KAP Survey on

Maternal and Child Health in Karkaar Region of Puntland, Somalia

Report

16th October 2012

Ministry of Health
WasaaradaCaafimaadka
Puntland

Save the Children


SOMALIA - Reference Map
OCHA
DJIBOUTI
ETHIOPIA
KENYA
SOMALIA
SANAAG
BARI
TOGDHEER
SOOL
NUGAAL
MUDUG
GALGADUUD
BAKOOL
BIRAAN
NORTH EASTERN
BAY
GEDO
SHABELLE DHEXE
SHABELLE HOOSE
JUBA DHEXE
JUBA HOOSE
MOGADISHU
Elevation (meters)
Legend

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ACRONYMS

ANC	Antenatal Care
BCC	Behaviour Change Communication
CHW	Community Health Workers
DFID	Department for International Development
DPT	Diphtheria Pertussis and Tetanus
FGD	Focus Group Discussion
FGM/C	Female Genital Mutilation/Cutting
IEC	Information Education and Communication
IUD	Intra Uterine Device
KAP	Knowledge Attitude and Practice
KII	Key Informant Interview
MCH	Maternal and Child Health
MNCH	Maternal, Newborn and Child Health
MOH	Ministry of Health
NGO	Non-Governmental Organisations
OPV	Oral polio vaccine
PPS	probability proportional to size
SCUK	Save the Children, UK
SPSS	Statistical Package of Social Sciences
TBA	Traditional Birth Attendants
THET	Tropical Health and Education Trust
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children Fund
WHO	World Health Organization
FSNAU	Food Security and Nutrition Analysis Unit
MICS	Multiple Indicator Cluster Survey

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We appreciate the research assistants who worked tirelessly across the selected regions to make this assignment a success.

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EXECUTIVE SUMMARY

Situation analysis and surveys conducted in recent years in Somalia illustrate appalling picture of acute and chronic maternal and child health needs that compare with no other in the world. Statistics speak of severe suffering and death. On average, Somali women have more than six children during their lifetime, a direct result of only 1 per cent of the population using modern contraception and over 25 per cent of all women have an unmet need for Family Planning.

As part of the on-going efforts to address the health sector challenges in Somalia, there is need to better understand the myriad factors that influence access, demand and utilization of healthcare services. Current and future health systems strengthening efforts, including the on-going Save the Children project in Karkar region, can only be effective, equitable and achieve value-for- money if they are informed and guided by an understanding of the demand-side factors including the knowledge, attitudes and practices of the targeted beneficiaries. The KAP survey aimed to identify knowledge gaps, cultural beliefs or behavioural patterns, practices and any other socio-cultural and economic factors that may facilitate understanding and action or create barriers to Maternal, New-born and Child Health (MNCH).

The KAP survey was undertaken in Karkaar, a gravel desert region of Puntland that touches the Indian Ocean coast. A Cross-sectional descriptive study design was utilised to provide information on key knowledge, attitude and practice variables related to maternal, newborn and child health with 422 households visited in 5 districts.

Among others, the following are the key findings of the survey:

- High total fertility rate,
- Low uptake of family planning/ birth spacing methods, especially modern and long term methods,
- Low facility based deliveries,
- High delivery related risks and
- Low ANC services uptake.
- Considerable knowledge gaps and misconceptions regarding some aspects of MNCH

Recommendations from this assessment include:

- The need to empower communities on MNCH by providing information on the various components of MNCH.
- There is need to strengthen the health system so as to improve access and quality of services in tandem with improved demand as health awareness increases.
- The need to undertake health programming with an in-depth analysis of all socio economic factors in the region, and
- A mix of channels be used in delivery of key MNCH messages with a focus on oral means of communication.

1.0 BACKGROUND

1.1 Geographical and Political Context

Somalia is a coastal country covering a land area of 637,657 square kilometres in the Horn of Africa bordering Kenya in the south, Ethiopia in the west, Djibouti in the north, and in the east it faces the Gulf of Aden and the Indian Ocean. The country is geographically and politically divided into the three zones of South Central Somalia, Somaliland (the north-west) and Puntland (the north-east). These zones are further divided into a total of 18 administrative regions. The exact current size of the population is unknown, since the last census was performed 40 years ago, in the early 1970s. Estimates range from 6 million to 11 million. The official United Nations estimate, however, is 8.9 million (UNICEF 2009).Some 70 per cent of the population live in South Central Somalia, while 20 per cent are resident in Somaliland and 10 per cent in Puntland. According to estimates, one third of the population live in urban areas and two thirds in rural areas. The rural population can be divided, partly based on their livelihood, into pastoralists, agro-pastoralists and riverine populations.

Politically, Somalia is considered as one of the world's most fragile state (Failed States Index) characterised by over two decades of conflict and civil unrest. A combination of war and natural calamities, such as the 2011 drought and famine, has taken the lives of hundreds of thousands Somalis and left many more destitute. The United Nations High Commissioner for Refugees (UNHCR) estimates that over 1.36 million Somalis are internally displaced (UNHCR 2012).

1.2 Maternal and Child Health Situation

Situation analysis and surveys conducted in recent years illustrate appalling picture of acute and chronic maternal and child health needs that compare with no other in the world. Statistics speak of severe suffering and death. For instance, the maternal mortality ratio is strikingly high at 1,000 – 1,400 maternal deaths per 100,000 live births (WHO, UNICEF & UNFPA, 2010). Giving birth remains one of the greatest risks in the lives of Somali women given the life-time risk of dying due to pregnancy related causes is approximately 1 in 14 (UNICEF, 2011). Over 90 per cent of Somali women give birth at home under the care of unskilled attendant. Less than 10 per cent births are attended by skilled personnel (DraftSomalia Child Health Strategy, WHO 2012).

On average, Somali women have more than six children during their lifetime, a direct result of only 1 per cent of the population using modern contraception and over 25 per cent of all women have an unmet need for Family Planning (UNICEF, 2006). Female genital mutilation/cutting (FGM/C) is almost universal (98%) and is performed on young and adolescent girls (UNICEF, 2009).

Childhood immunization coverage (1 year olds fully immunized) was only 36 per cent in 2007, according to the joint administrative report of UNICEF/WHO. According to the same report, only 18 per cent of women received two doses of tetanus toxoid during their last pregnancy.

The WHO estimates the perinatal mortality and under five mortality rates in Somalia at 81 per 1,000 total births (WHO, 2007) and 200 per 1000 live births respectively. The main causes of newborn deaths in Somalia are low birth weight and premature birth, asphyxia, birth injuries, septicemia and newborn tetanus while the main causes for under-5 mortality are pneumonia (24%), diarrhoea (19%), newborn disorders (17%), and measles (12%)(WHO,2009). In spite of high disease burden and extreme child mortality rates, there is a very low demand for public health services. Data from UNICEF reveals that Somali children under the age of five visit an MCH clinic every fourth year (UNICEF, 2008). Other data show that only four per cent of children with suspected pneumonia were taken to an MCH clinic, while 17 per cent got a remedy straight from the private pharmacy and as many as 70 per cent were left without any intervention (UNICEF, 2006).

These statistics provide only a glimpse into the shocking health situation in Somalia where in the backdrop of protracted conflict, the crumbled health system is struggling to provide even the most basic services. The health system is exemplified by dilapidated infrastructure, inadequate supplies, few health workers with inadequate skills, operational fragmentation among many more challenges.

1.3 Save the Children intervention

Save the Children has over 20 years' experience of supporting the health sector in Somalia, with a focus on delivering primary healthcare to communities affected by the longstanding humanitarian crisis. The organisation's intervention approach is providing emergency relief as well as health systems support with a longer-term focus.

In the north eastern zone of Puntland, Save the Children has been engaged in a number of support areas ranging from providing local technical capacity at service delivery points to a broader health system strengthening at central level. At community levels, Save the Children has sound experience of working with community structures and building relationship between them and health facilities. In Karkaar region, where the subject KAP survey was conducted, Save the Children is currently implementing a 2-year DFID-funded maternal and child health focused project aimed at improving the capacity of the Ministry of Health and the health workforce to provide, manage, and monitor quality health services at primary level while at the same time working towards increasing health service utilization by the local communities. The later involves reaching out to communities with appropriate health promotional messages, addressing barriers and enhancing awareness on seeking health care. The project is part of a broader consortium bringing together Population Services International (lead), Save the Children, Trócaire, Health Poverty Action and Tropical Health and Education Trust (THET). The consortium aims to rollout essential package of health services by harnessing the specific and complimentary thematic strengths of each agency and learning from each other.

2.0 KNOWLEDGE, ATTITUDE AND PRACTICE (KAP) ASSESSMENT

2.1 Background

As part of the on-going efforts to address the health sector challenges outlined in the back-ground section, there is need to better understand the myriad factors that influence access, demand and utilization of healthcare services. Current and future health systems strengthening efforts, including the on-going Save the Children project in Karkar region, can only be effective, equitable and achieve value-for- money if they are informed and guided by an understanding of the demand-side factors including the knowledge, attitudes and practices of the targeted beneficiaries.

Save the Children commissioned a KAP survey whose purpose was to generate information that will be used to develop a Behaviour Change Communication (BCC) strategy and communication messages on maternal and children health in order to increase knowledge and utilization of health services for improved health outcomes of the target population (reduction in child and maternal mortality in the target population)

The KAP survey aimed to identify knowledge gaps, cultural beliefs or behavioural patterns, practices and any other socio-cultural and economic factors that may facilitate understanding and action or create barriers to Maternal, New-born and Child Health (MNCH). KAP survey also assessed the communication processes/channels that are appropriate in promoting uptake of MNCH services and positive behavioural practices among communities in Puntland.

Specifically, the KAP survey sought to answer the following questions:

1. What do respondents know about maternal and child health?
2. What do they think about the health system response to MNCH needs?
3. What do they actually do with regard to seeking care or taking other actions related to MNCH?
4. From where do respondents get messages (even though inadequate) about maternal and child Health?
5. What are the respondent's preferred means of communication to receive information about maternal and child health?

The survey was conducted from 2nd to 7th September 2012.

2.2 Methodology

The KAP survey was undertaken in Karkaar, a gravel desert region of Puntland that touches the Indian Ocean coast. A Cross-sectional descriptive study design was used to provide information on key knowledge, attitude and practice variables related to maternal, newborn and child health.

2.2.1 Sampling

Households Sampling: ***Cluster*** sampling was used. Using fisher et. Al. formula a sample size of 384 households was attained. However, given the inherent loss of precision due to the cluster effect of the sampling method and to offset the risk of sub-optimal administration of the questionnaires, the sample size was increased by a factor of 10% bringing the final sample size total to 422 households. The survey utilized two-stage cluster random sampling where the primary sampling units were villages and secondary sampling unit were households within the sampled villages. All the 5 districts were represented in the sampling frame. At both stages, a simple random sample was picked. To compensate for the differences in population sizes (number of households) of the villages, sampling of households was based on probability proportional to size (PPS) thus ensuring villages with bigger populations had more sampled households. A structured questionnaire was used to collect data from a household representative.

KII Interviews: Purposive sampling was adopted in recruitment of the key informants. The targeted key informants included regional health officer, health workers, religious leaders, and Traditional Birth Attendants (TBAs).Key informants guides were used to lead the discussions.

