



IOM International Organization for Migration

Access to Maternal & Early Childhood Health Care for Urban Migrants in Eastleigh, Nairobi, Kenya: A Pilot Study

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Table of Contents

| | |
|---------------------------|--|
| Introduction |Error! Bookmark not defined. |
| 1.1 | Background7 |
| 1.2 | Research Objectives8 |
| 2 | Methodology8 |
| 2.1 | Study area8 |
| 2.2 | Study Population9 |
| 2.3 | Sample size9 |
| 2.4 | Sampling Method10 |
| 2.5 | Cross Sectional Survey10 |
| 2.6 | In-Depth Interview10 |
| 2.7 | Data Management and Analysis11 |
| 3 | Quantitative Results 11 |
| 3.1 | Socio-demographic Characteristics11 |
| 3.2 | Antenatal Care14 |
| 3.3 | Care during Labour & Delivery18 |
| 3.4 | Post-Partum Care20 |
| 3.5 | Contraception23 |
| 3.6 | Breastfeeding26 |
| 3.7 | Early Childhood Immunization28 |
| 3.8 | Care for Early Childhood Sickness30 |
| 4 | Qualitative Results: Barriers & Facilitators 32 |
| 4.1 | In-depth Interviews32 |
| 4.1.1 | Conceptual Framework32 |
| 4.1.2 | Geographic Accessibility33 |
| 4.1.3 | Availability34 |
| 4.1.4 | Financial Accessibility35 |
| 4.1.5 | Acceptability36 |
| 4.1.6 | Summary of in-depth interviews38 |
| 4.2 | Key Informant Interviews39 |
| 4.2.1 | Key Informant Interview Results39 |
| 5 | Study limitations & Recommendations for Larger Study 41 |
| 6 | Potential Health Programming Recommendations 43 |
| 6.1 | General43 |
| 6.2 | Antenatal Care43 |
| 6.3 | Labour & Delivery44 |
| 6.4 | Post-Partum Care36 |
| 6.5 | Early Childhood Immunization36 |
| 6.6 | Care for Early Childhood Sickness36 |
| 7 | References 46 |

Executive Summary

Background The international community has identified migrant health as a priority area. There is increasing evidence that migrant communities access and use health care services differently than do host populations and that migration status is associated with compromised access to health care. The health of urban migrants in Nairobi is a particularly important issue, as it is estimated that 500 new migrants arrive in the Eastleigh area of Nairobi each week. The Migration Health Division of the International Organization for Migration in Nairobi, is committed to identifying migrant health programming gaps and priorities, with a focus on maternal and early childhood health. This pilot project was conducted to refine and test the study protocol, to inform a larger study to take place in the near future. It is the result of a partnership between the School of Nursing, McGill University in Montreal, Canada, the IOM Migration Health Department in Nairobi, Kenya, and the Clinical Epidemiology Unit at the University of Nairobi, Kenya.

Methodology This mixed methods study took place in Eastleigh Section III, Nairobi between September and December 2010. For the quantitative component, 81 women, including both migrants and Kenyan citizens, were recruited to participate in interviewer-assisted cross-sectional surveys via a multi-stage cluster sampling design. Data were then entered into an SPSS database, where descriptive analyses and hypothesis tests were performed. For the qualitative component, 10 women from the cross-sectional surveys participated in in-depth interviews, following a criterion-sampling design. Three key informant interviews were also conducted. Verbatim transcripts were analyzed according to an iterative process, based on Peters et al. (2008) conceptual framework.

Results In this pilot study, the need for a larger study was confirmed. Quantitative pilot results showed that significant differences in health care access exist between migrant and Kenyan women. Most notable are differences in antenatal care, labour and delivery, contraception and breastfeeding. Qualitatively, despite a general consensus on the importance of accessing maternal-child health care, participants cited numerous barriers, especially cost, language barriers and religious beliefs. However, the larger study is necessary to confirm these results.

Conclusions and Recommendations This pilot study was able to refine and test the study protocol for a larger IOM study to take place in Eastleigh in the near future. Recommendations for the larger study include: including all areas of Eastleigh in the quantitative sample to ensure that results can be generalized; improving qualitative sampling by developing more well-defined criteria; emphasizing the in-depth interview during interviewer training; initiating community mobilization at least two weeks prior to data collection; selecting a greater number of more comprehensive health service indicators and health outcomes for data collection and conducting logistic regression with respect to migration status during data analysis. Finally, continued involvement of IOM in providing health services in Eastleigh will maintain a strong connection with the community, perhaps IOM's greatest strength.

Acronyms

| | |
|-----------|--|
| ANC | Antenatal Care |
| BCG | Bacillus Calmette-Guèrin |
| CDC | Centres for Disease Control & Prevention |
| DPT | Diphtheria, Tetanus & Polio |
| HIV | Human Immunodeficiency Virus |
| IEC | Information, Education & Communication |
| IOM | International Organization for Migration |
| KNHSSP II | Kenya National Health Sector Strategic Plan II |
| MDGs | Millennium Development Goals |
| MHD | Migration Health Department |
| MoH | Ministry of Health |
| NGOs | Non-Governmental Organizations |
| OPV | Oral Polio Vaccine |
| PMTCT | Prevention of Mother-to-Child Transmission |
| TB | Tuberculosis |
| U of N | University of Nairobi |
| UNHCR | United Nations High Commissioner for Refugees |
| WHO | World Health Organization |

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Introduction

1.1 Background

Through the World Health Assembly Resolution 61.17 'Health of Migrants' (May 2008), the international community has identified migrant health as a priority area. According to the International Organization for Migration, the leading inter-governmental organization working with migrants worldwide, migration is defined as "the movement of a person or group of persons from one geographical unit to another across an administrative or political border, with the intention of settling indefinitely or temporarily in a place other than their place of origin" (IOM, 2010). Resolution 61.17 recognizes the health of migrants as a human right and calls for World Health Organization (WHO) Member States to promote migrant sensitive health policies and programmes.

Migration status often determines health status before, during and after migration, and has been shown to have an effect on health outcomes (Gagnon et al., 2006; Busza & Lush, 1999). As well, there is increasing evidence that migrant communities access and use health care services differently than do host populations (Gushulak & MacPherson, 2006) and that migration status is associated with compromised access to health care (Chauvin et al., 2007). Thus, "estimating the public health consequences and long-term costs associated with problems in access to health care due to migratory status" (Rousseau et al., 2008) should be a global priority.

The health of urban migrants in Nairobi is a particularly important issue for Kenya. As many as 50% of the world's 10.5 million refugees currently live in cities (UNHCR, 2010) and projections indicate that a high percentage of migrants will become permanent urban residents (UNHCR, 2009). It is estimated that 500 new migrants arrive in Eastleigh each week, however, registration and identification of urban migrants is difficult as they may remain 'under the radar' for fear of deportation and exploitation (UNHCR, 2009). Refugees leave Kenya's two main refugee camps, Dadaab in the east and Kakuma in the northwest and come to Nairobi in order to find a sense of community, safety and economic independence. Instead, according to the Humanitarian Policy Group (2010) they are often confronted with harassment, extortion, violent crime, precarious living conditions in overcrowded slums, poverty and limited access to health and social services. A great majority of refugees in Nairobi do not feel assimilated into Kenyan society, due to discrimination and xenophobic attitudes (HPG, 2010).

Because of its geographic location, porous borders and relatively stable political environment, Kenya is a destination country and crucial transit location for thousands of migrants, resulting in large migration flows. The IOM Migration Health Department in Nairobi serves as the technical hub for health programming in Central & East Africa, as well as the logistic and technical centre for migration health assessments across Africa and the Middle East. Migrant health research and university partnerships are crosscutting components of the regional framework (Kenney, 2009). The IOM Nairobi MHD has recently identified the need for information to identify health programming gaps and priorities, and to ensure that health programmes are targeted to meet the specific needs of vulnerable migrants with a particular focus on maternal and early childhood health.

Maternal health "refers to the health of women during pregnancy, childbirth and the postpartum period" (WHO, 2010). The fifth Millennium Development Goal is focused on improving maternal health, with a target of reducing the global maternal mortality ratio by 75% by 2015 (Pitchforth et al., 2006). However, internationally, it is estimated that more than 550,000 women die each year as a result of complications from pregnancy and childbirth (York, 2010). Significantly, many of these deaths have been shown to be preventable with adequate access to maternal health care (York, 2010).

Early Childhood is defined as up to the age of five (KNHSSP II, 2005). The fourth MDG is committed to reducing the under-five mortality rate by two-thirds between 1990 and 2015 (Pencheon et al., 2008). The effects of reduced or limited health care provision for the young can have serious long-term consequences for future

adult health, making the early recognition and management of health issues in children especially important (Gushulak & MacPherson, 2006). With a total fertility rate of 5.0 per woman nationally (World Health Statistics, 2006), and a population growth rate of 4.1% in Nairobi (CIA World Factbook, 2010; Central Bureau of Statistics, 2009), a focus on child health is becoming increasingly important.

The Kenyan National Health Sector Strategic Plan II (KNHSSP II), based on the Millennium Development Goals, is a strategic plan formulated by the Kenyan Ministry of Health (MoH) to reduce health inequalities and reverse the decline in health status in Kenya. Its first policy objective is to increase equitable access to health services. Health services in Nairobi are provided by both private and public sectors and the cost of public health services tend to be less than private (Taffa & Chepngeno, 2005). According to UNHCR, 60% of the clients accessing health services at the Nairobi City Council clinic, a public facility, are refugees and asylum-seekers (Narayan, 2010).

This pilot project is the result of a partnership between the School of Nursing, McGill University in Montreal, Canada, the IOM Migration Health Division in Nairobi, Kenya, and the Clinical Epidemiology Unit at the University of Nairobi, Kenya. It was conducted between September and December 2010.

1.2 Research Objectives

- The objectives of this pilot project are to refine and test the study protocol in order to inform a larger study to take place in 2011 or 2012. The specific objectives are as follows:
 - Refine and test sampling and recruitment strategies
 - Refine, translate and test data collection tools
 - Develop an interviewer training module
 - Develop an SPSS database and coding strategy for data entry
 - Determine data verification strategies and;
 - Test data analysis plans
- The research objectives of the larger study are to:
 - Determine the differences in maternal and early childhood health service indicators between urban migrant women and Kenyan women residing in Eastleigh.
 - Explore the barriers and facilitators to maternal and early childhood health care access for urban migrants in Eastleigh, Nairobi.
 - Determine whether there is evidence of an association between health service indicators and maternal and early childhood health outcomes in migrant and Kenyan groups.

2 Methodology

2.1 Study Area

This study took place in Eastleigh Section III of Nairobi. UNHCR estimates indicate that the number of registered urban refugees and asylum-seekers in Nairobi is 46,377, with 23,000 of these from Somalia (Narayan, 2010). However, unofficial estimates indicate that this number may be closer to 100,000 (Pavanello et al., 2010; RCK, 2008; Dix, 2006). The total population of Eastleigh is estimated to be 100,000 (Kenya Census, 1999) with an estimated 3.82% of this total under the age of 5 (DPHN, 2010). Eastleigh comprises a large population of Somali migrants, earning it the nickname of 'Little Mogadishu'. Other migrants in Eastleigh are of Ethiopian, Eritrean, Sudanese and other origin. These migrants have both regular and irregular migration statuses and have been marginalized from mainstream health programmes due to data gaps on epidemiology, health risk and vulnerability, and health-seeking behaviours (Irving, 2007). It is believed that language barriers, cultural beliefs, gender norms, poverty, and migration status are imparting a profound effect on access to preventive and curative health programming for migrants in Nairobi (Kenney, 2009). Due to their involvement

in refugee resettlement programmes, IOM has a positive reputation among urban migrants in Eastleigh (Irving, 2007).

2.2 Study Population

This study recruited 10% (n=81) of the desired representative sample for the larger study (n=800), including both migrant and Kenyan women in the urban area of Eastleigh, Nairobi. The definition of migrant comprises several distinct categories, all of which were included in the study. *Immigrants* are motivated to leave their home countries and re-establish themselves in a new country with the promise of a better life. Their migration is planned and they are able to return to their countries of origin if they choose (Gagnon et al., 2006). According to the 1951 UN Refugee Convention, a *refugee* is a person who “owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country” (Meyer, 2008). An *asylum-seeker* is “a person expressing in any manner the wish to seek international protection outside his/her country” (Meyer, 2008). An *irregular migrant*, also known as a *clandestine*, *illegal* or *undocumented migrant* or *migrant with irregular status* is “a migrant in an irregular situation in a transit or host country due to illegal entry, or to the expiry of his or her visa. The term is applied to non-nationals who have infringed the transit or host country’s rules of admission; persons attempting to obtain asylum without due cause; and any other person not authorized to remain in the host country” (IOM, 2010).

