make at least 4 ANC visits and seek skilled delivery, b) HIV positive women/families seek eMTCT and ARVs, c) early and appropriate care seeking for pneumonia and malaria, d) ORS/Zinc use for diarrhoea
Irene Muhunzu	Appropriate feeding practices – early initiation, EBF and timely introduction of appropriate complimentary feeding/ Minimum meal frequency and minimum dietary diversity Qualitative sampling frame
Andrew Mutuku	Full immunization of children by 1 year of age
Reinhard Rutto	Parents enrol their children in school and keep them in school
Nzomo Mulatya	Sanitary disposal of human waste
Anne Khasakhala	Rejection of child harmful practices (FGM/C, child marriage)
Ben Jarabi	Birth of children 0-1 year registered
Catherine Ndei	Children and adolescent participate in decision-making
James Nganga	Quantitative Sampling frame

B. Supervisors/Coordinators

1. Mr. George Kichamu, NCPD
2. Mr. Macdonald Obudho, KNBS
3. Mr. Samuel Ogola, KNBS

C. Advisory group

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Mrs. Margaret Mwangi	NCPD
Maurice Opiyo	NCPD
Anne Waichinga	MoEST
Robert Buluma	KNBS
Alice Nyabuti	Youth Directorate
Emily Opati	Gender Directorate

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C. Care seeking behaviour

a) Pregnant mothers make at least 4 ANC visits and seek skilled delivery

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b) HIV positive women/families seek eMTCT and ARVS

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NCPD is a semi-autonomous government agency that formulates and promotes population policy and coordinates related activities for sustainable development in Kenya.



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