Focus Group Discussions: For the Focus Group Discussions (FGDs) purposive sampling was used to allow selection of appropriate respondents. A total of six focus group discussions were undertaken with women, men and male and female youths. Focus group discussions were held separately for both genders to overcome any potential bias due to gender dynamics. Where feasible, the composition of the specific FGDs ensured representation of various demographic subsets (e.g. various age-groups, participants of varying marital status, educational levels etc) so as to enable illumination of diverse views and prevailing conflicts in opinions. A FGD guide was used to guide the discussions.

2.2.2 Data Management

Quantitative data was analysed using Statistical Package of Social Sciences (SPSS) computer software. Analysis of categorical and nominal data is presented as percentages and frequencies while mean and range was analysed and presented for continuous variables. All qualitative data was transcribed verbatim, coded and organised into themes. Building on emerging themes, the qualitative data was triangulated with quantitative data from the household questionnaire and secondary sources.

The following measures were taken to ensure survey data was of utmost quality:

i. Translation of the data collection tools into local language (Somali)
ii. Pretesting of the data collection tools and their improvement based on pilot findings
iii. Training of enumerators before embarking on field data collection.
iv. Enumerators were closely supervised.
v. The facilitators for the FGDs and KII were persons with strong facilitating and interviewing skills.

2.2.3 Ethical/Administrative Considerations

The following ethical/administrative procedures were adhered to before and during the KAP survey:

i. Approval from the local authority: In advance of the survey, Save the Children sought the approval of the local authorities including the Puntland Ministry of Health and the Karkar regional and district administrators. As well, the survey team received security clearance from Save the Children Security Manager before embarking on the field activities.
ii. Informed consent: Every respondent was duly informed of the purpose and contents of the interviews and their consent sought before proceeding. The respondents were assured of their right to refuse to answer all or any specific questions.
iii. Privacy: Interviews were conducted in a manner that was comfortable to respondents and their right to privacy was respected.
iv. Confidentiality: The respondents' were assured of confidentiality and their names or other identifying information was not required for this survey.
v. Child safeguarding: The survey team was bound by Save the Children's child safeguarding policy. At all times the team ensured no harm to children.

2.2.4 Study Limitations

The study faced the following limitations:

- Sub-optimal skills among enumerators resulting in some several incomplete questionnaires
- The survey team was not able to interview Save the Children staff, as planned, due to commitments which took them out of the region during the survey period.

3.0 FINDINGS

3.1 Demographics

A total of 403 respondents were reached in the household survey representing a 95% response rate. Of this Majority (79%) were women while men were 21%. The table below summarizes the household demographic characteristics.

Table 1: Summary of household demographics

Demographic feature	Survey findings
Mean Age (Male)	36 years (Range: 18-70 years)
Mean Age (Female)	30 years (Range: 16-53 years)
Household size	7 people (Range: 2- 31people)
Average number of children under 5	2 (Range: 0-6 children)
Total fertility rate	5.3 births/woman
Heads of households	67% men; 33% female
Average household income/month (Somali Shillings)	301,500 (Range 3000-950,000)
Completed basic (Primary) education	46% men; 23% Female
Access to electricity	8% of households

Access to education

Survey on access to education established that a higher percentage (38%) of women had not attended school as compared to 23% of male. As shown in figure 1 below, a higher percentage of male respondents had completed various levels of education while women recorded a higher percentage not completing.

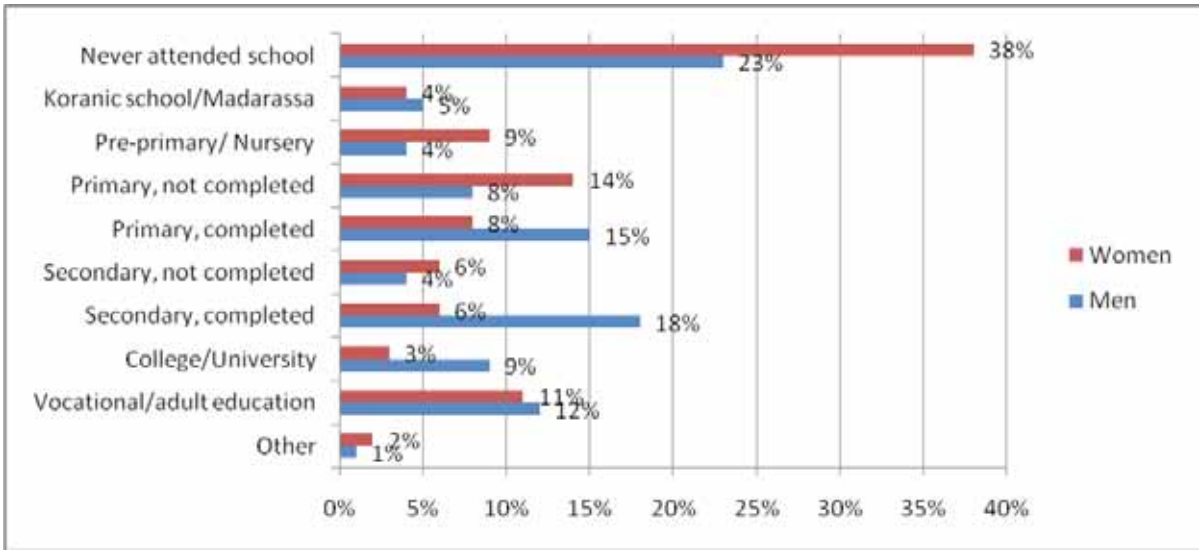

Figure 1: Access to education

Source of income

The main sources of income were business (26%), informal employment (22%) and livestock keeping (18%). The following sources recorded less than 10% of households: remittance from diaspora (8%), formal employment (8%), farming (7%), fishing 5% and other sources (6%).

Means of communication

The assessment sought to establish the ownership of various modes of communications equipment by households. While it was established that minority of households possess these equipments ownership of mobile phones recorded a higher percentage (12%) than both Radio (7%) and Television (4%).

Water, sanitation and hygiene

A majority of households surveyed relied on piped water (32%), Dam/Berkads (32%) and water trucking (21%) for their water as shown in the pie-chart below

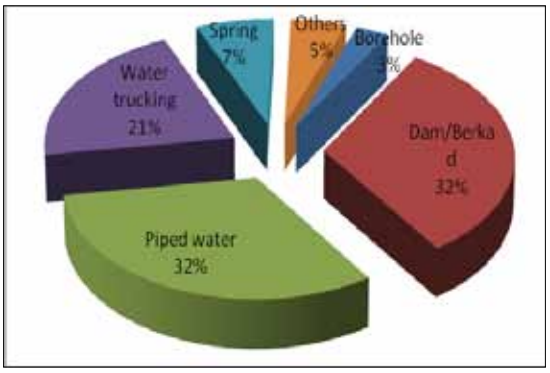

Figure 2: Main sources of household water

On average, it takes 28 minutes for a trip to and from the water source but some households reported up to two hours. In 61% of the households surveyed adult women were responsible for fetching household water as shown in the table below.

Table 2: Person responsible for fetching water

	% (N=222)
Adult man (age 15+ years)	21%
Adult woman (age 15+ years)	61%
Female child (under 15 years)	10%
Male child (under 15 years)	7%
Total	**100%**

Slightly more than three quarters (76%) of households reported not to be treating their drinking water. Of the 24% who treated their drinking water boiling was the common mode of treatment at 60% followed by Aqua/Pur/Chlorine treatment (32%) and use of filtration/solar or settling (8%).

Of the 403 households surveyed, 30% had no household toilet and therefore used open fields, bushes or shared with other families. Almost all (91%) of those who reported to have a form of toilet reported to have pit latrines.

The assessment established that hand washing practice was poor with only 22% of the households having a dedicated place for hand washing. While majority (87%) knew that hand washing was critical before eating or serving food less than 10% reported it as necessary in other crucial times namely: after visiting the toilet (8%) and after cleaning a child's bottom (2%).

Malaria control

Majority (75.4%) of the households surveyed did not own a mosquito net while for the 24.6% who had tended to have more than one net (mean 1.9). In terms of usage, it was evident that children were not the priority group as only a total of 18% reported them as the ones who slept under the net the previous night. Of significant concern is that among households with mosquito nets 37% reported that no one slept under the net the previous night. The table below summarises the findings:

Table 3: Ownership and usage of Mosquito nets

Ownership of mosquito net			**Who slept under the net the previous night?**		
Yes	99	24.6%	Husband	31	16%
No	275	75.4%	Wife	56	29%
Total (N)	**374**	**100%**	Child below 5 years	26	14%
Number of nets in household, for those with (N= 99):			Child over 5 years	8	4%
			Other adult	0	0%
▪ Mean= 1.9 nets			No one/ Net was not used	71	37%
▪ Minimum: 1; Maximum: 6			Total	**192**	**100%**

3.2 Knowledge and Attitude

The survey sought to find out the respondents' knowledge and attitudes toward various aspects of RMNH. The sections below outline the findings:

3.2.1 Under-age pregnancy

The responses on the ideal age for a woman to have the first baby were variable by gender. While men on average preferred women to have their first baby at the age of 18 years (range: 13-31 years) women themselves preferred at a lower age of 16 years (range: 12- 25 years). A Higher percentage (74%) of men reported being aware that early pregnancy increases the risk of complications which can lead to the death of mother and their child as compared to women respondents (58%).

3.2.2 Birth spacing methods

Significant variations were also noticed on the knowledge on various methods of birth spacing among men and women respondents. A high number of women (29.2%) reported to have knowledge on breastfeeding as a way of birth spacing followed by injection (20.2%) and then pills (17.3%). Men however reported more awareness on natural birth spacing methods with breastfeeding being first (20.7%) followed by abstinence (14.9%). Significant percentage (18.4%) of men reported lack of knowledge on any birth spacing method as compared to only 1.2% of women.

From the assessment however there was clear evidence from both genders that knowledge on long term methods of birth spacing was minimal, if not lacking, with both male and females recording less than 5% for IUDs, sterilization and implants. Almost all men were not aware of any of these long term methods while some 5.4% of women were aware of IUDs.