Inclusion and exclusion criteria by participant group may be found in Table 1.

Table 1. Inclusion Criteria by Participant Group

| Participant Group | Inclusion Criteria | Exclusion Criteria |
|-------------------|---|--|
| Migrant women | <ul style="list-style-type: none"> -Migrant -Has lived in Eastleigh, Nairobi for at least 3 months within the last 12 months -Legal adult (18 years) -Has had at least one live birth within the last 5 years | <ul style="list-style-type: none"> -Major hearing impairment -Major mental illness or cognitive impairment that precludes giving fully informed consent -Declined participation |
| Kenyan women | <ul style="list-style-type: none"> -Kenyan citizenship - Has lived in Eastleigh, Nairobi for at least 3 months within the last 12 months -Legal adult (18 years) -Has had at least one live birth within the last 5 years | <ul style="list-style-type: none"> -Major hearing impairment -Major mental illness or cognitive impairment that precludes giving fully informed consent -Declined participation |

2.3 Sample Size

For this pilot study, 10% of the sample size for the larger study (n=800) was used for the quantitative component, thus n=81. The sample size for the larger study is based on an event rate of 25% per outcome and 5-9 predictor variables. Predictor variables may include: language fluency, immigration status, ethnicity (as defined by maternal country of birth) (Gagnon et al., 2010), length of time in Nairobi, socio-economic status and education level.

For the qualitative component of the pilot study, a sample size of n=10 was used. For the larger study, n=40 (5% of the quantitative sample size) will be the objective. This is deemed sufficient to allow for

data saturation, the point at which “a sense of closure is attained because new data yield redundant information” (Polit & Beck, 2008).

2.4 Sampling Method

A group of 3 interviewers were recruited from the Eastleigh community and trained by the investigators for one week. The training included a thorough overview of the study protocol, research objectives and methodology. The study tools, including cross-sectional survey and in-depth interview were also refined, reviewed by the interviewers for cultural appropriateness and translated into Somali during this week of training.

In order to avoid participant fatigue due to the recently completed CDC-IOM health utilization study in Eastleigh Section II, the investigators purposively focused on Eastleigh Section III. Section III is deemed to be the section with the second highest population concentration and comparison of results between the two studies was thought to facilitate a greater understanding of access to health care in Eastleigh.

For the cross-sectional survey, random sampling was used. The interviewers, in collaboration with investigators, employed a multi-stage cluster sampling design, which involved “a successive random sampling of units” (Polit & Beck, 2008). First, using numbers drawn from a hat, the interviewers and investigators picked a random sample of 15 blocks of a total of 30 within Eastleigh Section III. This was done using a map showing blocks within Section III, located between 17th and 20th St in the east – west direction and between 1st and 5th avenue in the north – south direction. The interviewers verified that each block is indeed residential, containing households, by performing a walk-through in Eastleigh Section III. Then, 33 (10%) of the total plots within these blocks were randomly selected using the same method. In 15 of the plots, 3 interviews were conducted, whereas in 18 of the plots, 2 interviews were conducted. Within each plot, the interviewers randomly selected households. At each household, the interviewers verified whether potential respondents met the inclusion criteria (see Table 1). No two respondents were from the same household.

For the qualitative component of the study, purposive sampling, a non-probability sampling method in which “the researcher selects participants based on personal judgment about which ones will be most informative” (Polit & Beck, 2008), was used. Specifically, a criterion sampling design was used, an approach that is commonly employed in mixed methods research “in which data from the quantitative component are used to select cases meeting certain criteria for in-depth study” (Polit & Beck, 2008). Thus, the interviewers approached participants from the cross-sectional survey who were particularly open and willing to share detailed information about their health care experiences, for participation in the in-depth interview.

2.5 Cross Sectional Survey

To collect information on baseline characteristics, health indicators and health outcomes within the study population, an interviewer-assisted cross-sectional survey was administered. The cross-sectional survey was an 86-item questionnaire composed of questions deemed relevant to answering the research questions for the larger study. It drew from the CDC-IOM health utilization study in Eastleigh Section II (2010) and the Kenya Demographic and Health Survey (2008). Answers were either discrete or continuous categorical variables. Face-to-face interactions are regarded as the most effective method for collecting survey data due to the quality of information yielded and the low refusal rate (Polit & Beck, 2008).

2.6 In-depth Interview

To collect information on the barriers and facilitators to accessing maternal and early childhood health care for urban migrants in Eastleigh, interviewers conducted in-depth interviews through individual, face-to-face interviews with 10 participants, using the interview guide. A face-to-face interview is especially advantageous for qualitative methods because “the interviewer can probe more deeply the responses and clarify confusing questions” (Giuffre, 1997). Three of the ten in-depth interviews were audio taped with participant consent, as

the remainder of participants did not want the interview to be recorded. As much as possible, notes were recorded by the interviewers and incorporated into qualitative data analysis.

The interview guide focuses on key qualitative themes exploring the reasons why certain maternal and early childhood health-seeking behaviours occur in this community. It was developed following guidelines by Schensul, Schensul & LeCompte (1999), incorporating the variables within the Peters et al. (2008) conceptual framework (see Figure 1). It was also informed by the guide used by St-Cyr (2009, unpublished) in a study on the barriers and facilitators to reproductive health care access for urban migrants in Kampala, Uganda in collaboration with the IOM in fall 2009. The questions were open-ended to allow for collection of full quotes and for probing.

2.7 Data Management and Analysis

Quantitative data from the cross-sectional surveys were entered into an SPSS database. Descriptive analyses for each variable and health indicator were performed. Bivariate analyses, in the form of chi-square hypothesis tests, examined the relationship between migration status and health indicators/outcomes.

Verbatim in-depth interview transcripts, translated from Somali into English (for 9 of 10 interviews) and transcribed into Microsoft Word, were coded by hand according to an iterative data analysis (open coding) process, including both pre-determined and emerging codes, which were refined as the analysis progressed. Analysis ultimately led to axial coding, which related concepts to each other to establish meaning in the findings (Corbin & Strauss, 2008; St-Cyr, 2009, unpublished).

3 Quantitative Results

3.1 Socio-demographic Characteristics

One third (33%) of the participants were between 18 and 24 years old, while another 35% were between 25 and 29 years old. The average age of the children was 22.6 months, ranging from 6 months to 4 years, 11 months. Over half (54%) of the participants had lived in Eastleigh for at least 2 years, while 21% had lived there less than 1 year. The vast majority (78%) of respondents identified their occupation as housewife; 12% stated their occupation as businesswoman. When asked which language was spoken most often at home, over two-thirds (67%) answered Somali, with the second highest language spoken (19%) being Kiswahili. Other languages followed with Borana at 9%, Oromo at 4% and Amharic at 1%. Just over half (51%) of participants reported Kenya as their country of birth, followed closely by Somalia at 40% and Ethiopia at 7%. Maternal country of birth followed this trend closely with Kenya, Somalia and Ethiopia at 52%, 40% and 7%, respectively. Paternal country of birth also followed this trend closely with Kenya, Somalia and Ethiopia at 52%, 38% and 9%, respectively.

Key Findings: Socio-Demographic Characteristics

- 67% speak Somali
- 54% have lived in Eastleigh for at least 2 years
- 78% are housewives
- 26% have only completed *Madarasa*
- None have a university degree

With respect to migration status, the highest proportion of participants were Kenyan citizens (49%), followed by irregular migrants (24%), refugees (14%), asylum-seekers (10%) and labour migrants (1%). If applicable, participants were asked if they had a UNHCR mandate or a Kenyan ID card, in order to confirm their self-reported migration status. This was done because previous IOM experience has shown that many participants will falsely claim that they are either refugees or Kenyan citizens, for fear of deportation. However, participants were not asked to *show* any identification, as training interviewers to recognize

whether a document is legitimate or counterfeit was deemed unfeasible.

In terms of education level, 26% had completed *Madarasa* (Qur'an school), 17% less than primary school, 19% primary school or equivalent, 21% secondary school or equivalent and 12% a post-secondary degree or certificate. None of the 81 women surveyed had a university degree.

In an effort to indirectly measure income, numerous questions related to socio-economic status were asked, including water source, method of human waste disposal and availability of hand soap. Results showed that the vast majority (91%) of participants get their drinking water from a household tap, with only 3% getting it from a public/communal tap. However, almost half (47%) reported not treating their drinking water, an important finding given that tap water in Eastleigh is not suitable for drinking. On the other hand, one third (33%) treat it by boiling the water and 11% treat it with a commercial product, such as 'Water Guard'. With respect to human waste disposal, the vast majority of participants (95%) use a household toilet, while only 3% use a communal one. Only two thirds (67%) of participants reported having hand soap in their households, another notable finding with respect to infection control of communicable diseases. A summary of the socio-demographic characteristics of the participants may be found in Table 2.

Table 2. Socio-Demographic Characteristics

| Variable | n (%) |
|------------------------------------|--------------|
| Age | |
| 18-24 | 27 (33.3) |
| 25-29 | 28 (34.6) |
| 30-34 | 12 (14.8) |
| 35-39 | 11 (13.6) |
| 40+ | 2 (2.5) |
| No Response | 1 (1.2) |
| Length of Time in Eastleigh | |
| 3-6 months | 8 (9.9) |
| 7-11 months | 9 (11.1) |
| 12-23 months | 19 (23.5) |
| 2 years + | 44 (54.3) |
| No Response | 1 (1.2) |
| Occupation | |
| Housewife | 63 (77.8) |
| Business woman | 10 (12.3) |
| Domestic Staff | 2 (2.5) |
| Other | 4 (4.9) |
| No Response | 2 (2.5) |
| Language | |
| Somali | 54 (66.7) |
| Kiswahili | 15 (18.5) |
| Borana | 7 (8.6) |
| Oromo | 3 (3.7) |
| Amharic | 1 (1.2) |
| No Response | 1 (1.2) |
| Country of Birth | |
| Kenya | 41 (50.6) |
| Somalia | 32 (39.5) |
| Ethiopia | 6 (7.4) |

| | |
|--|-----------|
| No Response | 2 (2.5) |
| Maternal Country of Birth | |
| Kenya | 42 (51.9) |
| Somalia | 32 (39.5) |
| Ethiopia | 6 (7.4) |
| No Response | 1 (1.2) |
| Paternal Country of Birth | |
| Kenya | 42 (51.9) |
| Somalia | 31 (38.3) |
| Ethiopia | 7 (8.6) |
| No Response | 1 (1.2) |
| Migration Status | |
| Kenyan Citizen | 40 (49.4) |
| Undocumented Migrant | 19 (23.5) |
| Refugee | 11 (13.6) |
| Asylum-Seeker | 8 (9.9) |
| Labour Migrant | 1 (1.2) |
| Other | 1 (1.2) |
| No Response | 1 (1.2) |
| Level of Education | |
| Less than primary school | 14 (17.3) |
| Primary school or equivalent | 15 (18.5) |
| Secondary school or equivalent | 17 (21.0) |
| Post-secondary diploma/certificate | 10 (12.3) |
| <i>Madarasa</i> | 21 (25.9) |
| No Response | 4 (4.9) |
| Household Drinking Water Source | |
| Household Tap | 74 (91.4) |
| Public/Communal Tap | 2 (2.5) |
| Other | 4 (4.9) |
| No Response | 1 (1.2) |
| Treatment of Drinking Water | |
| Do not treat | 38 (46.9) |
| Boiling | 27 (33.3) |
| Commercial Product | 9 (11.1) |
| Other | 2 (2.5) |
| No Response | 5 (6.2) |
| Toilet | |
| Household Toilet | 77 (95.1) |
| Communal Toilet | 2 (2.5) |
| No Response | 2 (2.5) |
| Hand Soap in Household | |
| Yes | 54 (66.7) |
| No | 27 (33.3) |

3.2 Antenatal Care

Most (90%) of the participants received antenatal care (ANC) during their most recent pregnancy. With respect to migration status, however, while 98% of Kenyans received ANC, only 83% of migrants did, and the difference between groups is significant ($p=0.025$).

For those who received antenatal care, there was a wide variety of health care workers who provided this care. According to the WHO, a skilled birth attendant is “an accredited health professional – such as a midwife, doctor or nurse – who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns” (2004). In this study, 65% of participants saw a doctor and 46% saw a nurse, both considered “skilled”¹. However, 1% saw a traditional birth attendant, who is not considered skilled. Of note is that no participants reported seeing a midwife, though this may have been due to lack of awareness of the difference between a nurse and a midwife.

When asked where they received their antenatal care, participants reported a wide variety of institutions. The most common was private nursing/maternity home at 32%, followed by government health centre (11%), government hospital (10%), public nursing/maternity home (8%), faith-based hospital/clinic (6%). All other options (government dispensary, my home and home of my friend/relative/neighbour) were rarely reported, with only 1% of participants reporting each category.

Key Findings: ANC

- 90% have received ANC
- 98% of Kenyans received ANC vs. 83% of migrants
- 47% have had at least 4 ANC visits
- 31% of Kenyans have not had 4 ANC visits vs. 69% of migrants

The facilitators to accessing antenatal care were measured by asking the participants to cite the reasons they chose the particular health facility that they did. Results showed that the two most common reasons were: proximity to their homes and affordability, (34% each), followed by relative’s advice (25%), health care worker’s approach (21%), ease of transport (16%), health care worker’s advice (11%) and finally, seeing or hearing an advertisement and health care workers speaking their language (1% each).

Almost half of the participants (47%) met the KNHSSP II indicator of at least four antenatal care visits, with 31% attending four visits and 16% attending more than four. However, 27% of participants attended three visits, 14% attended two and 1% attended only one. When analyzed according to migration status, 30.8% of Kenyan citizens did not meet the KNHSSP II indicator, while 68.8% of migrants did not ($p=0.001$). When broken down into migrant categories, 55.6% of refugees, 57.1% of asylum-seekers and 78.6% of undocumented migrants did not meet the KNHSSP indicator of four ANC visits ($p=0.029$).

The first antenatal care visit is recommended to occur during the first trimester (<3 months of pregnancy) and only 35% of participants met this criteria. Of the Kenyan group, 41% met the recommendation, while 33% of migrants did ($p=0.302$). A greater proportion of respondents (38%) did not go until the second trimester (4-6 months), while 17% waited until the third trimester (7-9 months).

Those women who waited until the second or third trimester to go for their first antenatal care visit were asked about the barriers to them accessing care earlier. The most commonly cited reason was that they did not think they needed to attend before this time cited (59%), which suggests that education on the importance of early ANC is urgently needed. Other less commonly cited barriers

¹ Values do not add up to 100% because participants were permitted to give multiple responses.

included travel distance (7%), no one to take them, no one to take care of the house or children while they were gone and lack of time, (5% each). Finally, both affordability and fear of authorities were cited by 2% of the participants as barriers to not seeking antenatal care until the second or third trimester.

With respect to transport to antenatal care, 37% of participants took a bus or *matatu*, while 30% went on foot and 20% took a taxi. Much less common was a personal car at 4%. Almost half (48%) of participants reported that it took them between 30-60 minutes to get to antenatal care, while for 38% it took less than 30 minutes. Only 1% reported between 1 and 2 hours.

The cost of antenatal care reported by participants was significant. The average cost was 181 Ksh (\$2.26)² for transport, 754 Ksh (\$9.43) for medical care and 1400 Ksh (\$17.50) for drugs. Thus, the total average cost for antenatal care *per visit* was 2335 Ksh (\$29.19), a total of 9340 Ksh (\$116.75) if a woman meets the recommended four antenatal visits.

Barriers & Facilitators: ANC

- Barriers: Lack of knowledge around importance of ANC
- Facilitators: Proximity to home, affordability

For those participants who did not receive antenatal care at all, the barriers were once again identified. The most common reason cited was lack of awareness of ANC at 38% which indicates a significant knowledge gap around this topic. Other reasons, each cited by 13% of participants, included that they did not think they needed to, there was no one to take them, affordability, travel distance and not knowing where to go. A summary of findings on access to antenatal care statistics may be found in Table 3.

Table 3. Access to Antenatal Care

| Variable | n (%) ³ |
|-----------------------------------|--------------------|
| Received Antenatal Care | |
| Yes | 73 (90.1) |
| No | 8 (9.9) |
| Health Care Worker | |
| Doctor | 53 (73.6) |
| Nurse | 37 (51.4) |
| Midwife | 0 (0) |
| Traditional Birth Attendant | 1 (1.4) |
| Other | 0 (0) |
| N/A | 8 (10.0) |
| Don't Know | 0 (0) |
| No Response | 2 (2.7) |
| Facility | |
| Private nursing/maternity home | 23 (31.5) |
| Government health centre | 8 (9.9) |
| N/A | 8 (9.9) |
| Government hospital | 7 (9.6) |
| Public nursing/maternity home | 6 (8.2) |
| Faith-based hospital/clinic | 4 (5.5) |
| My home | 1 (1.4) |
| Home of friend/relative/neighbour | 1 (1.4) |

² Based on exchange rate of 80Ksh=1\$CDN

³ See footnote 1

| | |
|--|-----------|
| Government dispensary | 1 (1.4) |
| Other | 0 (0) |
| Don't Know | 0 (0) |
| No Response | 0 (0) |
| Facilitators | |
| Close to my home | 25 (34.2) |
| Affordable | 25 (34.2) |
| Advised by friend/relative | 18 (24.7) |
| Ease of Transport | 12 (16.4) |
| Advised by health care worker | 8 (11.0) |
| Saw/heard advertisement | 1 (1.4) |
| Health care workers friendly/welcoming | 15 (20.5) |
| Health care workers speak my language | 1 (1.4) |
| It was an emergency | 0 (0) |
| Other | 2 (2.7) |
| N/A | 8 (9.9) |
| Don't Know | 0 (0) |
| No Response | 0 (0) |
| Number of ANC visits | |
| One | 1(1.2) |
| Two | 11 (13.6) |
| Three | 22 (27.2) |
| Four | 25 (30.9) |
| More than Four | 13 (16.0) |
| N/A | 8 (9.9) |
| Don't Know | 1 (1.2) |
| Gestational Age at First ANC visit | |
| 1-3 months | 28 (34.6) |
| 4-6 months | 31 (38.3) |
| 7-9 months | 14 (17.3) |
| N/A | 8 (9.9) |
| Means of Transport | |
| On Foot | 24 (29.6) |
| Personal Car | 3 (3.7) |
| Bus/ <i>matatu</i> | 30 (37.0) |
| Taxi | 16 (19.8) |
| N/A | 8 (9.9) |
| Length of Travel Time | |
| Less than 30 minutes | 31 (38.3) |
| 30-60 minutes | 39 (48.1) |
| 1-2 hours | 3 (3.7) |
| N/A | 8 (9.9) |
| Barriers to not going in First Trimester | |
| Don't know what ANC is | 2 (4.5) |
| Did not think I needed to before this time | 26 (59.1) |
| No one to take me | 2 (4.5) |
| No one to take care of house/children while gone | 2 (4.5) |
| Could not afford it | 1 (2.3) |
| Too far to travel | 3 (6.8) |
| Did not have time | 2 (4.5) |
| Did not know where to go | 0 (0) |

| | |
|--|-----------|
| Health care workers do not speak my language | 0 (0) |
| Health care workers unfriendly/unwelcoming | 0 (0) |
| Fear of authorities/did not have the right papers | 1 (2.3) |
| Other | 1 (2.3) |
| N/A | 36 (45.0) |
| Don't Know | 1 (2.3) |
| No Response | 5 (11.1) |
| Barriers to ANC (of those who did not attend ANC visits at all) | 3 (37.5) |
| Don't know what ANC is | 1 (12.5) |
| Did not think I needed to | 1 (12.5) |
| No one to take me | 0 (0) |
| No one to take care of house/children while gone | 1 (12.5) |
| Could not afford it | 1 (12.5) |
| Too far to travel | 0 (0) |
| Did not have time | 1(12.5) |
| Did not know where to go | 0 (0) |
| Health care workers do not speak my language | 0 (0) |
| Health care workers unfriendly/unwelcoming | 0(0) |
| Fear of authorities/did not have the right papers | 2 (25.0) |
| Other | 0 (0) |
| Don't Know | 2 (22.2) |
| No Response | |

This study assessed not only access to antenatal care, but also the quality of antenatal care received, based on criteria in the Kenyan Antenatal Care Profile (WHO, 2010). Of the women who received ANC, just over half (53%) reported being given information about breastfeeding. Only 34% reported being informed about the signs of pregnancy complications, while only 31% reported being told where to go if they experienced these complications. In general, 88% of participants were given a vaccination against tetanus, 78% took iron tablets or iron syrup and 43% took malaria prophylaxis (i.e. Fansidar). By migration status however, 55% of Kenyans took malaria prophylaxis, while only 39% of migrants did ($p=0.182$). While prevention of malaria during gestation is associated with improved maternal health outcomes, infant health and survival (RBM, 2010), this is less of a concern for residents of Nairobi, where malaria is not endemic.

Of the antenatal care recipients, 70% reported being tested for HIV and the self-reported prevalence in this group was 0%. However, this might not be a fully accurate picture, given that during the post-data collection debriefing session, the interviewers stated that many participants were uncomfortable with this question. In general, this is a limitation of self-reporting when compared to clinical testing in health research. None of the women reported receiving care and treatment for HIV, or PMTCT due to the reported HIV prevalence. A summary of antenatal care quality may be found in Table 4.

Table 4. Antenatal Care Quality

| Variable | n (%) ⁴ |
|---|--------------------|
| Reportedly given information about breastfeeding | |
| Yes | 43 (53.1) |
| No | 30 (37.0) |
| N/A | 8 (9.9) |
| Reportedly given information about signs of | |

⁴ See footnote 1

| | |
|--|-----------|
| pregnancy complications | |
| Yes | 27 (33.8) |
| No | 45 (56.3) |
| N/A | 8 (10.0) |
| Reportedly given information about where to go if had complications | |
| Yes | 25 (30.9) |
| No | 45 (53.1) |
| N/A | 8 (9.9) |
| Reportedly given tetanus toxoid immunization | |
| Yes | 71 (87.7) |
| No | 2 (2.5) |
| N/A | 8 (9.9) |
| Took iron tablets/syrup | |
| Yes | 63 (77.8) |
| No | 10 (12.3) |
| N/A | 8 (9.9) |
| Took malaria prophylaxis | |
| Yes | 35 (43.2) |
| No | 37 (45.7) |
| N/A | 8 (9.9) |
| Tested for HIV | |
| Yes | 57 (70.4) |
| No | 12 (14.8) |
| N/A | 8 (9.9) |

3.3 Care During Labour & Delivery

Just over half (56%) of participants reported giving birth at private facilities, with 30% at private nursing/maternity homes and 26% at private hospital/clinics. The remainder gave birth at a variety of facilities, including government hospital (12%), public nursing/maternity home (10%), faith-based hospital/clinic (7%) and government health centre (5%). Only 7% of participants reported giving birth either at their own home (5%) or the home of a friend, relative or neighbour (3%). It is important to note that *all* of participants who reported giving birth at home (100%) were migrants.

When asked about facilitators to accessing these different health care facilities, the primary reason was affordability (41%), followed by friend/relative's advice (27%), proximity to home' (25%), ease of transport (16%), health care workers' approach (16%), health care worker's advice (7%), emergency (6%), health care workers' speaking their language (3%) and finally seeing or hearing an advertisement (1%).

**Key Findings:
Labour & Delivery**

- 7.4% gave birth at home (all were migrants)
- 100% Kenyans assisted by skilled health worker vs. 85% migrants

In terms of transport to the facility for labour and delivery, results differed from those for antenatal care, perhaps due to the more urgent nature of labour. Fifty four per cent of participants reported using a taxi, while 15% went on foot, 12% took a personal car and 11% took a bus or *matatu*. It took 82% of participants less than an hour to reach the health facility and 42% in less than half an hour.

Unfortunately, for 10% it took 1-2 hours and for one woman (1%) it took greater than 4 hours. It is suspected that this woman did not deliver in Nairobi, but instead went outside the city to give birth.

Labour and delivery care was the most costly of all the maternal-child health services reported in this study. The average cost for transport was reported as 422 Ksh (\$5.28), while that for medical care was 13 743 Ksh (\$171.79) and for drugs 5794 Ksh (\$72.43), for a total of 19 959 (\$249.49).

As with antenatal care, a variety of health care workers assisted with the deliveries, with an important distinction between skilled and non-skilled birth attendants. The KNHSSP II outlines the ‘prevalence of deliveries conducted by a *skilled* birth attendant’ as an important health service indicator. Evidence indicates that skilled care at birth reduces the risk of maternal mortality (WHO, 2004), especially important in this context because maternal death is the leading cause of death for Kenyan women of childbearing age (WHO, 2009).