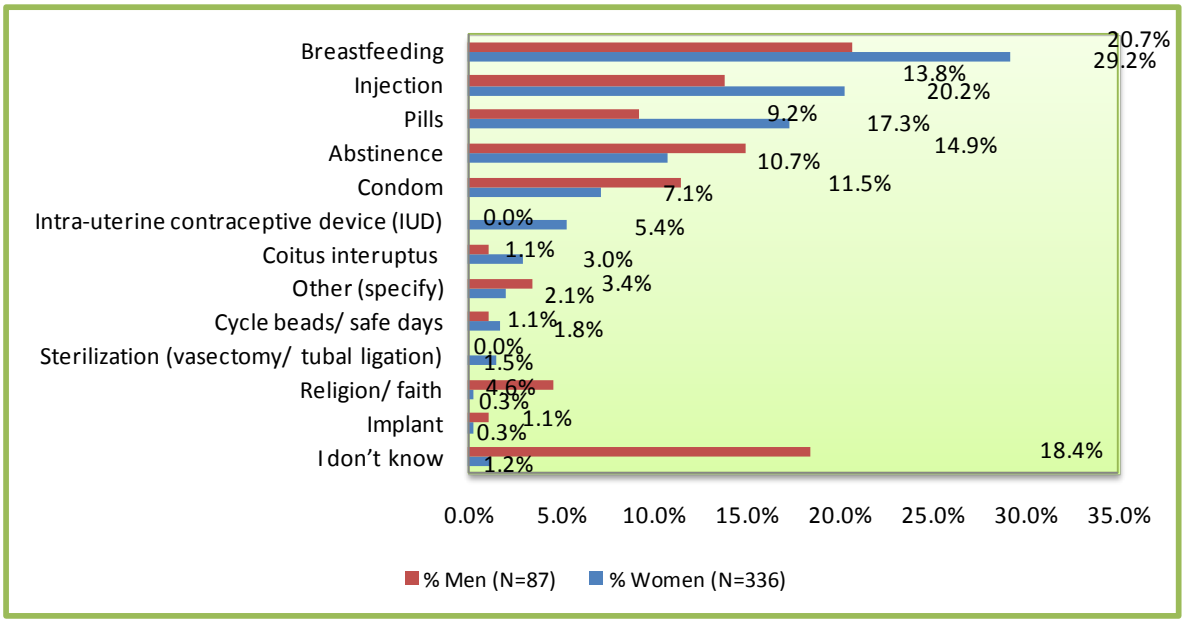

Figure 3: Knowledge on various methods of birth spacing (multiple answers)

Knowledge on places where one can get modern birth control methods in their communities recorded less than half of the respondents. Health facility was the most reported place at 35% with Pharmacy/medicine shops, TBAs/CHWs and NGOs recording less than 10% as shown in the table below.

Table 4: Reported places where one can get modern birth control methods

	Men (N=85)	Women (N=318)	Total (N=403)
Health Facility	34.1%	35.2%	35.0%
Pharmacy	1.2%	11.0%	8.9%
NGO	22.4%	4.7%	8.4%
TBA	7.1%	0.9%	2.2%
Other	10.6%	0.0%	2.2%

3.2.3 Antenatal Care (ANC)

Women who had utilised ANC services during their last pregnancy were asked who, in terms of gender, had examined them. A majority (77%) of the ANC clients were examined by a female health worker while 23% were examined by a male health worker. Almost all of the respondents however would have preferred a female health worker examining them.

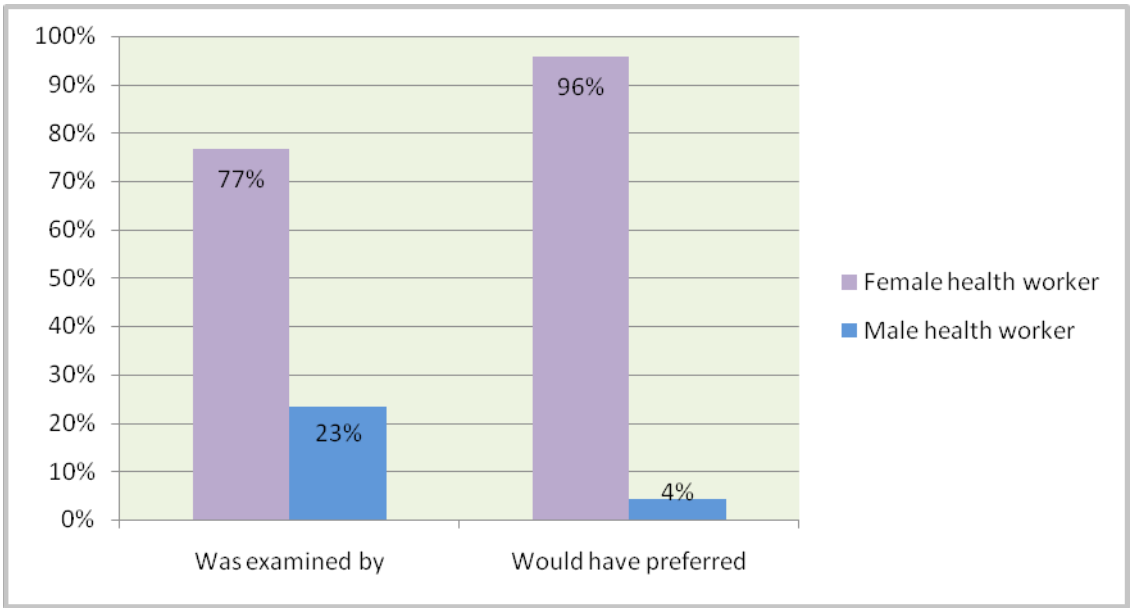

Figure 4: ANC client examining and preferred health worker by gender

While slightly more than three quarters of men (77%) agreed that there is need for pregnant women to go for ANC, 20% did not agree with a further 3% not sure.

3.2.4 Giving birth at a health-care facility

Women attitudes about giving birth at health facilities varied. While majority viewed adequate privacy (71.1%) and having no problem with male health workers delivering assisting during delivery (54.7%) all other issues recorded less than half of women agreeing to.

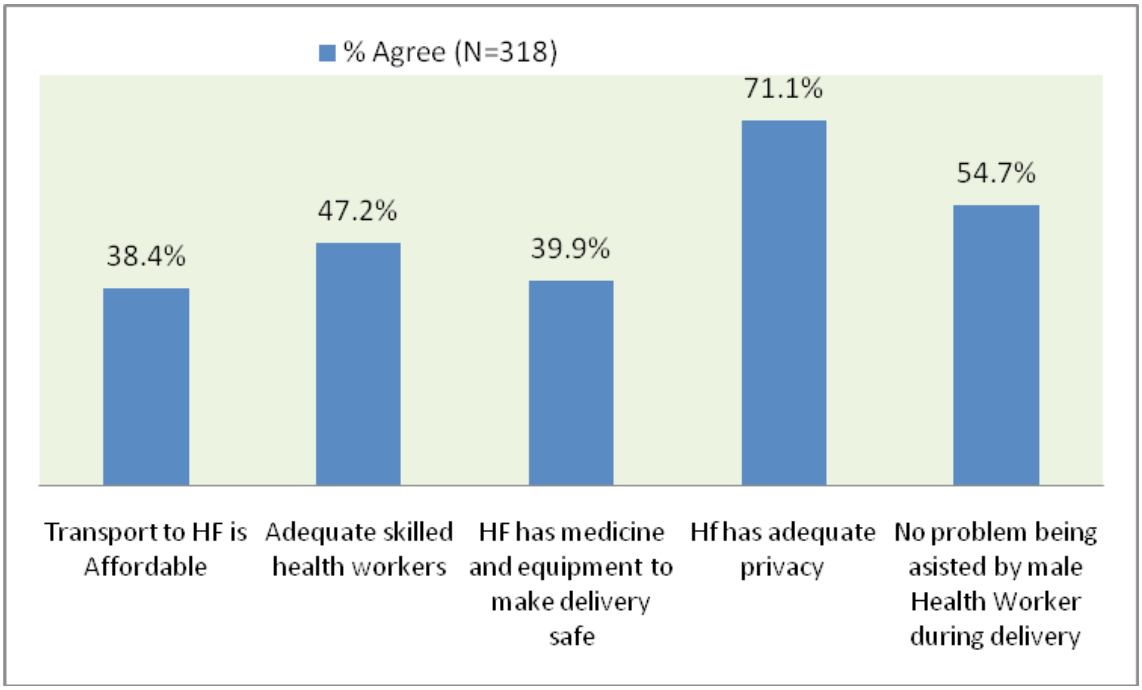

Figure 5: Attitude towards giving birth at the nearest health facility

The above were supported by men's perception of their nearest health facilities. In most of the issues less than half of them agreed as portrayed in the table below.

Table 5: Men's perception on nearest health facilities

	Men (N=85)
HF Safe for woman to give birth	63.5%
Fees charged are affordable	48.2%
Not far from home	45.9%
Has all medicine	40.0%
Adequate qualified staff	32.9%

3.2.5 Danger signs in pregnancy

The assessment sought to establish knowledge level on danger signs during pregnancy. Approximately 68% of all respondents gave an answer (almost all of them giving more than 2 symptoms), however, 22.3% of women and 30.6% of men were not aware of any symptoms. More than a quarter of women gave the following symptoms as danger signs of pregnancies: Pelvic or abdominal pain (31.4%), vaginal bleeding (31.1%) and persistent back pains (26.4%). The only symptom eliciting more than a quarter (28.2%) of men respondents was vaginal bleeding.

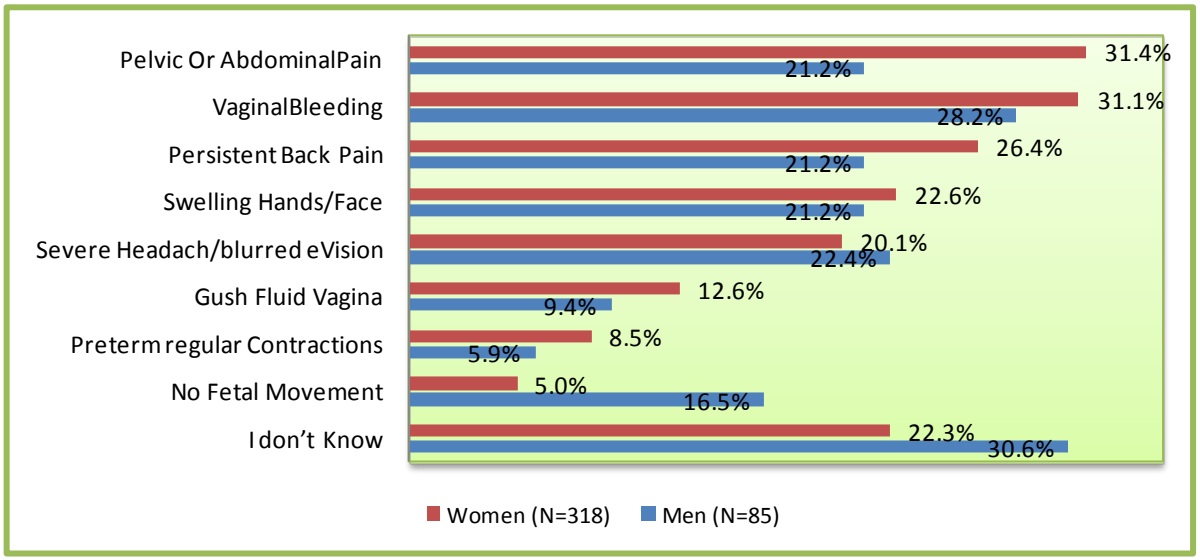

Figure 6: Knowledge of men and women on danger signs in pregnancy (multiple responses)

3.2.6 Danger signs in newborns

Knowledge on danger signs in newborns showed similar trends among male and female respondents though the later recorded generally higher percentages. The most mentioned symptom was fever by almost half of women respondents (49.4%) followed by vomiting (36.8%), Diarrhoea/ dehydration (27.0%) and Difficult/ rapid breathing (25.5%). As for men only the following symptoms elicited more than a quarter respondents having knowledge: Vomiting (28.2%) and Fever (25.9%).