Facilitators: Labour & Delivery

- Affordability
- Friend/relative’s advice
- Proximity to home
- Ease of transport

In this study, during labour and delivery, 53% of women reported being assisted by a doctor, 62% by a nurse, 5% by a traditional birth attendant, 3% by a relative/friend and 1% by a midwife. The high percentage of women being assisted by a nurse during delivery is most likely due to the fact that all nurses in Kenya receive midwifery training as students. Fortunately, none of the women reported ‘no one’ as assisting them, thus no women were left alone. Interestingly, while 100% of Kenyan citizens were assisted by a skilled health worker, only 85% of migrants were (p=0.011).

The majority of women (84%) had normal vaginal deliveries, while another 1% required assistance (such as vacuum or forceps) during normal delivery and 15% required Caesarean sections. This value is much higher than the Kenyan Caesarean section rate of 4% (KDHS, 2003). The Kenyan rate, however, is influenced by the low prevalence of Caesarean sections in rural Kenya (3%), where access to this service is limited compared to urban areas (9%). Over three quarters of women (78%) reported no complications during delivery, while the remainder (22%) reported experiencing complications. A summary of findings on care during labour and delivery may be found in Table 5.

Table 5. Care during Labour & Delivery

| Variable | n (%) ⁵ |
|-----------------------------------|--------------------|
| Facility | |
| Private nursing/maternity home | 24 (29.6) |
| Private hospital/clinic | 21 (25.9) |
| Government hospital | 10 (12.3) |
| Public nursing/maternity home | 8 (9.9) |
| Faith-based hospital/clinic | 6 (7.4) |
| Government health centre | 4 (4.9) |
| My home | 4 (4.9) |
| Home of friend/relative/neighbour | 2 (2.5) |
| Other | 2 (2.5) |
| Facilitators | |
| Affordable | 33 (40.7) |

⁵ See footnote 1

| | |
|--|-----------|
| Advised by friend/relative | 22 (27.2) |
| Close to my home | 20 (24.7) |
| Ease of Transport | 13 (16.0) |
| Health care workers friendly/welcoming | 13 (16.0) |
| Advised by health care worker | 6 (7.4) |
| It was an emergency | 5 (6.2) |
| Other | 4 (4.9) |
| Health care workers speak my language | 2 (2.5) |
| Saw/heard advertisement | 1 (1.2) |
| Don't Know | 1 (1.2) |
| No Response | 0 (0) |
| Means of Transport | |
| Taxi | 44 (54.3) |
| On Foot | 12 (14.8) |
| Personal Car | 10 (12.3) |
| Bus/matatu | 9 (11.1) |
| N/A | 5 (6.2) |
| No Response | 1 (1.2) |
| Length of Travel Time | |
| Less than 30 minutes | 34 (42.0) |
| 30-60 minutes | 32 (39.5) |
| 1-2 hours | 8 (9.9) |
| 4 hours + | 1 (1.2) |
| N/A | 5 (6.2) |
| No Response | 1 (1.2) |
| Health Care Worker | |
| Nurse | 50 (61.7) |
| Doctor | 43 (53.1) |
| Traditional Birth Attendant | 4 (4.9) |
| Midwife | 1 (1.2) |
| Relative/Friend | 2 (2.5) |
| No One | 0 (0) |
| Other | 0 (0) |
| Don't Know | 2 (2.5) |
| No Response | 0 (0) |
| Type of Delivery | |
| Normal Vaginal Delivery | 68 (84.0) |
| Caesarean Section | 12 (14.8) |
| Assisted Vaginal Delivery | 1 (1.2) |
| Experienced Complications | |
| Yes | 18 (22.2) |
| No | 63 (77.8) |

3.4 Post-Partum Care

It is recommended that to ensure a safe delivery, *both* mother and baby should be checked by a health care worker within the first five minutes after birth. In this study, immediate post-partum care was assessed through a number of questions. Sixty three per cent of participants reported that a doctor performed the first post-partum check and 36% reported that a nurse did. Other health care workers were only slightly represented, with traditional birth attendant at 4%, midwife at 1%, and relative/friend at 1%. A post-partum check was not performed at all for 1% of participants. This may be due to a number of factors, including: no one was able to take them, affordability, not knowing where

to go and health care worker negligence or workload, each cited by 33% of participants who did not receive a post-partum check. A possible explanation for these barriers is that the women who gave birth at home would be less likely to visit a health centre post-partum.

With respect to the timing of the post-partum check, results were mixed. Over half (54%) of participants claimed that their baby was checked within the first five minutes after birth, meeting the recommendation. However 15% claimed that this check did not take place until 6-9 minutes, and another 15% claimed that it took 20 minutes or longer. When asked about when the health care worker checked on the mother, 37% responded 20 minutes or longer, while only 27% were checked within the five minute window. The other options, '6-9 minutes' and '10-19 minutes' were both reported by 10% of women.

When asked where the first post-partum check took place, the results mirrored those for labour and delivery, with over half (52%) of participants reportedly using private health care facilities. Of 8% used private nursing/maternity homes, while 24% used private hospital/clinics. The next most common facility was government hospital (15%), followed by public nursing/maternity home (11%), faith-based hospital/clinic (9%), government health centre (5%), my home (4%) and home of friend/relative/neighbour (3%).

Key Findings: Post-Partum Check

- 54% of babies checked with 5 minutes
- 27% of mothers checked within 5 minutes

The reasons cited for why they chose this option were also quite varied. Over one-third (36%) cited affordability, while proximity to home followed closely at 28%. Again, this may be cited by the women who delivered at home. Relative/friend's advice was cited by 26% of the participants, health care workers' approach by 15%, ease of transport by 14%, and emergency by 9%. In this case, it is possible that there were complications during or immediately after the delivery, such as post-partum haemorrhage, retained placenta or neonatal distress. With a complication prevalence of 22% in this sample (see section 3.3), the health check as an emergency procedure is a feasible explanation. The remaining rationales for health facility choice were health care workers' advice (8%), health care workers speaking their language (4%) and seeing or hearing an advertisement (1%). A summary of results related to post-partum care may be found in Table 6.

Table 6. Post-Partum Care

| Variable | n (%) ⁶ |
|-----------------------------|--------------------|
| Health Care Worker | |
| Doctor | 51 (63.0) |
| Nurse | 29 (35.8) |
| Traditional Birth Attendant | 3 (3.7) |
| Don't Know | 2 (2.5) |
| Midwife | 1 (1.2) |
| Relative/Friend | 1 (1.2) |
| No One | 1 (1.2) |
| Other | 0 (0) |
| Timing (baby) | |

⁶ See footnote 1

| | |
|---|-----------|
| 0-5 minutes | 44 (54.3) |
| 6-9 minutes | 12 (14.8) |
| 20 minutes + | 12 (14.8) |
| Don't Know | 9 (11.1) |
| 10-19 minutes | 3 (3.7) |
| N/A | 1 (1.2) |
| Timing (mother) | |
| 20 minutes + | 30 (37.0) |
| 0-5 minutes | 22 (27.2) |
| Don't Know | 12 (14.8) |
| 6-9 minutes | 8 (9.9) |
| 10-19 minutes | 8 (9.9) |
| N/A | 1 (1.2) |
| Facility | |
| Private nursing/maternity home | 23 (28.4) |
| Private hospital/clinic | 19 (23.5) |
| Government hospital | 12 (14.8) |
| Public nursing/maternity home | 9 (11.1) |
| Faith-based hospital/clinic | 7 (8.6) |
| Government health centre | 4 (4.9) |
| My home | 3 (3.7) |
| Home of friend/relative/neighbour | 2 (2.5) |
| N/A | 1 (1.2) |
| No Response | 1 (1.2) |
| Facilitators | |
| Affordable | 29 (36.3) |
| Close to my home | 22 (27.5) |
| Advised by friend/relative | 21 (26.3) |
| Health care workers friendly/welcoming | 12 (15.0) |
| Ease of Transport | 11 (13.8) |
| It was an emergency | 7 (8.8) |
| Advised by health care worker | 6 (7.5) |
| Health care workers speak my language | 3 (3.8) |
| Saw/heard advertisement | 1 (1.3) |
| Other | 1 (1.3) |
| N/A | 1 (1.3) |
| Don't Know | 0 (0) |
| No Response | 0 (0) |
| Barriers | |
| N/A | 79 (97.5) |
| No one to take me | 1 (1.2) |
| Could not afford it | 1 (1.2) |
| Did not know where to go | 1 (1.2) |
| Health care workers negligent/too busy | 1 (1.2) |
| Did not think I needed to | 0 (0) |
| No one to take care of house/children while gone | 0 (0) |
| Too far to travel | 0 (0) |
| Did not have time | 0 (0) |
| Health workers do not speak my language | 0 (0) |
| Health care workers unfriendly/unwelcoming | 0 (0) |
| Fear of authorities/did not have the right papers | 0 (0) |

| | |
|-------------|-------|
| Other | 0 (0) |
| Don't Know | 0 (0) |
| No Response | 0 (0) |

3.5 Contraception

Family planning allows individuals and couples to anticipate and attain their desired number of children and the timing and spacing of their births. It is achieved through the use of contraceptive methods. A woman's ability to space and limit her pregnancies has a direct impact on her health and well-being, as well as the outcome of each pregnancy. Results from this study showed that 55% of Kenyans have used or are currently using, contraception, while this number is only 20% for migrants (p=0.002).

The proportion of participants in this study reporting never having used contraception is 63%. Another 26% reported currently using, while the remainder (11%) reported using previously, then stopping. Of note is that during the debriefing session, the interviewers reported that participants would often look around to make sure no one was listening, before responding that they have used contraception. This suggests that there is stigmatization towards the use of contraceptives in this community, which is confirmed by the research findings. Twenty four per cent of participants claim that their culture/religion does not allow it, while 16% cite a fear of adverse effects, 14% claim that their husband does not allow it, another 14% claim that they did not think they needed to, 6% did not know what contraception is and 2% are afraid of the authorities. Thus, the belief in not using contraception for cultural or religious reasons seems quite prevalent in this community, which is a challenge for health promotion activities, as this variable may be less amenable to change.

Key Findings

- 55% of Kenyans are currently using or have used contraception
- 20% of migrants are currently using or have used contraception
- 63% of women have never used contraception

In terms of type of contraception, the use of injectables was reported by 12% of participants, while 16% report using an oral contraceptive ('the pill') and 11% report using implants. Of note is that these are all female methods of contraception; for example, none of the participants reported using a male condom. Further research examining power in sexual relationships within this community may provide greater insight into community gender dynamics, and their relationship to contraceptive use.

With respect to length of time using contraception, 11% had used for 0-5 months, 10% for 1-2 years, 9% for 6-11 months, 6% for 2-3 years and 1% for greater than 3 years. In other words, one-fifth (20%) of participants have been using contraception for less than one year. The reasons cited for using different types of contraception are: ease of use (50%), health care worker advice (30%), proximity to home (23%), relative/friend advice (10%), allowed by their husband (7%), ease of transport (3%) and affordability (3%). It is interesting to note that health care workers can have a fairly important influence when it comes to these decisions, a potential area for intervention to increase the use of contraceptives in this community.

For those who used contraceptive previously, then stopped, there were only two reasons cited: they wanted to have a child (6%) and fear of adverse effects (3%). The second reason suggests that this community may benefit from education targeted at correction misconceptions around adverse effects of contraceptives. It may also be interesting to

Barriers & Facilitators: Contraception

- Barriers: Culture/religion, fear of adverse effects
- Facilitators: Proximity to home, affordability

find out what information brought about this fear and led to behaviour change, and how this information was disseminated.

In terms of where they accessed contraceptives, participants reported a variety of facilities. The two most common, both reported by 23% of participants, were chemist/pharmacy and private hospital/clinic. Once again, we see the preference in this community for private health care facilities when it comes to maternal-child health. Both public nursing/maternity home and private nursing/maternity home were cited by 17% of participants, while 10% said government hospital, 7% said government health centre and 3% said faith-based hospital/clinic. The reasons cited for choosing these different options were: proximity to home (43%), affordability (37%), ease of transport (13%), health care worker's advice (10%), health care worker approach (10%), relative/friend's advice (3%) and seeing or hearing an advertisement (3%). A summary of results on contraception may be found in Table 7.

Table 7. Contraception

| Variable | n (%) ⁷ |
|--|--------------------|
| Ever used Contraception | |
| Yes, using currently | 21 (25.9) |
| Yes, used previously then stopped | 9 (11.1) |
| No | 51 (63.0) |
| Type of Contraception | |
| Injectables | 19 (16.0) |
| Pill | 10 (12.3) |
| Implants | 9 (11.1) |
| All other forms of contraception | 0 (0) |
| Length of time using | |
| N/A | 50 (62.5) |
| 0-5 months | 9 (11.3) |
| 1-2 years | 8 (10.0) |
| 6-11 months | 7 (8.8) |
| 2-3 years | 5 (6.3) |
| 3 years + | 1 (1.3) |
| Facilitators: choice of contraception | |
| It is easy | 15 (18.5) |
| Advised by health care worker | 9 (11.1) |
| Can get near my home | 7 (8.6) |
| Advised by friend/relative | 3 (3.7) |
| My husband allows it | 2 (2.5) |
| Ease of transport | 1 (1.2) |
| Affordable | 1 (1.2) |
| It respects my cultural/religious beliefs | 0 (0) |
| My family allows it | 0 (0) |
| Saw/heard advertisement | 0 (0) |
| Health care workers friendly/welcoming | 0 (0) |
| Health care workers speak my language | 0 (0) |
| It was an emergency | 0 (0) |
| Other | 0 (0) |
| N/A | 0 (0) |

⁷ See footnote 1

| | |
|--|-----------|
| Don't Know | 0 (0) |
| No Response | 0 (0) |
| Used previously, reasons for stopping | |
| N/A | 71 (87.7) |
| Wanted to have child | 5 (6.2) |
| Fear of adverse effects | 2 (2.5) |
| Got married | 0 (0) |
| Diagnosed with a medical condition (ex. Diabetes, heart disease) | 0 (0) |
| Did not think I need to anymore | 0 (0) |
| No one to take me | 0 (0) |
| No one to take care of house/children while gone | 0 (0) |
| Could not afford it | 0 (0) |
| Too far to travel | 0 (0) |
| Did not have time | 0 (0) |
| Did not know where to go | 0 (0) |
| Health care workers do not speak my language | 0 (0) |
| Health care workers unfriendly/unwelcoming | 0 (0) |
| Fear of authorities/did not have the right papers | 0 (0) |
| Don't Know | 0 (0) |
| No Response | |
| Source of contraception | |
| N/A | 50 (61.7) |
| Private hospital/clinic | 7 (8.6) |
| Chemist/Pharmacy | 7 (8.6) |
| Public nursing/maternity home | 5 (6.2) |
| Private nursing/maternity home | 5 (6.2) |
| Government hospital | 3 (3.7) |
| Government health centre | 2 (2.5) |
| Faith-based hospital/clinic | 1 (1.2) |
| No Response | 1 (1.2) |
| Natural methods | 0 (0) |
| From a friend/relative | 0 (0) |
| From a traditional healer/birth attendant | 0 (0) |
| Government dispensary | 0 (0) |
| Other | 0 (0) |
| Don't Know | 0 (0) |
| Facilitators: Choice of Facility | |
| N/A | 50 (61.7) |
| Close to my home | 13 (16.0) |
| Affordable | 11 (13.6) |
| Ease of Transport | 4 (4.9) |
| Advised by health care worker | 3 (3.7) |
| Health care worker friendly/unwelcoming | 3 (3.7) |
| Advised by friend/relative | 1 (1.2) |
| Saw/heard advertisement | 1 (1.2) |
| No Response | 1 (1.2) |
| Natural methods | 0 (0) |
| Health care workers speak my language | 0 (0) |
| It was an emergency | 0 (0) |
| Other | 0 (0) |

| | |
|---|-----------|
| Don't Know | 0 (0) |
| Barriers to using contraception | |
| N/A | 30 (37.0) |
| No Response | 13 (16.0) |
| My culture/religion does not allow it | 12 (14.8) |
| Fear of adverse effects | 8 (9.9) |
| My husband does not allow it | 7 (8.6) |
| Did not think I needed to | 7 (8.6) |
| Other | 6 (7.4) |
| Don't know what contraception is | 3 (3.7) |
| Fear of authorities/did not have right papers | 1 (1.2) |
| No one to take me | 0 (0) |
| No on to take care of house/children while gone | 0 (0) |
| Not affordable | 0 (0) |
| Too far to travel | 0 (0) |
| Did not have time | 0 (0) |
| Did not know where to go | 0 (0) |
| Health care workers did not speak my language | 0 (0) |
| Health care workers unfriendly/unwelcoming | 0 (0) |
| My family does not allow it | 0 (0) |
| Don't Know | 0 (0) |

3.6 Breastfeeding

In this sample of women from Eastleigh, 93% report breastfeeding. For the 5% of women who do not breastfeed, the only reason cited was 'no milk' (60%). With respect to length of time breastfeeding, the WHO recommends exclusive breastfeeding for at least 6 months, due to the significant immunological, nutritional and developmental benefits. In this study, the majority (80%) reported breastfeeding for at least 6 months. Thirty three per cent reported between 6 months and 1 year, 25% reported 1-2 years and 23% reported greater than 2 years. A minority (13%) report less than 6 months.

In order to assess whether the breastfeeding was *exclusive* for this period of time, women were asked when they started giving their baby food other than breast milk. Unfortunately, 31% reported giving their baby food other than breast milk before 6 months of age. Of these, 56% were Kenyan, 24% were undocumented migrants and 16% were refugees (p=0.006). The majority (55%) of participants continued to breastfeed to between 6 months and 1 year, while a small group (5%) waited until 1-2 years before giving their child other foods. Thus, while breastfeeding appears to be very common in this community, education about the importance of *exclusive* breastfeeding for at least 6 months may be beneficial.

When asked why they gave food other than breast milk before 6 months of age, 16% reported being pregnant again, which also points to the need for greater use of contraception. Research indicates that there is no health risk to either mother or baby in breastfeeding while pregnant. According to La Leche League International, there is no evidence that continuing to breastfeed while pregnant will deprive the unborn child of necessary nutrients (2010). However, recent

Key Findings: Breastfeeding

- 93% breastfeed their children
- 31% give baby food other than breast milk before 6 months
- Of who give food other than breast milk before 6 months, 56% are Kenyan, 24% are undocumented migrants and 16% are refugees

research suggests that milk supply may decline in the fourth to fifth month of gestation (LLL, 2010).

In agreement with the data for not breastfeeding at all, 48% of women reported that there was no milk as the reason for giving other foods before 6 months. This was closely followed by women claiming that the baby needed more than breast milk (44%), mother sick (8%), and pain and other food believed to be better (both 4%). A summary of results related to breastfeeding may be found in Table 8.

Table 8. Breastfeeding

| Variable | n (%)⁸ |
|---|--------------------------|
| Breastfeed | |
| Yes | 75 (92.6) |
| No | 4 (4.9) |
| No Response | 2 (2.5) |
| Length of Time | |
| 6 months- 1 year | 26 (32.5) |
| 1-2 years | 20 (25.0) |
| 2 years + | 18 (22.2) |
| Less than 6 months | 10 (12.3) |
| N/A | 5 (6.3) |
| No Response | 1 (1.2) |
| End of exclusive breastfeeding | |
| 6 months- 1 year | 44 (55.0) |
| Less than 6 months | 25 (31.3) |
| 1-2 years | 4 (5.0) |
| N/A | 4 (5.0) |
| No Response | 3 (3.8) |
| Barriers to exclusive breastfeeding for 6 months | |
| N/A | 54 (66.7) |
| No milk | 12 (14.8) |
| Baby needed more than breast milk | 11 (13.6) |
| Became pregnant again | 4 (4.9) |
| I was sick | 2 (2.5) |
| Pain | 1 (1.2) |
| Other food is better | 1 (1.2) |
| Other | 1 (1.2) |
| Don't Know | 0 (0) |
| No Response | 0 (0) |
| Not enough time | 0 (0) |
| Away from my baby | 0 (0) |
| Barriers to breastfeeding in general | |
| N/A | 75 (92.6) |
| No milk | 3 (3.7) |
| Other | 2 (2.5) |
| Pain | 0 (0) |
| I was sick | 0 (0) |
| Not enough time | 0 (0) |
| Away from my baby | 0 (0) |

⁸ See footnote 1

| | |
|----------------------|-------|
| Other food is better | 0 (0) |
| Don't Know | 0 (0) |
| No Response | 0 (0) |

3.7 Early Childhood Immunization

Ninety five per cent of participants responded that their child under 5 had been vaccinated. However, while 94% had been issued a vaccination card for their child, only 41% were actually able to locate the vaccination card. This finding emphasizes the importance of strong community mobilization prior to data collection, in order to inform the community of what will be required of them as research participants.

Immunization coverage in this study appears to be similar to Kenyan averages, with 65% of children fully immunized at 1 year of age. Specific immunization coverage is as follows: BCG at 92%, Pentavalent (DPT/Hemophilus Influenza B/Hepatitis B) dose 1 at 78%, Pentavalent dose 2 at 76%, Pentavalent dose 3 at 72%, OPV birth at 86%, OPV dose 1 and 2 both at 81%, OPV dose 3 at 79% and measles at 65%. For Kenya, these numbers are BCG at 75%, Pentavalent dose 1 at 80%, Pentavalent dose 3 at 75% and OPV dose 3 at 71% (WHO and UNICEF, 2010). Due to the fact that measles is given at 9 months, according to the Kenyan vaccination schedule (WHO, 2010), the proportion of children vaccinated appears lower than the rest of the vaccines. Further analyses report that the measles vaccination coverage for children 9-12 months is only 4%, while for those over 12 months, it is 94%. This indicates that most children are not receiving their measles vaccination according to the schedule.

Key Findings

- 95% of children under 5 have been vaccinated
- 65% of children fully immunized at 1 year
- 92% BCG coverage
- 65% measles coverage
- Only 4% of those 9-12 months have received measles
- Most receive measles after 12 months of age, despite recommendation
- Only 11% of children have received vitamin A within last 6 months

The recommendation for vitamin A supplementation, according to WHO guidelines, is that children under 5 receive a vitamin A capsule once every 6 months between 6 months of age to 5 years (WHO, 2010). However, this study shows that only 11% of children had received vitamin A within the last 6 months. Seventeen per cent received it between 6 and 11 months ago, 13% received it between 12 and 24 months ago and 8% last received it over 2 years ago. Thus, these children are at risk of vitamin A deficiency, which can lead to blindness, measles, diarrhoea and even death (WHO, 2003). In fact, vitamin A deficiency is the leading cause of preventable childhood blindness and supplementation is regarded as the best approach to addressing vitamin A deficiency (Andersson and de Benoist, 2002).

As indicated in the table below, there are minor discrepancies between the pentavalent vaccine and oral polio vaccine given at the same age. This may be due to the fact that in some cases the researchers relied on information provided by the participants, for those who did not have a vaccination card for verification. A summary of early childhood immunization results may be found in Table 9.

Table 9. Early Childhood Immunization

| Variable | n (%) |
|-----------------------------------|--------------|
| Child vaccinated | |
| Yes | 74 (94.9) |
| No | 3 (3.8) |
| Don't know | 1 (1.3) |
| Issued vaccination card | |
| Yes, card available | 32 (40.5) |
| Yes, but card not available | 42 (53.2) |
| No | 4 (5.1) |
| No Response | 1 (1.3) |
| Child received BCG vaccine | |
| Yes | 70 (92.1) |
| No | 6 (7.9) |
| Pentavalent dose 1 | |
| Yes | 59 (77.6) |
| No | 17 (22.4) |
| Pentavalent dose 2 | |
| Yes | 58 (76.3) |
| No | 18 (23.7) |
| Pentavalent dose 3 | |
| Yes | 55 (72.4) |
| No | 21 (27.6) |
| OPV birth | |
| Yes | 65 (85.5) |
| No | 11 (14.5) |
| OPV dose 1 | |
| Yes | 62 (81.6) |
| No | 11 (14.5) |
| OPV dose 2 | |
| Yes | 62 (81.6) |
| No | 14 (18.4) |
| OPV dose 3 | |
| Yes | 60 (78.9) |
| No | 16 (21.1) |
| Measles | |
| Yes | 49 (64.5) |
| No | 27 (35.5) |
| Vitamin A | |
| Yes | 39 (49.4) |
| No | 33 (41.8) |
| Don't Know | 5 (6.3) |
| No Response | 2 (2.5) |
| Most Recent Vitamin A dose | |
| No Response | 32 (39.5) |
| 6-11 months ago | 13 (16.0) |
| 12-24 months ago | 10 (12.7) |
| Don't Know | 9 (11.1) |
| 0-5 months ago | 9 (11.1) |
| 2 years ago + | 6 (7.6) |

3.8 Care for Early Childhood Sickness

Sixty three per cent of participants reported having a child under 5 who was sick in the past year. Of these, less than half (46%) sought treatment for their child. Of this number, 51% were migrants and 49% were Kenyan citizens ($p=0.717$). Notably, these results are opposite to most other categories of care. It is hypothesized that severity of illness may play a role in this difference.