Table 6: Knowledge on newborn danger signs

	Men (N=85)	Women (N=318)	Total (N=403)
I don't know	1.2%	1.9%	1.7%
Skin colour change	8.2%	6.3%	6.7%
Poor suckling	21.2%	20.1%	20.3%
Difficult/ rapid breathing	12.9%	25.5%	22.8%
Lethargy/extreme weakness	17.6%	24.5%	23.1%
Diarrhoea/ dehydration	17.6%	27.0%	25.1%
Vomiting	28.2%	36.8%	35.0%
Fever	25.9%	49.4%	44.4%

3.3 RMNCH-related Practices

3.3.1 Age at first birth

The mean age of women at the time they had their first baby was 19 years (range: 13 -35 years). Those who had gotten their first child below 15 years of age composed of 11% of all female respondents.

3.3.2 Birth spacing

The assessment established that 2% of men and 14% of women respondents had at one time or the other wished to delay pregnancy or space births with majority (87.5% men and 71.4% women) of them actually using a birth spacing method. Long term methods of family planning however were not reported as the adopted method of delaying pregnancy or spacing births as shown in the table below. Breastfeeding was the most preferred with 46.7% of women reporting having used it followed by pills (23.3%); comparatively, many (42.9%) of the men reported injection then pills (28.6%) as their methods of choice.

"...child spacing is something which has its roots in Islam because our religion says that the baby should be breastfeed for two years so he can benefit from the milk but so that there is space between the children and we as religious leaders promote it."

Table 7: Birth spacing methods of choice (multiple choices possible)

	Men (N=7)	Women (N=42)
Sterilization (vasectomy/Tubal ligation)	-	-
Implant	-	-
IUCD	-	6.7%
Injection	42.9%	10.0%
Pills	28.6%	23.3%
Condoms	14.3%	16.7%
cycle beads/safe days	-	-
Coitus interuptus	-	3.33%
Breastfeeding	14.3%	46.67%
Abstinence		13.33%

The information above was corroborated by key informants within the health sector who stated that most of the communities are knowledgeable about breastfeeding as one of the methods of birth spacing and the most preferred in light that generally there is an argument that children are God-given hence there is no need for birth control. Key informants accepted that the biggest impediment to adoption of modern birth spacing methods is religious interpretation.

For the majority of respondents who reported having never used any birth spacing method, the main reasons given were that it was forbidden by their religion or culture and/or because they did not know of any birth spacing method. As shown in the table below, there was considerable variation in opinions between men and women

Table 8: Reasons given for never using any birth spacing method

	% Women (N=53)	% Men (N=64)
I don't know of any birth spacing method	49%	20%
I don't know where to get birth spacing method	8%	6%
Not allowed by our culture	13%	25%
Not allowed by my religion	17%	30%
Fear of side effects	4%	6%
Other reasons	4%	6%
I don't know	6%	6%
Total responses	100%	100%

The findings above were corroborated by key informants who identified the following as the obstacles to the increased uptake of modern family panning methods:

1. Religion: forbids birth control as children are blessing from Allah,
2. Side effects: fears of side effects (being barren)after the injection (for spacing), and effects on menstrual cycles,
3. Trust: mistrust on the reliability of methods as there might be cases of taking modern methods and still get pregnant.

3.3.3 Uptake of Antenatal Care (ANC)

Majority (70%) of women who had ever been pregnant reported to have taken up antenatal care services during their last pregnancy. For the remaining 30% the reasons for not taking up the ANC services varied from cost, transport challenges and lack of knowledge of its importance as shown in the figure below.

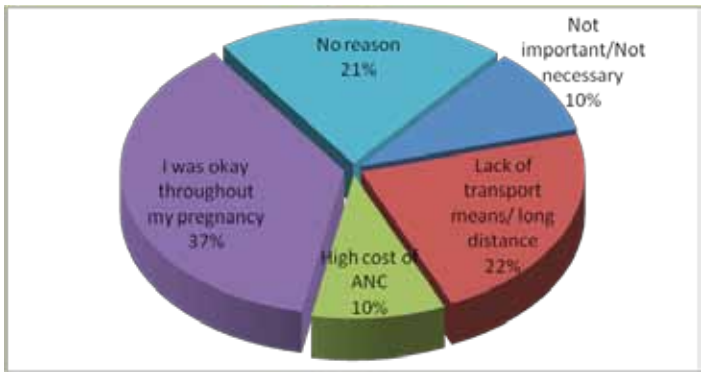

Figure 7: Reasons for not seeking antenatal care during the last pregnancy

The number of ANC visits during pregnancy and the timing of the first visit were also assessed. The World Health Organization (WHO) recommends a minimum of four antenatal visits with the first visit being within the first trimester. The survey found out that only 12% of the female respondents had made at least four ANC visits during their last pregnancy. As evident from the pie chart below, delay in taking up ANC services was also a problem as only 43% of the respondents made their first ANC visit within the first trimester.

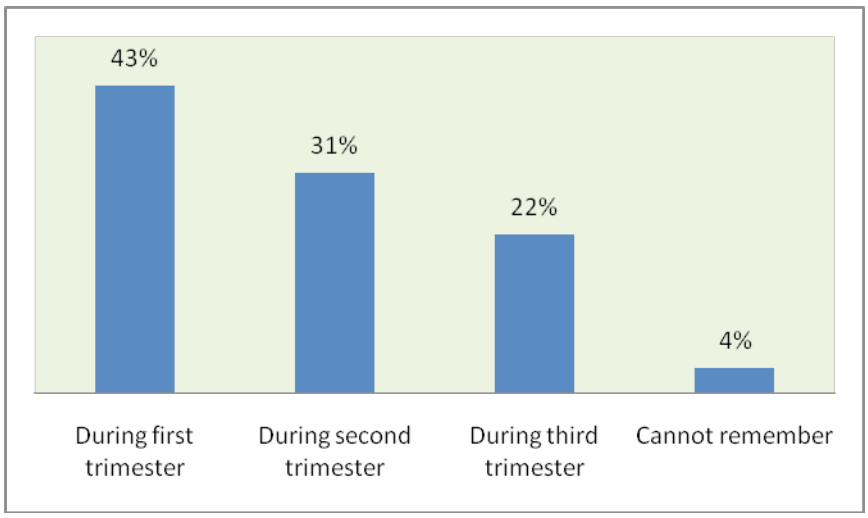

Figure 8: Gestational age when first ANC visit was made

3.3.4 Birth preparedness

While almost two thirds (64%) of mothers who had given birth knew the expected day of delivery and three quarters (75%) had made the decision on where to give birth only slightly more than a quarter (26%) reported to have made arrangements for emergency transport. The lack of arrangements for emergency transport could further explain why a majority (59%) reported to have given birth at home.

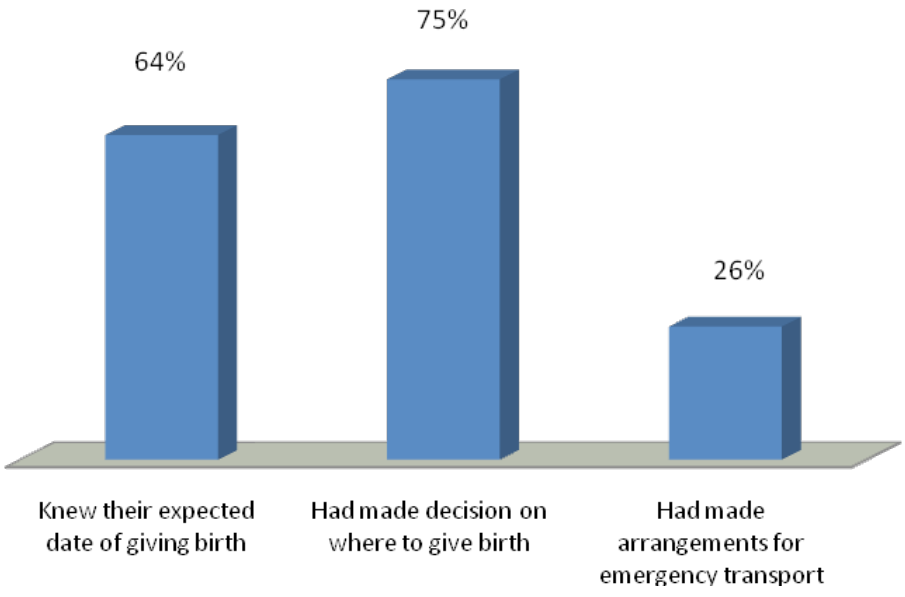

Figure 9: Birth preparedness during the last pregnancy

3.3.5 Place of birth

The final decision on where a woman will give birth was found to be largely made by the woman as 73% of them reported to have done so during their last child birth. However 21% reported that the decision was made by their husbands with a further 6% reporting of influence from relatives.

As illustrated by the figures below, the decision on whether to give birth at a health facility or at home was influenced by a combination of factors. The choice of health facility was predominately influenced by safety, the desire for skilled deliveries, proximity to the woman's home while delivery at home was preferred for reasons such as "to be able to attend to my other children", "there are no fees charged/ it is cheaper", "you get better care at home".

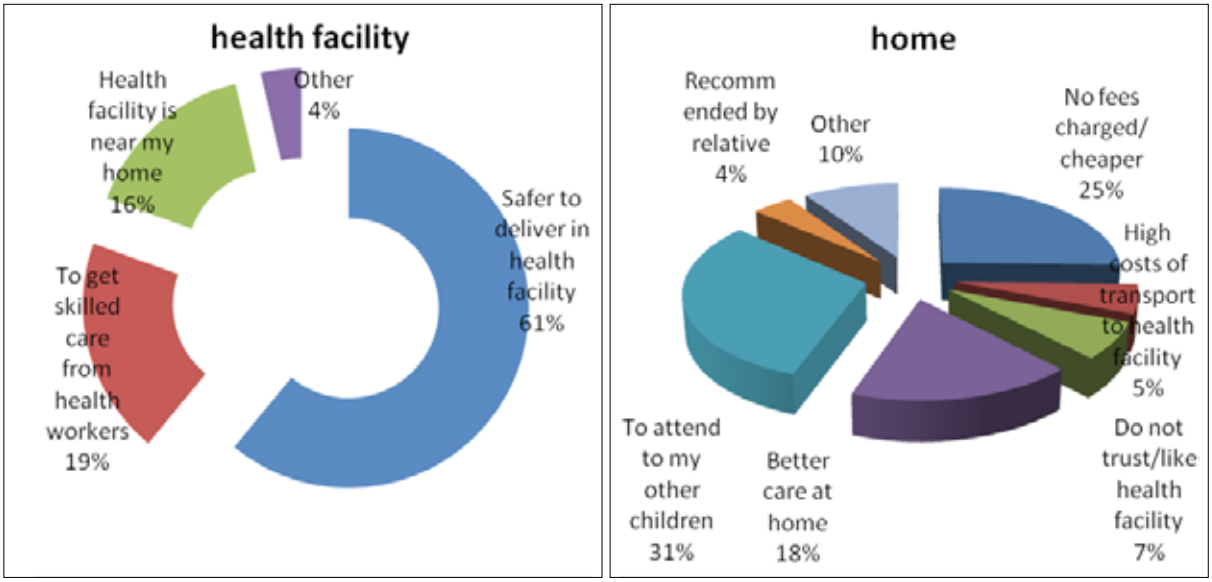

Figure 10: Reasons given for preference to give birth at home or health facility

The information above on factors influencing why mothers choose to give birth at home were corroborated by key informants who stated that women prefer home-delivery in order to take care of their other children and attend to their other household chores.

Births at home are mainly done by traditional birth attendants (TBAs). In all the 18 visited villages across the five districts in Karkar region, there existed at least one TBA. The use of TBAs as identified by the assessment is a very common and integral part of the society. As stated by several TBAs their roles are as follows:

- Assist the pregnant women in the delivery process,
- Check and advise the pregnant women regarding the condition of their foetus,
- Advise pregnant women on how to care for themselves and their babies after birth,
- Provide necessary medication after delivery, and
- Give new names to new born babies.

While the TBAs accepted and appreciated facility based deliveries, they acknowledged that for many of them, attending to births is a form of income generation. They stated that while they assist in deliveries they often refer complicated cases to hospitals. While maternal mortal-

ity is known to be high in Somalia, the 11 TBAs interviewed reported no maternal death has ever occurred in their care. TBAs interviewed had been undertaking birth deliveries for a mean of 20 years with an average of 10 deliveries each month. According to TBAs the following are what makes them the better choice for birthing services as opposed to health facilities:

- Easiest method to deliver,
- Cheap,
- Always available, and
- The nearest all the times.

> "Delivery in hospital, MCH or health post is safe but very expensive"
>
> **TBA respondent**

3.3.6 Response to danger symptoms during pregnancy

A high proportion (44%) of women reported having experienced one or more of the danger symptoms during their last pregnancy. Though when that happened, the predominant action was to seek treatment from a health facility almost 9% reported to have done nothing substantive to heal with their actions being to: do nothing 3%, take rest 3% or seek prayers.

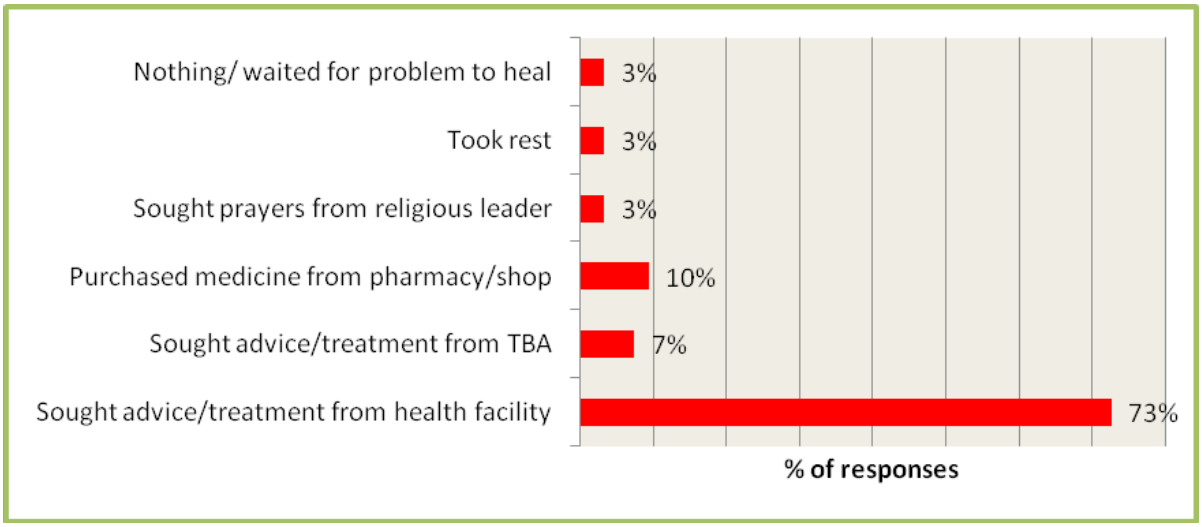

Figure 11: Actions taken when woman experienced danger signs/symptoms during last pregnancy

After noticing the danger symptoms, 61% of the women took action within 12 hours while 14% and 25% took action after 12 to 24 hours and after more than 24 hours respectively.

It is shocking that almost a third (29%) of women respondents who have ever been pregnant reported either having ever had a miscarriage, spontaneous abortion or still birth or a child that died after birth.

3.3.7 Breastfeeding practices

Breastfeeding is one of the most effective ways to ensure child health and survival. The WHO recommends that breastfeeding should be initiated within the first hour after birth and exclusive breastfeeding be done up to 6 months of age. This survey sought to find out the level of knowledge, attitude and practice to these two "gold standards".

Women who had given birth were asked after how long they breastfed their babies after birth. A majority (71%) of respondents reported having done so within the recommended 1 hour. The survey found out that the main reason (71%) was perception that the mother was unwell after delivery and needed time to recover before breastfeeding. There was also mention of early initiation of breastfeeding being a taboo, the misconception that colostrum was not good for baby and the notion that breasts had no milk at the early stage. The pie chart and table below present these findings.

Table 9: Reasons given for not breastfeeding within the first hour

	% (N=78)
Mother was unwell	71%
Taboo	8%
Breast not producing milk	13%
First breast milk (Colostrums) not good for baby	5%
I don't know	4%
Total	**100%**

A majority (65%) stated that they weaned their children at or after six months. There were a few women who reported giving alternative food/ drinks to newborns soon after delivery. In the focus group discussion with women, it emerged that women had wrong beliefs that in the first 3 days of life, there is no milk in the breast; hence there is no need to put the child on the breast. They also believe that colostrums milk is bad for a child's health as it is too concentrated and makes the child sick.

3.3.8 Immunisation uptake

The assessment sought information on whether the last born child had received all the vaccines due at their age. Two methods were used, the enumerators scrutinized the child health card and where the card was not available a series of questions were asked to determine the immunisation status of the child. The child heath card was only available in 40% of the households. The findings indicate that only 50% of the children under survey were duly immunised as per their age. It was evident that the coverage declined progressively with doses and age of child. For instance, the coverage of OPV 1 and DPT/Penta 1 tended to be higher than OPV 3 and DPT/ Penta 3 respectively. This finding is suggestive of progressive dropout and high defaulter rate. The graph below presents these findings.

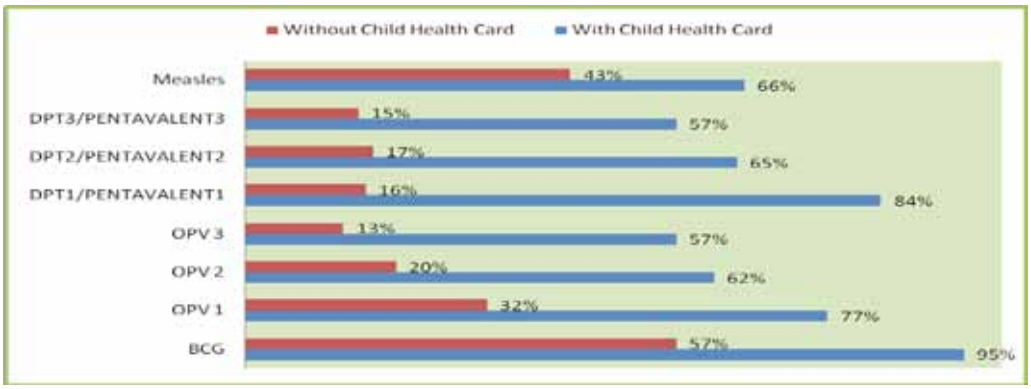

Figure 12: Vaccination status of last born child

Mothers were asked to give reasons why they had not taken their children for immunisation, or why they had defaulted. As summarised in the table below, majority of the reasons depict lack of adequate knowledge or poor attitude towards immunisation.

Table 10: Reasons given why child was not duly vaccinated

	% (N=129)
Mother too busy/sick	18%
Vaccine not available	13%
Unaware of need for completing all doses	10%
Unaware of need for immunization	9%
Not aware of place or time of immunization	9%
Time of immunization inconvenient	9%
Child ill	9%
Health facility too far	5%
Unpleasant treatment by health worker	5%
Vaccinator absent	4%
Long waiting time on the queue	4%
Fear of side effects	2%
Other	2%
Total	**100%**

The findings highlight a number of barriers to access and utilisation of immunisation services. These barriers can be categorised into two main clusters, those that relate to individual and community knowledge and attitudes and those related to weaknesses in the health system. As shown in the pie chart below a bigger share of the barriers relate to knowledge and attitudes.

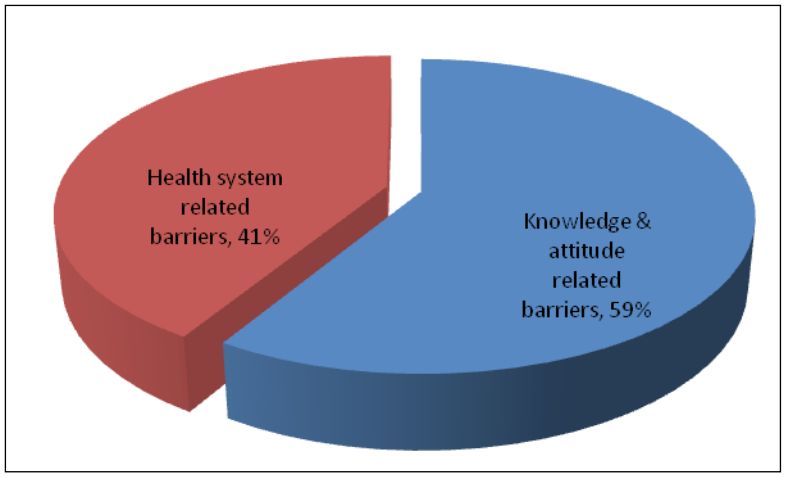

Figure 13: Reasons why child is not duly vaccinated

3.3.9 Common childhood illnesses

In assessing for the prevalence of the common childhood illnesses particularly diarrhoea, malaria and pneumonia (among the topmost children killers globally) it was established that half of

the children had suffered cough, fast or difficult breathing, which are indicative of respiratory tract infections (and commonly pneumonia). Fever and diarrhoea were reported in 43% and 26% of the children respectively. Although fever is generally not a very specific clinical predictor of malaria, the proportion of children reported as having had fever in the last 2 weeks is consistent with information gathered from the regional health officer and health workers that Malaria is among the top causes of morbidity in children.

Oral rehydration is the mainstay of diarrhoea management to avoid or correct dehydration. When a child has diarrhoea, mothers are encouraged to provide them more than usual amounts of fluid. The survey sought to assess whether this advice was practiced in the Karkar region and only 37% of mothers reported giving more fluids to their diarrhoeal children.

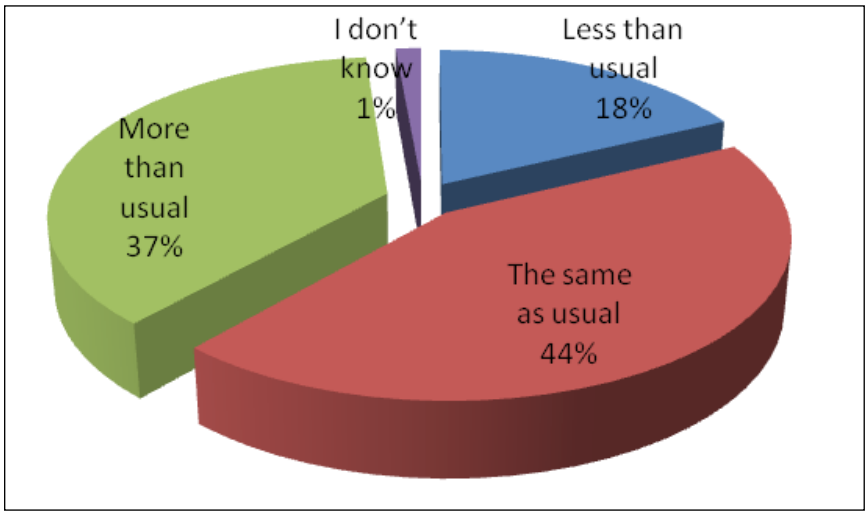

Figure 14: Knowledge on the amount of fluid that a child with diarrhoea should be given to drink

When the child was sick in the previous two weeks, only 79% of mothers said that they sought advice or treatment with a health facility being the most common place (75%) followed by purchase of medicines from a pharmacy or medicine shop (21%). Community Health Workers were least likely to be consulted when the child was sick recording only 1% of respondents. Other options included seeking advice from traditional practitioners (3%) and religious leaders (2%). While slightly less than half sought advice the same day more than half waited for a day as depicted in the table below.