The reasons for not seeking treatment were diverse, including: the child was getting well on their own (10%), the mother did not think she needed to seek treatment (7%), affordability (5%), no one to take them (1%), did not know where to go (1%) and health care workers' approach (1%). These reasons also differed with respect to migration status. Only migrants said that there was no one to take them, that they did not know where to go and that the health care workers had a negative approach. Thirty eight per cent of migrants cited affordability, while only 17% of Kenyan citizens did ($p=0.393$).

Barriers & Facilitators: Early Childhood Sickness

- **Barriers:** Child getting well on own, did not think needed treatment
- **Facilitators:** Affordability, relative/friend's advice, proximity to home

In terms of where respondents sought treatment for their sick child, the results matched closely those for other types of maternal-child health care. Twenty six per cent went to a private hospital or clinic, 7% went to a faith-base hospital/clinic, another 7% went to a government health centre, 5% went to a private nursing/maternity home and 1% went to a chemist/pharmacy.

When asked why they chose the health facility they did, 33% cited affordability, 31% cited relative/friend's advice, 19% cited proximity to home, 14% cited health care worker's advice, 14% cited health care worker's approach, 11% cited ease of transport, 3% cited an emergency and 3% cited health care workers' speaking their language. The methods of transportation used to get to the health facility were: taxi (19%), bus/*matatu* (13%), on foot (10%) and personal care (4%). Twenty five per cent of participants reported that it took between 30 and 60 minutes to reach the health facility, while 15% reported that it took less than 30 minutes and 5% reported between 1 and 2 hours.

With respect to cost, the average cost for transport was 361 Ksh (\$4.51), the average cost for early childhood medical care was 758 Ksh (\$9.48) and the average cost for drugs was 2170 Ksh (\$27.12), for a total cost for seeking health care for a sick child of 3289 Ksh (\$41.11). A summary of results related to care for early childhood sickness may be found in Table 10.

Table 10. Care for Early Childhood Sickness

| Variable | n (%) ⁹ |
|--|--------------------|
| Child Sick in Past Year | |
| Yes | 50 (63.3) |
| No | 29 (36.7) |
| Sought Treatment for Sick Child | |
| Yes | 36 (45.6) |
| N/A | 29 (36.7) |
| No | 14 (17.7) |
| Barriers | |

⁹ See footnote 1

| | |
|---|-----------|
| N/A | 65 (80.2) |
| Child getting well on own | 8 (9.9) |
| Did not think I needed to | 6 (7.4) |
| Could not afford it | 4 (4.9) |
| No Response | 2 (2.5) |
| No one to take us | 1 (1.2) |
| Did not know where to go | 1 (1.2) |
| Health care workers unfriendly/unwelcoming | 1 (1.2) |
| Other | 1 (1.2) |
| No one to take care of house/children while gone | 0 (0) |
| Too far to travel | 0 (0) |
| Did not have time | 0 (0) |
| Health care workers do not speak my language | 0 (0) |
| Fear of authorities/did not have the right papers | 0 (0) |
| Don't Know | 0 (0) |
| Facility | |
| N/A | 43 (53.1) |
| Private hospital/clinic | 21 (25.9) |
| Government health centre | 6 (7.4) |
| Faith-based hospital/clinic | 6 (7.4) |
| Private nursing/maternity home | 4 (4.9) |
| Chemist/Pharmacy | 1 (1.2) |
| Home of friend/relative/neighbour | 0 (0) |
| Government hospital | 0 (0) |
| Government dispensary | 0 (0) |
| Public nursing/maternity home | 0 (0) |
| Other | 0 (0) |
| Don't Know | 0 (0) |
| No Response | 0 (0) |
| Facilitators | |
| N/A | 42 (51.9) |
| Affordable | 12 (14.8) |
| Advised by friend/relative | 11 (13.6) |
| Close to my home | 7 (8.6) |
| Advised by health care worker | 5 (6.2) |
| Health care workers friendly/welcoming | 5 (6.2) |
| Ease of Transport | 4 (4.9) |
| Other | 2 (2.5) |
| Health care workers speak my language | 1 (1.2) |
| It was an emergency | 1 (1.2) |
| Saw/heard advertisement | 0 (0) |
| Don't Know | 0 (0) |
| No Response | 0 (0) |
| Means of Transport | |
| N/A | 43 (54.4) |
| Taxi | 15 (19.0) |
| Bus/ <i>matatu</i> | 10 (12.7) |
| On Foot | 8 (10.1) |
| Personal car | 3 (3.8) |
| Length of Travel Time | |
| N/A | 43 (54.4) |

| | |
|----------------------|-----------|
| Less than 30 minutes | 12 (15.2) |
| 30-60 minutes | 20 (25.3) |
| 1-2 hours | 4 (5.1) |

4 Qualitative Results: Barriers & Facilitators

4.1 In-depth Interviews

A total of ten women from the quantitative sample consented to participate in an in-depth interview. These were conducted by the interviewers, as they had already established a relationship with the participants during the cross-sectional survey. The average length of interview was 20 minutes, indicating that for the larger study, more training for the interviewers will be required on the techniques for conducting a full-length in-depth interview. Nine of the interviews were conducted in Somali and one in English. Thirty per cent of the interviews were recorded, while the rest did not consent to audio-taping. However, extensive notes were taken during each interview. Of this sample of ten women, four were Kenyan citizens, four were undocumented migrants and two were refugees. The first language for almost all the women was Somali, though eight could also speak either Kiswahili or English with varying levels of fluency.

Half of the women suffered challenges along their migration trajectory, while escaping conflict or persecution in Somalia, crossing the border and attempting to seek asylum in Eastleigh, Nairobi. They cited having to repeatedly pay bribes to the Kenyan police at check points along the highways between Somalia and Nairobi. One woman explained her story:

“I am born and brought up in Mogadishu (Somalia). I came to Eastleigh, Nairobi five years ago through Mandera border [...] I have faced a lot of problems because I did not have a Kenyan ID, so I was forced to pay the Kenyan police men almost 250 USD so that I cross the border.”

This situation is well documented, especially for Somali refugees and asylum-seekers. Despite the Kenyan government officially closing the Somali-Kenyan border in January 2007 due to concerns over national security, at least 80 000 Somali asylum-seekers are estimated to have entered Kenya since then, a rate of 165 per day (Human Rights Watch, 2009). According to this same report, the implication of the border closure has included increased police corruption and harassment, such as demanding bribes from asylum-seekers, arbitrary arrests and detainment and forcibly returning asylum-seekers to Somalia, a violation of the right to *non-refoulement* as guaranteed by both international and Kenyan refugee law.

4.1.1 Conceptual Framework

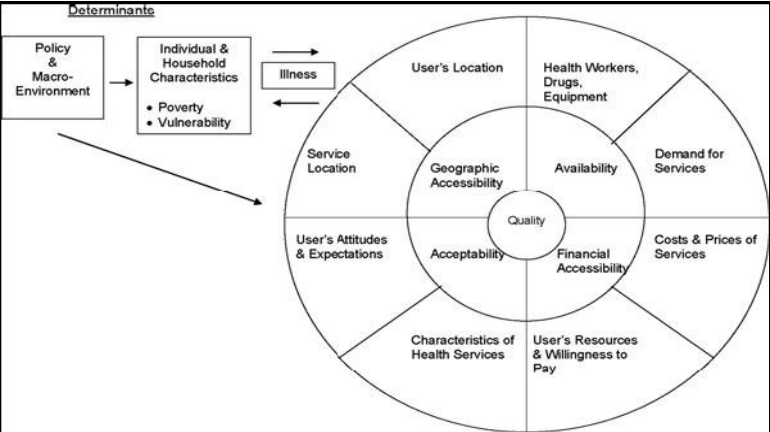


Figure 1. Conceptual Framework on Access to Health Care in Developing Countries (Peters et al., 2008).

Inequity in access to health care has been suggested as a factor that may help to explain inequities in health (Starfield, 2002). Access to health care is defined as “the timely use of services according to need” (Peters et al., 2008). Lack of access to adequate health services is associated with higher levels of more complicated disease and illness (Oxman-Martinez, 2005). Consequently, the provision of care may be more costly, have higher risks of morbidity or mortality and pose greater risks of community impact (Gushulak & MacPherson, 2006).

Peters et al. (2008)’s conceptual framework for understanding access to health care in developing countries (Figure 1) was used in this study. Quality is at the centre, because it is “ultimately related to the technical ability of health services to affect people’s health” (Peters et al., 2008). The four fundamental components of this framework: *geographic accessibility*, *availability*, *financial accessibility* and *acceptability*, are found in Table 11. Another related framework used was Andersen’s Behavioural Model, which includes the concept of *mutability* as an important component of equitable access. Andersen (1995) argues that “to be useful for promoting access, a variable must also be considered mutable, or point to policy changes that might bring about behavioural change”. A summary of the mutable variables, used during analysis of the in-depth interviews, are found below.

Table 11. Mutable Variables within the fundamental components of conceptual framework (Peters et al., 2008)

| Fundamental Components | Definition | Mutable Variables |
|--------------------------|---|---|
| Geographic Accessibility | Physical distance or travel time from service delivery point to user | <ul style="list-style-type: none"> • Service location • User’s location • Quality of roads • Communication systems |
| Availability | Right type of care available to those who need it | <ul style="list-style-type: none"> • Hours of operation • Waiting times • Availability of health workers • Availability of drugs |
| Financial Accessibility | Relationship between price of services and ability of users to pay for those services | <ul style="list-style-type: none"> • Direct costs of treatment • Indirect costs • Economic consequences of treatment |
| Acceptability | Match between how responsive health service providers are to the social and cultural expectations of individual users and communities | <ul style="list-style-type: none"> • Language • Attitudes of health care workers • Patient’s perception of quality • Cultural/religious acceptability |

4.1.2 Geographic Accessibility

Geographic accessibility is an important component to health care access, as “an inverse relationship between distance or travel time to health facilities and use of health services has been demonstrated” (Peters et al., 2008). This component includes such variables as health care service location, user’s location (and thus, distance between the two), quality of roads and communication systems. As shown by the quantitative findings, most women (69.5%) are able to reach maternal and early childhood health services near Eastleigh within one hour.

Geographic accessibility was cited as both an important barrier and facilitator to accessing maternal-child health care by almost all the participants. For example, one participant explained that:

“the challenges women come across accessing antenatal care are when [...] it is far from their homes”.

As mentioned elsewhere, Eastleigh is populated predominantly by undocumented and other migrants who may be living there informally or illegally. The result is that in terms of infrastructure and basic sanitation (i.e. sewage and garbage collection), Eastleigh is effectively ignored by the Nairobi City Council. Thus, the roads in Eastleigh are very rough, with little to no tarmac and large potholes, which fill with water during the rainy season. The condition of these roads plays an important role in geographic access to health care for women and their young children.

On the other hand, as a facilitator, some participants noted that Eastleigh had an adequate concentration of health centres. For example, one participant noted that there were many health centres where they lived. Because there are many health centres within a close geographic distance, transport is less of an issue for women in Eastleigh, as they may even be able to walk to their destination, thus avoiding public transportation and the aforementioned issues with road quality.

Geographic accessibility is also inextricably linked to financial accessibility. In Eastleigh, although there are many health facilities reported nearby, this does not necessarily mean that they are financially accessible. For example, though a private facility may be closer geographically, a woman from a low-income household may be forced to travel much farther for more affordable services. As one participant noted:

“Here in Eastleigh most of the health facilities are private, so it forces women to travel far to look for cheap places”.

Similarly, if a health facility is close, this may counteract the barrier of financial limitations. For example, even if a woman does not have enough money, she may still buy medicines from a pharmacy/chemist near her home. This may be due to the fact that pharmacies or chemists often sell incomplete doses of drugs if customers are unable to pay for the full dose (Peters et al., 2008).

When asked what changes could be made to enhance access to maternal and early childhood health care in Eastleigh, one of the most common responses was to ensure that cheap health care facilities were located close to home. Another proposed solution was to establish more health centres in a given area, though more research is needed to establish if this is indeed necessary.

4.1.3 Availability

According to Peters et al. (2008), availability can be measured in terms of the opportunity to access the health care as and when needed. Problems such as limited hours, long waiting times, absentee health workers and lack of drug stocks at public facilities are well documented in the developing world (Peters et al., 2008). This is hypothesized as one of the explanations for the prevalent use of informally trained health care workers. For example, it is estimated that most chemists (pharmacists) in Eastleigh are not registered with the Kenyan government (Narayan, 2010).

In one dramatic incident, a participant described:

“a woman who was my neighbour who gave birth at home and [developed complications] I took her to the nearest clinic [...and] they [the health workers] refused to attend to her”.

Whether this refusal by the health care workers was due to a staff shortage, discrimination or simply a negative attitude is unclear. This situation illustrates that even if maternal-child health care facilities are geographically accessible, they may not be available.

Similarly, waiting times were described by participants as a significant barrier. For example, in the public facilities, one participant noted that the health care workers took a lot of time to attend to patients. This may be a particularly important barrier for those women who cited 'not enough time' as one of the factors that hindered them from accessing maternal-child health care.

Finally, availability of drugs is an important component to accessibility. The Kenya Demographic Health Survey (2003) estimates that 24% of women in Kenya who do not want to have a child within the next two years are not using contraception due to unavailability. As one participant explained, one of the changes that could be made to improve access for women and their young children in Eastleigh is to ensure that chemists are well stocked.

4.1.4 Financial Accessibility

Financial accessibility, or affordability, is now considered one of the most important determinants of access and is most directly associated with dimensions of poverty (Peters et al., 2008). For example, research shows that the introduction of user fees in Kenya led to decreased utilization of health services (Collins et al., 1996), and this effect was more significant for the poor (Gilson, 1997). Similarly, a study in Uganda showed that the abolition of user fees increased the use of curative and preventive health services (Burnham, 2004).

Financial accessibility includes several mutable variables. For example, there are direct costs of treatment such as consultation fees and cost of drugs, indirect costs such as the opportunity cost of time for both the mother and those accompanying her, as well as the cost of transportation. Finally, there may be economic consequences of paying for health services, such as catastrophic spending, defined as "spending high proportions of household finances" (Xu et al., 2006) and distress financing, defined as "borrowing money or selling assets" (McIntyre et al., 2006) in order to pay for maternal and/or early childhood health services. In this study, labour and delivery were the most costly among the maternal-child service received, with the average cost being 15 486 Ksh (\$193.58). One participant even paid 100 000 Ksh (\$ 1250 US) for her caesarean section!

Financial accessibility was cited repeatedly by all but one participant, both as a barrier and as a facilitator. This factor was often the distinction between choosing to access public over private maternal-child health services. One participant explained:

"I go to health centre [public] where the charges are less [than private]".

As a barrier, financial accessibility was very important. As one participant explained,

"we can't afford medical care, so [we] wait until delivery".

Similarly, for seeking care for early childhood sickness, one participant noted that if a mother does not have the money to pay for the costs, she is unable to take her child for health care. This sentiment was echoed by another participant, who explained that:

"if your child get sick and you can afford, then you take him to hospital. If you can't afford then you can't take him, you just remain home with your child".

These qualitative data depict an alarming situation, given that many fatal childhood illnesses, such as severe diarrhoea, can be treated very easily and inexpensively with IV rehydration. However, these qualitative results disagree with the quantitative results, which indicate that the majority of women choose to use private health facilities, which are more expensive than public facilities. This may be due

to the small sample size of this pilot study, leading to a non-representative sample. In the larger study, a greater sample size would have a greater likelihood of being representative, potentially reconciling the discrepancy between quantitative and qualitative results. Furthermore, the criterion-sampling design of the qualitative component could potentially have led to a sample of women who disproportionately use private services.

Financial accessibility was also the most important barrier to giving birth in a health facility. As explained by one participant,

“most of the women who give birth at home are those who can’t afford [to give birth in a health facility]”.

However, most of the participants knew that it was important to give birth in a health facility as they would receive proper care and drugs. Thus, home births appear to be the result of financial barriers, not lack of knowledge. Similarly, finances appear to be the primary barrier to immediate post-partum health checks:

“sometimes you as a person you have not afford the charges [for post-partum care] because the charges are different from delivery”.

In terms of labour and delivery, the general consensus is that most women in the Eastleigh community would prefer to give birth in a private facility, but they are constrained by costs and thus give birth at a public facility instead. For those who are very poor, neither of these options is available and they may be forced to give birth at home with the assistance of a traditional birth attendant.

With regards to immunizations, cost was a facilitator in this case. For example, many women went to city council clinics where there is no charge for immunization services. Many of the participants know that it is free, thus cost is not a barrier for this service. As one participant noted, it is:

“because of ignorance that they don’t immunize, because it is free of charge”.

In terms of financial accessibility for migrants, one participant explained the challenge very clearly:

“the health facilities are near, but some of them are expensive, so some women can’t afford because we are refugees. Sometimes we wait until we have complication that is when they rush to the hospital or pharmacy”.

This situation illustrates the consequences of financial inaccessibility to maternal and early childhood health care, especially for migrant women and their children. Further research is needed however, to determine whether this is actually the case for the population of Eastleigh and to corroborate with quantitative results.

4.1.5 Acceptability

Acceptability may be defined as “the match between how responsive health service providers are to the social and cultural expectations of individual users and communities” (Peters et al., 2008). This may include the patient’s perceptions of quality, which has actually been shown to be a “more important determinant of utilization than prices of other dimensions of access” (Andaleeb, 2001). It may also include other variables such as language, culture and religion. Furthermore, the attitudes of health care workers, which may be related to personality factors, but also to larger determinants such as lack of human resources, can play an important role in health service acceptability. For example, although they may not be trained or certified, traditional healers or village doctors may have “helpful attitudes and

longstanding relationships with" (Peters et al., 2008) their patients, thus increasing acceptability and therefore utilization.

This study found that after financial accessibility, acceptability was the second most important barrier and facilitator, a finding which agrees with the quantitative results. All the participants but one cited language barriers as a factor that hindered their communication with health care workers and influenced their decision to seek maternal and early childhood health care. Recall that the participant's first language is predominantly Somali, while the working languages of health care services in Nairobi are Kiswahili and English. When asked specifically about the factors that affect the health care worker-client relationship, most of the participants cited language as an important factor. As one participant noted:

"language...language is the major problem [...] the issue of language should be solved because without communication nothing will work".

Another participant explained that:

"the worst thing is language, language, language. Most of health workers don't speak our language [Somali]. It forces us to go with someone to help us [translate]".

Another participant, who is a nurse by profession, elaborated on this dynamic:

"women especially those from Somalia don't know their languages (the staffs) so they assume they are rude and they are not attended to as expected".

The implications of these language barriers may be dangerous, as the health care workers may not be able to provide adequate care for mothers and their young children. For example, in a study on health-seeking behaviours of refugees in Nairobi, "health providers indicated that accuracy of diagnoses is a problem due communication barriers" (Narayan, 2010). Many of the women suggested that this language barrier may be overcome by health centres hiring Somali-Kiswahili interpreters.

The attitudes of health care workers may also affect acceptability of health care services. A few of the participants identified health care worker refusal to attend to patients. For example, one participant explained that if a woman gives birth at home, she will not be checked post-partum, and so they develop complications. When she is taken to the hospital, the health care workers refuse to attend to her. Experiences with unfriendly health care workers and poor service were also mentioned by participants. However, one participant did contrast this by saying that:

"health care workers are good and understanding"

as a facilitator for accessing antenatal care. These factors are related to perception of health care quality by patients. As one participant noted:

"hospitals, I don't like nurse because some may be new and they lack experience".

This echoes the general perception that private facilities have overall better quality services. One participant explained that women choose to give birth in:

"private hospitals because they believe its safe[r] than the public hospitals [...] a lot of public hospitals are dirty so we want cleanliness".

In Eastleigh, a predominantly Somali Muslim community, culture and religion play a major role in acceptability of health services. For example, many participants explained that in the *Qur'an* it states that women should breastfeed their babies until the age of two years. Thus, breastfeeding is seen as healthy and normal in this community. Many participants outlined the physical and developmental benefits of breastfeeding. On the other hand, contraceptives were reported as completely unacceptable by the community. This may be due to the fact that children are seen as a blessing and most women will have as many children as God gives them. The number of children per family in this community reported by participants was between 6 and 8.

Although there were a few women who reported fear of adverse effects, such as infertility, the primary reasons for not using contraceptives were cultural or religious in nature. As one participant explained:

“it is not allowed in Islamic religion...it is a sin...that is why most people don't use it”.

One woman even went as far as to explain that those who use contraceptives are disowned by the community. Therefore, even if contraceptives were geographically and financially accessible and available, they are not acceptable, and thus according to this study, rarely accessed in this community.

Finally, religion also played an important role in the decision to seek health care when necessary. For example, when asked about what happens when something goes wrong during a home birth, one participant noted:

“Nothing, God always plans for us. If your days are over then you will die and if you are lucky you and your baby will survive”.

When asked about the factors that hinder a woman from taking her child for health care when they are sick, one participant responded:

“maybe the husband don't want. There are some husbands believe in religion and they just read the Qur'an and say they will be alright so the mother gives up”.

Similarly, with respect to seeking immunization services, another participant explained that some women do not vaccinate their children because they believe that if you believe in God, no adverse events will happen.

4.1.6 Summary of In-depth Interviews

Overall, the results from the in-depth interviews showed that women felt that their health and the health of their children are important. They expressed that receiving care during the antenatal period, labour and delivery, post-partum, as well as both preventive and curative services for their young children was a positive thing, because this would give them information about their health and the health of their baby. They also felt that seeking health care would ensure that they would receive help if there were health concerns. All of the women agreed that it was important to deliver in a health facility, to breastfeed their baby for as long as possible and to ensure their child was vaccinated in order to protect them from diseases.

However, despite a general consensus on the importance of accessing maternal-child health care, participants cited numerous barriers to achieving this, most notably cost, language barriers and religious beliefs. When referring to their entire community, many women referred to illiteracy as another barrier, explaining that illiteracy led to a lack of knowledge around accessing health services.

Other less commonly cited barriers included distance, health care worker attitudes and quality of the facilities.

Thus, the general opinion of the women interviewed was that access to maternal and early childhood health care for women and children in Eastleigh, especially migrant women and children, could be improved by providing free, quality health care services, with well-trained, friendly and helpful health care workers, in facilities that are close to home, clean and with an adequate drug supply. If the health care workers do not speak the patient's language, as is reportedly the case in Eastleigh, the women proposed that all facilities should hire full time interpreters, perhaps from the Somali community in Eastleigh, to ensure effective communication during health care encounters.

4.2 Key Informant Interviews

A total of three key informant interviews were conducted by the student researcher. The first was with a District Public Health Nurse, the second with an Eastleigh women's group leader and the third with a Sheikh from Eastleigh Section III. An invitation was also sent to a community Chief, but he was not available for an interview. Two of the interviews were conducted in English and one was conducted with the assistance of an English-Somali interpreter. These interviews were conducted to corroborate with both quantitative and qualitative findings and to develop a broader understanding of barriers and facilitators to maternal and early childhood health care in Eastleigh from the perspective of those with a specialized knowledge, either of this topic, or of the Eastleigh community. See Appendix 8.5 for the key informant interview guide.

4.2.1 Key Informant Interview Results

In general, the findings from the key informant interviews agreed with those from the in-depth interviews. Key informants described the Eastleigh community as a primarily Somali migrant area, with nationalities such as Ethiopia and Eritrea also represented. In terms of service delivery, Eastleigh is described as:

"one of our hard to reach areas [...] when we are doing campaigns [...] they will not open their doors to us...they are fearing that the government maybe wants to get them and to return them to where they came from [...] when it comes to immunization, they hide their children in the house".

When asked whether there had ever been a situation where a health care worker has turned a migrant woman over to the authorities, the key informant responded that they had never heard of such a situation, and that this fear was simply a perception amongst the migrants in Eastleigh.

In terms of geographic accessibility, the key informants echoed the sentiments of the participants: there are many health facilities in Eastleigh, ranging from hospitals to clinics to health centres. However, the major barrier to seeking maternal-child health care was financial accessibility. In agreement with the participants, cost was cited as the most important barrier for these women to seek care for themselves or for their young children. With respect to overcoming these financial barriers, all three key informants stressed the importance of providing free services. One stated that:

"it would be good to have free hospitals for maternal/child [...] for people who cannot afford private hospitals".

In terms of availability, this was reported as both a facilitator and as a barrier. As a facilitator, a health care facility having a good stock of immunization was described as a motivating factor for women to seek antenatal care. Availability of PMTCT services, laboratory services and even prenatal education

(which includes discussion of the importance of hospital delivery, breastfeeding, prevention of HIV/AIDS, TB and nutrition) were also important facilitators for antenatal care. However, availability of drugs and services could also be a barrier when they were not available. For example:

“when they come, you don’t have drugs in the hospital. So, you will need to tell them to go and buy. That is maybe a factor that can hinder them to come, more so in public facilities”.

With regards to acceptability, language differences were again cited as the second most important barrier to seeking maternal-child health care in Eastleigh. For example, one key informant explained that:

“there is language barrier. We cannot speak with them because they don’t know our national language, and we can’t speak their language, so communication is a big problem [...] the antenatal mothers do not want to come to clinic because they expect to see somebody of their own [culture] in the clinic, but we don’t have”.