Table 11: Delay before seeking advice/treatment for sick child

Time taken before seeking treatment/ advice	% (N=184)
Same day	46%
The next day	27%
After two days	15%
After three or more days	8%
After 1 week	3%
Other	1%
Total	**100%**

The 21% of respondents, who never sought any advice/treatment when their child below five years was sick, gave reasons varying from cost, distance and self-perception of the severity of the illness. A significant 13% had no reason at all.

Table 12: Reasons for not seeking advice/treatment

	% (N=47)
I could not afford the cost of advise/treatment	36%
Long distance to a place where I can seek advise/treatment	28%
In my opinion the sickness was not serious	21%
Other reasons	2%
I have no reasons	13%
Total	**100%**

3.4 Behaviour Change Communication (BCC) on MNCH

3.4.1 Sources of MNCH messages

The assessment sought to establish existing messages and channels of information on MNCH specifically from women respondents. In the three months preceding the assessment, slightly less than half (46%) of women respondents heard or read messages on health of mothers and children. Asked which messages they had received, 65% of the women said messages on antenatal care, 59% hygiene, 31% immunisation, 22% disease specific and 19% other general health messages (including nutrition). Majority (61%) of men could remember hearing or reading information on their own or their family's health.

The source of health messages was explored by asking the respondents to recount from where they had heard or read maternal and child health messages. Health facility staff, radio and community health workers were the main source of information mentioned.

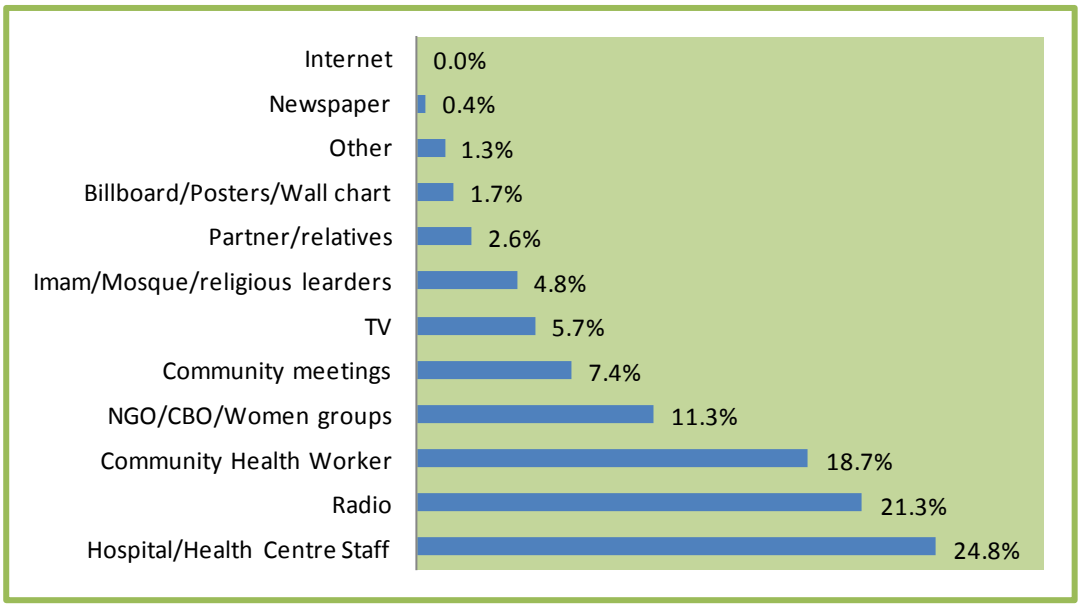

Figure 15: Current sources of information on MNCH

The interviews conducted with health services providers and regional managers confirmed that the communication channels they commonly used included: Media (Radio/TV), newsletters, posters, billboards, outreach using microphone mounted cars/vehicles, ministry of health officers and communal meetings.

3.4.2 Preferred means of MNCH communication

Just like existing sources of information, the preferred means registered almost a similar trend. It was however very evident that a higher number (40.3%) of women preferred hospitals or health staff as a source of information on MNCH. Key informants identified health officers, NGOs and religious leaders as the most trusted means of delivering MNCH messages.

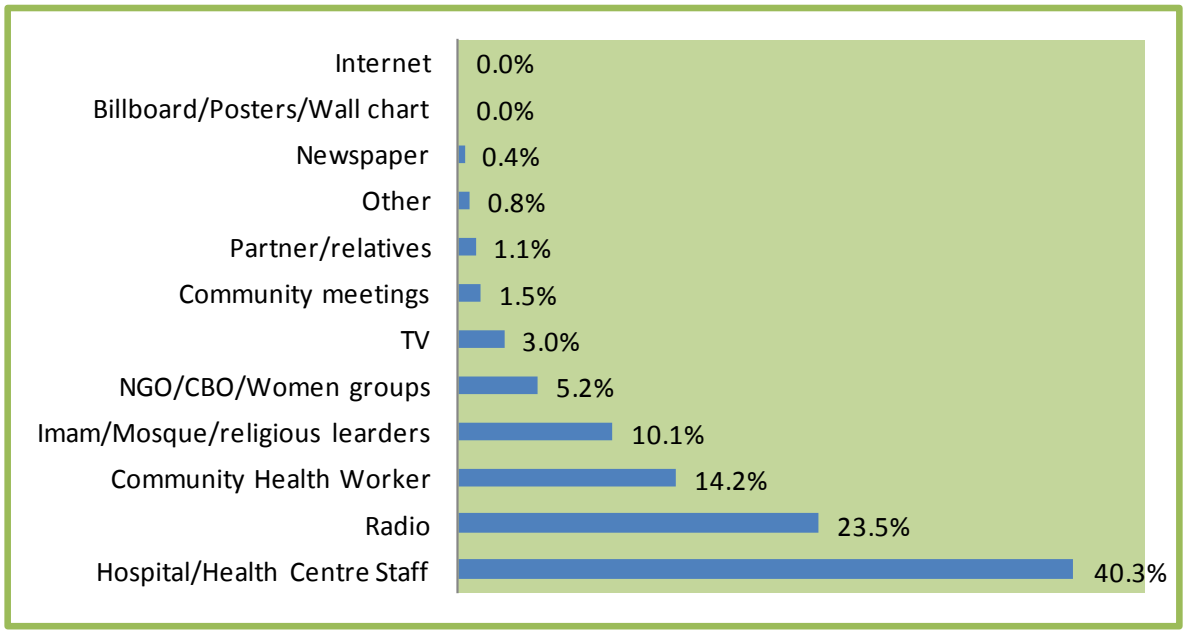

Figure 17: Trusted sources for MNCH information

3.5 The Opinion of Key Informants

The health officers interviewed stated that in light of the unique challenges facing Somalia, the response to MNCH needs was satisfactory though a lot more can be improved. Specifically mentioned was the support the health sector receives from partners such as the free services and support for referrals from Save the Children and SRCS. Still a challenge however was laboratory services in some parts of the region e.g. at Rako District. One of the key informants identified outreach to rural areas with a package of services as an effective way of extending access to essential health care services. Health officers acknowledged that rural pastoral areas whose members were nomadic in nature have not been adequately reached. In rural pastoral settings, economic and infrastructural factors are a hindrance to health seeking behaviour by communities. Transportation is a challenge in these areas. Whereas in some areas there exist support for fuel and ambulances (provided by NGOs including Save the Children) there is inadequate awareness among the nomadic pastoral groups. According to another key informant access and utilisation of MNCH is heavily influenced by the household economic state and hence the need to address underlying factors such as poverty.

Key informants recognized an improved awareness among communities on the need and importance of skilled deliveries at health facilities but also acknowledging the need to better coordinate the ongoing efforts. The most mentioned organ by key informants to coordinate behaviour change communication interventions was the district health committees. Noteworthy, the regional MOH office mentioned that currently there was inadequate information what agencies were doing and their scope of coverage.

> "I do not know what NGOs*[1] are doing at the regions* as they do not give us any report even what is happening in their MCHs"
>
> A statement from one of the key informants at the regional level

The key points mentioned by key informants outlining the situation of MNCH in Karkar region are:

- The health system capacity in dealing with maternal and child mortality in the region is not adequate resulting in inadequate coverage of health services.
- There is inadequate health personnel and limited knowledge by communities on maternal and child health.
- There is evidence of high number of cases of anaemia and acute malnutrition, mostly linked to ignorance, among many other factors, of seeking advice and treatment from health sector.
- Low immunization coverage due to both supply and demand side challenges. For instance, parents fail to seek immunization for their children due to misconceptions and in other cases stock out of vaccines discourage uptake. Though the Puntland Ministry of Health has demonstrable will and aspiration to improve the coverage of MNCH services, non-governmental providers especially NGOs will continue to bear considerable share of the responsibility.

Drawing on this state of affairs, the key informant recommendations were:

- There is need for capacity building for health workers through skills-oriented training and refresher courses,
- There is need to restructure District Health committees and ensure selection is based on set and acceptable criteria,
- There is need to shift the priority focus to prevention and health promotion activities rather than curative services.
- There is an urgent need to equip regional hospitals and referral health centres to be able to provide comprehensive emergency obstetric care services. Among the urgent support required include: delivery sets, incubators, surgical theatres and blood bank at hospitals.
- To improve uptake of reproductive health services, output based models and demand-side incentives among other innovative approached should be piloted and, if found promising, scaled up.

4.0 DISCUSSION

The KAP survey has illuminated several knowledge, attitude and behavioural factors that underlie the prevailing maternal, newborn and child health situation in Karkar region of Somalia. Coupled with the widely known health systems weakness, these findings may to a great extent explain the remarkably poor access and utilisation of maternal, newborn and child health services. This section undertakes to answer the research questions based on the findings of the survey.