This informant described that efforts are being made to employ nurses from Somali and Oromo backgrounds, so that when those staff are on duty, the community will be more comfortable with them and thus more likely to seek care from these facilities. However, these nurses are a small minority in the work force. This sentiment was echoed by another key informant, who said:

“employment to the people who are known to this community is very important”.

Language and cultural acceptability were cited as another main reason why women from Eastleigh generally seek private instead of public health care. As one key informant described:

“Most of the private clinics [in Eastleigh] have Somalis. So they want to go where one of their own is practicing and where they can understand their language also...when you come to a government facility, no Somalis, no Oromos, you have to look for somebody to translate, so there [at the private clinics] they talk to them directly”.

This is also related to the concept of perception of quality. One key informant explained that in Kenya, there is a perception that things which are free cannot be of good quality.

At the administrative level, health care worker understaffing and lack of motivation with regards to remuneration were identified as issues. Health care workers have expressed that they are not compensated adequately for the amount of work they do, and become irritable and overwhelmed with the work load, which affects the health care worker-patient relationship. The health care workers have even been described as harsh when the patients do not respect clinic hours. For example:

“The staff, they want to do the clinics in the morning hours, then you find a mother comes just after 1, when they have closed all their services, then they are involved in an exchange...‘where were you? Why have you come at this time?’...the client will feel bad and go away”.

Another issue that was identified was health care workers asking for bribes from the clients when they come for maternal or early childhood health care. As one key informant explained:

“there are one or two staff, who for some reason, they ask for more money than should be given. And if the woman doesn’t have, then they fear they will not be attended to”.

This situation forces administrators to call meetings to talk about corruption with the health care workers.

With respect to delivering in a health facility, one key informant explained that some people in the community believe that giving birth in a hospital is taboo. They also mentioned that the relationship that these women have with their traditional birth attendant may be so good that they do not understand why they should deliver at the hospital. Among the Luo community (one of Kenya's 42 tribes), there is a belief that a woman should have sex with her husband on the third day after birth, thus if she gives birth in hospital where they might keep her for 3-4 days, she will not be able to fulfil this cultural ritual.

In terms of contraception, the general consensus among the key informants was that it was not acceptable. One key informant said

“this woman, after 9 months, she gives birth, after another 9 months, she gives birth, there is no plan. Family planning is totally out [...] they say it is forbidden by God”.

This may be due, again, to the extremely high value placed on children in this community, with most families desiring at least six children. One key informant explained that:

“the most important asset in the world [for this community] is children [...] they believe in giving birth”.

There were also misconceptions about contraceptives identified by the key informants. These include: contraceptives promote promiscuity, cause infertility and cause birth defects. It also includes the belief that condoms are laced with HIV/AIDS. This is a very important area for education.

On the other hand, breastfeeding is very acceptable in this community. Even the mosque leaders encourage women to breastfeed. However, there were two main barriers to 6 months exclusive breastfeeding identified by the key informants: subsequent pregnancy and HIV/AIDS. With respect to subsequent pregnancies, one key informant asked:

“if this woman give birth in January, in October, she's again giving birth [...] when will this child be breastfed?”

Another key informant elaborated on the issue of HIV/AIDS:

“for many years, people have been breastfeeding freely...but since the era of HIV/AIDS care, the number of women breastfeeding has gone down because of the teaching about prevention of mother to child transmission of HIV/AIDS [...] we are encouraging them now to just go ahead and breastfeed even if they are HIV positive...but the community still is not comfortable enough”.

With respect to migrants, one key informant stressed the importance of stopping government harassment of illegal migrants, as this was a barrier to them accessing health services. This key informant emphasized that the government should find a way to make migrants feel welcomed and comfortable in Kenya and to help them feel free to attend health services.

5 Study Limitations & Recommendations for Larger Study

As this was a pilot study, there were many methodological lessons learned and significant improvements can be made through all stages of the research process for Phase II. Firstly, the criterion sampling method used for

the in-depth interviews could be improved, by applying more well-defined criteria. This will ensure that the qualitative sample is representative.

According to the UNHCR, displacement into urban areas compounds the difficulty of identifying populations in need, especially the most vulnerable. In general, data on these populations is difficult to gather due to lack of citizenship, poor data disaggregation and low service access, which contributes to their “invisible” status (Irving, 2007). However, recruitment was facilitated through the positive reputation of the IOM in the migrant community of Eastleigh, as well as the use of community members as interviewers. Thus, continued involvement of IOM in providing health services to migrants and other populations in Eastleigh will maintain a strong connection with the community, ensuring access to research participants.

Secondly, the sample in this pilot study was not statistically representative, as it only comprised 81 individuals, 10% of the target sample size for the larger study. Thus, results cannot be generalized to the entire population of Eastleigh Section III. On a related note, due to the fact that this study was focussed on Eastleigh Section III only, results may not be generalized to the whole of the Eastleigh area of Nairobi. During the larger study, it is recommended that all areas of Eastleigh are included in the sample, in order to ensure that the results can be generalized. Furthermore, during data analysis, logistic regression may help to further determine whether differences in health service indicators and outcomes are in fact, related to migration status.

A third lesson learned was the importance of community mobilization. During a debriefing session after the data collection phase, the interviewers expressed that community mobilization, which included knocking on doors in each plot, introducing themselves and explaining the study to potential participants, required a significant amount of time, which could have been used for data collection instead. Thus, for the larger study, it is recommended that community mobilization begins at least two weeks prior to data collection and includes meetings with community and religious leaders, advertisements posted throughout Eastleigh, as well as the use of social media such as radio, in order to explain the purpose of the study and decrease the refusal rate. It may also be helpful to include specificities of the study in the community mobilization, for example that the verification of immunization records will be required, so that participants are prepared ahead of time.

Another study limitation was that the length of the in-depth interviews was inadequate at only 20 minutes each, on average. In-depth interviews should be at least 45 minutes to one hour in length. This may have been due to the interviewer’s unfamiliarity with this data collection method. Thus, it is recommended that the interviewer training module includes greater emphasis on in-depth interview techniques, including probing, as well as adequate time to role-play, in order to increase comfort with this method.

Although the prevalence of underweight children under 5 years is an important health outcome outlined in the KNHSSP II, in this study weight was not measured directly, but rather collected through participant self-report. This is due to the difficulty of having interviewers carry three different scales (infant, toddler and young child) during the data collection phase. However, during the larger study, it is recommended that each interviewer have an assistant to carry these items, as well as to assist with data collection. As well, in order to fully measure ‘underweight’, gender, height and other related information will be necessary to collect. Finally, to expedite the data collection and data entry processes even further, it may be beneficial to train interviewers in the use of digital data collection tools, as was done during an IOM bio-behavioural surveillance survey with female sex workers (Kriitmaa et al., 2010, unpublished).

In this pilot study, the KNHSSP II health service indicators (Appendix 8.1) were used. However, there were only seven which were selected for analysis in this study. Others were more relevant to Kenyan health system studies, for example the KNHSSP II indicator ‘number of health care facilities providing basic/emergency obstetric care’ was deemed irrelevant for this study. Thus, for the larger study, it is recommended that the number of indicators measured be increased, precisely defined and expanded to cover all maternal and early childhood health areas (antenatal care, labour and delivery, post-partum care, contraception, breastfeeding,

immunization and early childhood sickness). This is also true for health outcomes (Appendix 8.2), as only two from the KNHSSP II were selected for analysis in this study, because the remainder lacked relevance or feasibility for the study objectives.

Finally, the migration status of participants in this study was based on self-report. Unfortunately, some participants may have falsely claimed that they have refugee status, or are Kenyan citizens. They may even possess counterfeit registration documents to this effect. However, the level of trust developed with the interviewers, as well as multiple 'checking' questions within the cross-sectional survey, may have helped to mitigate this issue. Also, interviewers are unable to recognize whether documents are legitimate or not, thus necessitating self-report of migration status. This remains perhaps the greatest challenge in migration health research.

6 Potential Health Programming Recommendations

6.1 General

It is important to note that this project was a pilot study, thus results may not be representative of the overall migrant community in Eastleigh. However, the findings from this pilot study give us a 'glimpse' into the health care experiences of women and their young children in Eastleigh and useful lessons have been learned, many of which can inform the larger study. Overall, it appears that access to maternal and early childhood health care may be better than generally believed. It seems that there is an adequate concentration of health facilities within a reasonable distance to the Eastleigh community. Also, most women use private health facilities, despite the higher cost when compared to public. That being said, the finding that affordability plays a role in the health choices women make, was a result that was demonstrated in both the quantitative and qualitative components of this study.

A fear of authorities, such as police officers or government, did not come out strongly as expected. This is a barrier that is common in the literature written on migrants in Eastleigh. However, in this study, a fear of authorities was rarely cited as a barrier, in either quantitative or qualitative components. Further research within the larger study will help to confirm this finding.

In general, this community may benefit from education campaigns on maternal and early childhood health care topics. It is hypothesized that greater knowledge will lead to more informed decisions with regards to health and more effective health-seeking behaviours. Ultimately, this will lead to improve maternal and early childhood health outcomes.

Similarly, women in Eastleigh appear to suffer from low levels of literacy and formal education. Literacy levels for this population are estimated at 20%, while the results from this study indicate that most have only a primary school or *madarasa* education. These barriers hinder the ability of these women to access information, make decisions about their health and the health of their young children and are ultimately a source of disempowerment. These factors also lead to early marriage and childbearing and are a source of significant gender inequality in the Eastleigh community. While it is beyond the scope of IOM's mandate to provide such services, advocating for literacy and formal education within this population through partnerships with NGOs may be extremely beneficial for this population.

6.2 Antenatal Care

- Due to the high prevalence of women not thinking they needed to access ANC before the second or third trimester, IEC campaigns are urgently needed to emphasize the importance of seeking ANC in first trimester (1-3 months).

- To overcome language barriers, interpreters fluent in Somali, Oromo, Kiswahili and/or English should be readily available in all health facilities that offer ANC in Eastleigh.
- Efforts must be made to recruit health care workers from the Eastleigh community, especially those from a Somali background.

6.3 Labour & Delivery

- As with ANC, to overcome language barriers, interpreters fluent in Somali, Oromo, Kiswahili and/or English should be readily available in all health facilities Eastleigh that provide labour and delivery services.
- Reducing barriers to delivering in a health facility, such as providing free labour and delivery services at public facilities, may help to reduce the number of home births from 7.4%. This may be especially important for migrants.

6.4 Post-Partum Care

- Due to the very low prevalence of post-partum checks of the mother, a sensitization campaign directed towards health workers should emphasize the importance of checking on the health of the mother as well as the baby.

6.5 Contraception

- IEC campaigns on the importance of child spacing and family planning may help to improve the rate of contraceptive use in this community. These campaigns could include the physical, psychological and social benefits of child spacing, both to the mother and to her children and education on different types of contraception, including natural methods. At the later stages of this campaign, it may also be beneficial to include husbands as part of the education.
- Given the high rate of fear of adverse effects of contraceptives, IEC campaigns specific to deconstructing misconceptions and promoting the benefits of contraception may be extremely beneficial.
- Efforts must be made to reduce the stigmatization towards contraception in this community. This may be accomplished through developing positive relationships with trusted community leaders who can then lead de-stigmatization campaigns.

6.6 Breastfeeding

- IEC campaigns on the importance of exclusive breastfeeding for 6 months are urgently needed, given the low prevalence in this community.
- Correcting the misconception about no milk supply, the most common barrier to exclusive breastfeeding is necessary.
- Women may also benefit from breastfeeding support groups, where groups of women can get together to breastfeed at, for example, the Eastleigh Community Wellness Centre, where a nurse could be present to provide breastfeeding support.
- Related to recommendations around contraception, encouraging child spacing through natural methods and contraception will help to overcome the barrier of subsequent pregnancies, thus ensuring that babies are breastfed for longer periods of time.

6.7 Early Childhood Immunization

- Community mobilization is needed in order to ensure that information on vaccinations is collected from vaccination records as opposed to self-report.

- Community mobilization campaigns, such as the weekly campaign conducted by the Eastleigh Community Wellness Centre staff, should be scaled up, with emphasis on bringing children for measles vaccine at 9 months, due to the low coverage rate.
- Continued provision of free immunization services will ensure that women continue to bring their children for immunization.

6.8 Care for Early Childhood Sickness

- As with ANC and labour and delivery, providing interpreter services and recruiting health care workers from the Eastleigh community, will ensure that language barriers are reduced.
- As many women cited that they did not think they had to bring their children for care, it may be beneficial to provide IEC campaigns on recognizing signs and symptoms of common childhood illnesses and how to distinguish between minor ailments and those requiring professional care.

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