4.1 Communities knowledge about maternal and child health

On the overall, the survey found considerably low level of awareness on matters of maternal and child health. This corroborates the findings of a great deal of other publications that the researchers reviewed. Evidently, the study population has inadequate knowledge on the following among other subject areas:

- Critical hand washing moments
- Birth spacing methods
- Risks of early pregnancy
- Importance of antenatal care
- Danger signs in pregnancy and newborns
- Importance of skilled attendance at birth

A number of misconceptions were also revealed, among them:

- Colostrums milk is harmful to a new-born
- The breasts of newly delivered mothers have inadequate milk
- Vaccines are not safe to new-borns or sick children should not be vaccinated
- A child with diarrhoea should be given less to drink/eat

There are clear disparities in the knowledge levels between men and women. It appears that women are better informed on maternal and child health issues as compared to men. This finding has been corroborated by key informants who stated that women are more knowledgeable on MNCH issues than men. For instance, 18% of men interviewed said they did not know of any birth spacing method compared with only 1% women who did not know. A significantly high percentage of all respondents (over 60%) could not report of a place where they could access birth control methods. Similarly, about 20% men did not see the need for antenatal care if the woman was not ill. Generally men were not informed of the danger signs in pregnancy as only vaginal bleeding was mention by more than a quarter (28%) of men. These and other knowledge gaps should be of major concern to health planners given that men have substantive influence on the health seeking behaviours of their wives and families.

It is however good to note that even though women were generally more aware than men their knowledge level was still low and in most cases less than half of the interviewed responded correctly. An instance of knowledge gap by women was the risks posed by early pregnancy where their mean preferred age is 16 years as compared to 18 years for men. Almost half (42%) of women reported not being aware that early pregnancy increases the risks of complications

and that it might lead to death of both the mother and child. This is corroborated by the sub sections below where cases of pregnancy related complications were reported.

4.2 Perception on health system response to MNCH needs

There were mixed attitudes towards the health system and its approach to MNCH needs. The positive side is that households saw health facilities as the first point of call when a pregnant woman had pregnancy-related complications or when a child was sick. 80% of men said they would prefer their wives to give birth in health facilities citing safety and good quality of care. 75% of women reported that they took their sick children to health facilities. Vast majority of respondents said they had received health messages from health workers and indeed health workers were the most trusted source of MNCH information. These statistics paint a picture of community confidence in the health system.

On the flip side, there was notable lack of confidence in the health system as depicted by a considerable proportion (25%) of respondents that reported turning to pharmacy/drugs shop, Koran/prayers and traditional healers when their children were sick.
While almost a quarter (23%) of women who had attended ANC clinics had been examined by men health workers, almost all (over 96%) would have preferred a female health worker. This can be one of the factors which hampers uptake of ANC services especially where there are male health workers.

Majority of women viewed giving birth at the health facility offered them privacy but more than half (53%) did not consider them having adequate skilled attendants. Even more women (over 60%) stated than health facilities lacked adequate medicine and equipment to offer safe delivery. In light of the infrastructural situation in Somalia, this is indeed true and remains a major impediment to health facility deliveries. Another significant barrier was identified as unaffordable transport costs (cited by 60% of the respondents), which reinforces the urgent need to invest in more health facilities to reduce the travel distances. Health facilities should not be seen only as a source of privacy during deliveries but more so as the safe place due to presence of skilled health workers and adequate medicine and equipment.

4.3 Practices with regard to MNCH

There was a high prevalence of underage pregnancy with 11% reporting to have given birth below the age of 15. The mean age of first pregnancy was at the teenage stage withone reported case of birth at the age of 13 years. This can be attributed to the lack of awareness by many mothers of the risks associated with underage pregnancies as explained earlier.

The survey highlighted a huge gap in family planning services knowledge and uptake. Very few men and women reported having desired to delay pregnancy at some point. Almost all men (98%) did not report having had a desire for child spacing. This should be taken in light that this was an household survey and respondents were either the mother or the farther thereby their desires plays a crucial role in the decision making on when to have a child. The uptake of family planning methods was extremely low with only 46% percent reporting using breast

feeding as a way of delaying pregnancy. The popularity of breast feeding as a birth control method could be attributable to the fact that Islam actively promotes exclusive breastfeeding as reported by a religious key informant. Long term modern family planning methods uptake was almost nonexistent while almost two thirds of women reported adopting traditional methods of birth control. The poor adoption of family planning methods was attributed by many respondents to religion and/or culture. It is also worth nothing that lack of knowledge on birth spacing methods was also significant among half of men and 20% of women.

The uptake of antenatal care services was low with varying reasons being given, ranging from being healthy through the entire pregnancy period to no reason at all. 10% of women actually reported ANC as not being necessary. Costs and distance was also another reported impediment. While some took up the service the adherence to the recommended minimum of four times was lacking.

There is a clear incongruity between knowledge and attitude towards health facility delivery and the actual practice. While majority were aware of benefits of skilled birth attendance and indeed demonstrated positive attitude to health facilities only 41% reported of having delivered in a health facility. The poor uptake of prenatal, perinatal and postnatal caremay explain the high reported cases of pregnancy complications with 44% of women reporting having experienced one or more of the danger signs of pregnancy. Those who had experienced danger signs more than a quarter (27%) did not seek advice or treatment at health facilities instead went to pharmacies, religious leaders and TBAs. A significant 6% actually reported to not soughtany advice or treatment. This provides an explanation why 29% reported having had miscarriages, spontaneous abortion and child that died after birth.

As documented in the 2006 Multiple Indicator Cluster Survey (MICS), negative perceptions and misconceptions relating to some health services are common, crucially in this regard being childhood immunisation. The uptake of immunization services was generally low with completion of the recommended vaccination schedule not the norm. There was compelling evidence of high defaulter rate or progressive dropout case being that uptake of OPV1 and DPT/Penta 1 tended to be higher than OPV3 and DPT/Penta 3. This could be attributed to poor knowledge and attitudes (41% of respondents) and health system related barriers (59%).

In households with children under 5 years, there was a reported high number who had suffered from various ailments 2 weeks preceding the survey: 50% cough, fast or difficult breathing, 43% fever and 26% diarrhoea. The vast majority of caretakers with sick children reported seeking advice/ treatment from health facilities within the recommended 24 hours which indicates satisfactory health seeking behaviour. This is consistent with similar findings of annual FSNAU nutritional surveys. On the overall, however, demand for preventive and promotive services is low.

4.4 MNCH-related behaviour change communication

Health facility staff, radio and community health workers are the main sources of maternal and child health information. It is somewhat surprising that radio was mentioned as the second most

common source of information and yet only 7% of the households reported owning a radio. Whether this can sufficiently be explained by communal listenership and secondary dissemination of radio messages in hard to determine. However, a qualitative research in communication channels in use in Somalia conducted by UNICEF (2000) found similar popularity in radio.

The KAP survey found that health workers followed by radio are the most trusted sources of health information. Community health workers and religious leaders also featured prominently. Communication in Somali communities is largely oral which probably explains why print media was not very popular. This is also consistent with the fact that literacy levels are very low as demonstrated by the finding that a vast majority had not attended any formal schooling.

5.0 CONCLUSION

The findings of this survey shed more light to determinants of health seeking behaviour and the constraints the communities face in accessing health care. The survey exposed several knowledge gaps, misconceptions, sub-optimal attitudes and cultural behavioural patterns that may explain the poor status of maternal and child health in Karkar region. It is hoped that the findings will inform better programming in Puntland and Somalia at large.

It is evident that health facilities are the primary providers of health services, a fact that is well documented in a number of publications. Self medication based on purchase of medicines from pharmacies and drug shops is also relatively common as corroborated by a situational analysis report by UNICEF (UNICEF, Health Care Seeking Behaviour in Somalia). The considerable reliance on over-the-counter medication is reportedly more common in urban areas than it is in rural areas, likely because the private commercial sector is more established in towns. As found out in the UNICEF-supported literature review there is community tendency to "commoditise" treatment where accessing drugs means much more than the actual clinical consultation.

Beyond knowledge and attitude, the KAP survey and indeed other studies have identified other factors that mediate uptake of MNCH including cost (of both accessing care and of the service itself), convenience, quality, acceptability among others.

Community health workers as a source of information would probably have ranked higher were it not for the fact that there are currently very few trained CHWs in the areas surveyed, as reported in the interviews with health officials. This is an area that the Save the Children project in Karkar should pay attention to given that several studies, in several parts of the world, have demonstrated that trained and adequately supported CHWs are effective in reducing maternal, perinatal and newborn mortality and in encouraging service utilization. Given these findings, any behaviour changes communication strategy must be predominantly oral in nature and delivery mechanisms must involve health workers, community health workers, religious leaders and other influential gate keepers. Radio programming also seems to hold substantial promise though a more in-depth study on radio ownership, listenership and preference of media house and time of broadcast is advisable.

6.0 RECOMMENDATIONS

Based on the findings of the KAP survey and review of relevant literature, the following are the specific recommendations:

6.1 Recommendations' targeting communities knowledge and practices on MNCH

- There is need for concerted efforts to educate communities on hand washing techniques especially after visiting the toilets and changing babies' nappies. The survey highlighted inadequate awareness of the crucial need to undertake hand washing at these times.

- Communities must be educated on critical benefits of family planning/ birth spacing. The Programmes should prioritize awareness on the various methods of birth spacing, especially long term methods. The strategies adopted must consider the cultural and religious sensitivities elicited by the issue of family planning.

- Save the Children, MoH and other health actors in Puntland should design and implement initiatives aimed at empowering men and women to take informed actions for optimum spacing of births to help reduce risks to the lives of women and children and improve the health and welfare of families. Given the cultural and religious barriers cited by a sizable proportion of respondents, child spacing promotion should bring on board religious and cultural opinion leaders. Successful promotion of child spacing from a religious perspective has been applied in similar (pathfinder and Huber, Saeedi & Samadi 2010) settings.
- All actors in Puntland should raise awareness of the harmful effects of certain practices that endanger maternal, newborn and child health including early marriages and pregnancy, female genital mutilation (FGM) among others.
- Awareness on importance of antenatal care need to be elaborated to all women of reproductive age and especially the need for early visit, within the first trimester, and ensuring the recommended four visits.
- There is need for education also on the various signs of danger in pregnancy and newborns. Men should also be sensitized on this and the urgent need to seek advice and treatment from health faciliites as soon as possible.

- The importance of skilled attendance at birth need be a critical aspect in all MNCH campaigns targeting both men and women.Messages in this regard should be a priority so as to start addressing the high pregnancy and birth-related complications and mortalities.

- There is need for a campaign against misconception surrounding early initiation of breastfeeding. The campaign should tackle the following misconceptions among others: Colostrums milk is harmful to a newborn, and the breasts of newly delivered mother's have inadequate milk.

- There is need to tackle the low vaccination uptake as evident from the findings and espe-

cially educate communities against the notion that vaccines are not safe to newborns or sick children should not be vaccinated.

- Further, BCC messages should aim to raise awareness on oral rehydration of diarrhoeal children as well as the benefits of micronutrients supplementation for children especially Vitamin A

6.2 Recommendations to improve the health system response to MNCH needs

- There is need to capitalize on the existing positive perception of health facilities by both men and women so as to further foster demand for MNCH services.

- Health facilities as channels of delivering MNCH messages need to be enhanced given they were listed as the most trusted source and the fact that health professionals are more likely to disseminate correct and factual messages.

- While the private sector plays an important role in any health system, the inherent dangers of over-the-counter drugs and self-medication especially during pregnancy and for a sick child need to be highlighted, both to policy makers and the consumers themselves.

- Health promotion campaigns should partner with religious leaders as agents of change given their influence in the community.

- More female midwifes need to be trained to not only address the health worker shortage but also meet the preference by women for female providers of reproductive and maternal health services.

- There is need to equip health facilities to deal with deliveries. Medical supplies and drugs need be made adequate so that health facilities do not become the impediment to skilled deliveries.

6.3 Recommendations touching on general health programming

- The findings of the KAP survey reiterated the fact that Somalia is a highly gendered society. It is therefore recommended that health programming be informed by thorough gender analysis and any interventional actions are gender sensitive and responsive to the needs of women, girls, boys and men. It is important to emphasize that programming should ensure the specific needs of adolescents are included, given that 55 percent of the Somali population is estimated to be under the age of 20 years

- Due to the behavioural and health systems barriers highlighted by the findings of this survey, combination of both health facility-based and community-based approaches will be required to increase MNCH serves uptake. Community Health Workers, Traditional Birth At-

tendants, Traditional healers and any other 'alternative' healthcare providers must be seen as partners rather than competitors. Particularly, investing in CHWs can achieve quick wins especially in promoting MNCH services through home-visits and inter-personal communication.

- Traditional Birth Attendants (TBAs) are currently attending to more than twice the number of births attended at health facilities. They therefore have a crucial role to play only that their role should be transformed to one of promotion of MNCH services at community level and early referral to skilled care during childbirth. As stated by the key informants TBAs need to linked with formal health system and those with more advanced knowledge and skills absorbed and further modelled into community midwives.

6.4 Recommendations on proper and effective channels of information on MNCH

- Behaviour change communication initiatives in the project area should use a mix of channels with more focus on oral means of communication especially counselling and interpersonal communication by health workers (both formal and CHWs) and radios. As mentioned earlier, it is prudent to undertake more analysis of radio as a means of communication. Given the high diffusion rate of information (from person to person) influential opinion shapers should be identified and engaged as agents of behaviour change.

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APPENDICES

Appendix 1: Terms of reference

To Conduct Knowledge, Attitude and Practice survey on Maternal and Child Health and develop a BCC strategy and messaging for the Karkaar region in the State of Puntland

Background:

Save the Children has over 20 years' experience of supporting the health sector in Somalia, the focus been mainly on the primary health care. It has been engaged in a number of support areas ranging from providing local technical capacity at service delivery points to a broader health system strengthening at central level. At community levels, Save the Children has sound experience of working with community structures and building relationship between them and health facilities. The organization has been operational in Karkaar region since 2004. This started as post-tsunami rehabilitation of health facilities.

Currently, Save the Children is implementing a 2 year UKAid funded maternal and child health focused project in the Karkaar region. The project aims at improving the capacity of the Ministry of Health and the health workforce to provide, manage, and monitor quality health services at primary level while at the same time works towards increasing health service utilization by the local communities. The later involves reaching out to communities with appropriate health promotional messages, addressing barriers and enhancing awareness on seeking health care.

The limited number of health facilities and uneven distribution of them within the region of close to 200,000 people has resulted in an appallingly very low access to basic health services. Over all service utilization in Puntland is currently at 0.21 visits per person per year. The low services utilization is further confounded by complex socio-cultural and economic factors that have further contributed to lower service uptake. Understanding these complex factors through a thorough discussion with the community and service users is a fundamental step that needs to be taken before developing any key message for behavioural change and communication.

Purpose of the survey and BCC strategy development:

The purpose of the KAP survey is to generate information that will be used to develop a BCC strategy and communication messages on maternal and children health. The BCC strategy will be used to plan and implement advocacy, communication and social mobilization activities in order to increase knowledge and utilization of health services for improved health outcomes of the target population (reduction in child and maternal mortality in the target population)

Objectives of the assignment

1. Design and undertake a KAP survey on Maternal and child health.

The survey should establish but not limited to information on:

a) What respondents know about maternal and Child Health,

b) What they think about the health system response to MNCH,

c) What they actually do with regard to seeking care or taking other action related to MNCH,
d) From where do respondents get messages (though inadequate) about Maternal and Child Health
e) What is the preferred means of communication do respondents to receive about Maternal and Child Health

The KAP survey should identify knowledge gaps, cultural beliefs or behavioural patterns, practices and any other socio-cultural and economic factors that may facilitate understanding and action or create barriers to MNCH. KAP survey should also assess communication processes/ channels that are appropriate and key in promoting MNCH

2. Based on the findings of the KAP survey develop a BCC strategy with appropriate BCC messages for different sections of society (Women, men, children, elders, decision makers, health managers and policy makers,

Key tasks of the assignment:

a) Design and develop the survey tools
b) Discuss and reach consensus about the tools with SC and relevant local partners and stakeholders
c) Conduct surveys and collect data
d) Make data analysis, generate report and submit to SC for review and approval
e) Design and develop key BCC strategy and CC messages targeting different sections of the society (Children, women, elders, decision makers, health managers)
f) Present and generate consensus on the BCC strategy and messages with key health actors and influential actors at community level

Methodology:

The KAP survey will largely employ quantitative methods. Some qualitative methods will be employed to generate in depth understanding of data collected using quantitative methods. Data and information will be gathered from sampled districts of SC operational districts of Karkar region (the region has 5 districts with a total population of 200,000). Respondents of the survey are expected to be children with special emphasis on girl child and girl youth; mothers; health workers and managers; community and religious leaders; people actively taking part in community health structures/systems etc. An appropriate sampling technique will be designed to determine sample size of respondents to generate representative conclusions.. Data and information gathered through quantitative methods will be analysed and presented systematically. Qualitative information will be utilised to substantiate quantitative findings and draw appropriate conclusions accordingly.

In developing the BCC strategy and messages, a participatory process shall be followed to ensure social – cultural appropriateness of the messages and strategies for disseminating. In this regard, the views of the people that took part in the KAP survey should be sought.

With the above guidance consultants that apply for the job are expected to indicate in their technical proposals the details of the data/information collection, analysis and reporting tech-

niques (using both quantitative and qualitative techniques) they plan to deploy. Moreover, their technical proposal should also indicate the process and methods they intend to adopt to develop the BCC strategies and messages. The proposed methodologies and approaches will then be further elaborated in consultation with SC.

Duration:

1. The duration of the consultancy will be for 30 days (both for the assessment and development of BCC materials)

Deliverables:

The consultant will deliver the following deliverables:

1. Develop an inception report and share with save the Children
2. A report on **Knowledge, Attitudes and Practices on Maternal and child health** in Karkaar Puntland
3. A BCC strategy on Maternal and child Health for Karkaar Puntland
4. A BCC messages targeting different sections of the community (see above)
5. A complete set of tools and data submitted to Save the Children as organization's property

The study team

The study team will consist of the following persons

- The team leader who will manage the process and write the report
- A co investigator who will assist the lead consultant and lead on implementation of the assignment
- A health communication expert who will lead on development of the BCC strategy and messages
- Enumerators that will collect the data

Qualifications:

Lead consultant

- The consultant should have a Masters Degree in Public Health or Medical Anthropology or Economics or Sociology
- Extensive experience in health program research demonstrated by assignments conducted
- Experience in undertaking KAP surveys and developing BCC strategies and messages
- Knowledge of the socio-economic and health development issues in relation to Somalia is desired.

Co investigator

Postgraduate qualification in social science, development studies or in a discipline relevant to this assignment

Knowledge and experience in research methods

- Experience in Somalia and knowledge of the local context
- Ability to speak the local language is desired

Communication expert

- Degree in communication or journalism or any other relevant post graduate training communication
- Extensive experience in behavioural change and communication
- S/he should have practical skills in designing and developing BCC strategies and health message development

All team members

- S/he should have appropriate level of sensitivity to the children/ young population needs and be mindful of their basic rights.
- Willingness to a bid by the SC child safe guarding policy

** It is anticipated that the different team members will spend different amounts of time on the assignment- this has to be clearly explained in the proposal*

Details of itinerary:

Activity	Days	Location
Consultant work		
Document review and finalize design of assessment tool,	4	Nairobi
Travel to Garowe-Puntland	1	
Meeting with Ministry , SC field team,	1	Garowe
Recruitment local data collectors and training (the process of recruitment will start before the consultant travels to Puntland)	3	
Data collection	7	Gardo
Data Analysis and report writing	5	Garowe
BCC strategy and message development	5	Garowe
Conduct validation meeting	1	Garowe
Travel to Nairobi	1	
Finalization of reports	2	Nairobi
Total	30 days	

Terms and Conditions:

- Rate as per Save the Children consultancy rate
- Travel and visa / airport tax to and from Nairobi into Puntland (Nairobi/ Garowe/ Nairobi), as well as travel within Puntland will be covered by Save the Children (this includes transport to/from airports)
- Modest accommodations will be provided by Save the Children - The consultant will be based in Save the Children guest houses during her/his stay in Nairobi and Puntland.
- Tax arrangements will be agreed in accordance with Save the Children procedures – see accompanying Agreement.

Proposal Submission from Consultant:

In response to these terms of reference, potential consultants are requested to submit a detailed proposal outlining how he/she propose to address the objectives. Approaches,other than that outlined above, are welcomed; however, consultant should justify the effectiveness of their various approaches. In addition to a detailed outline of the methodologies to be used, the proposal should include the following:

- Work approach
- Timescale
- Current CV
- References of previous employers for similar work.

Reporting:

The consultant will report to the Health Technical Manager – Dr. Kunuz Abdella

Contacts:

Primary contacts within the Nairobi office will be the Health Technical Manager – Dr. Kunuz Abdella (+254 731 092 828)

Appendix 2: Household questionnaire

Name of village:	
District:	

Name of interviewer:	
Date of interview:	

Questionnaire checked by:	
Date of cross-check:	

INFORMED CONSENT

Good morning/afternoon, my name is ... and I am working for Save the Children. Currently we are conducting a household survey on mother and child health in your community. The information will be useful for us, the government and other agencies in planning and delivery of health services. The interview will take around one hour. Your information will be confidential and will not be shared with other people.

You have been randomly selected to participate in this survey. Participation in this survey is voluntary. You do not have to answer any questions that you do not want to answer, and you may end this interview at any time you want to. However, we hope you can participate fully since your opinion and information are very important.

Do you agree to participate in the survey?

If respondent agrees to be interviewed, proceed with the interview. If respondent does not agree to be interviewed, thank the respondent and move to the next household.

Instructions to the interviewer:

1. Circle the answers under the coding category column
2. Take note of additional instructions in ***bold italics*** against some questions
3. There are three sections in this questionnaire, as follows:
   - Section A: Household characteristics
   - Section B: Interview for men in the visited household
   - Section C: Interview for women of child bearing age (15-49 years).

SECTION A: HOUSEHOLD CHARACTERISTICS

No.	QUESTIONS AND FILTERS	CODING CATEGORY
A1	How many people live in this household?	----------
A2	How many children below the age of five years live in this household?	----------
A3	Gender of household head. ***Ask who is the head of the household and circle the gender.***	Male ----------1 Female----------2
A4	What is the main source of income for this household?	Formal employment (of any of the household members)----------1 Informal employment (of any of the household members)----------2 Livestock ---------- 3 Farming----------4 Business----------5 Remittance from Diaspora----------6 Other (specify)----------99
A5	What is the average household income per month?	---------- Somalia shillings
A6	How much money is the average expenditure of this household every month?	---------- Somalia shillings
A7	What of these items does your household have?	Yes / No
	Electricity	1 / 2
	Radio	1 / 2
	Television	1 / 2
	Telephone (either fixed or mobile)	1 / 2

A8	What is the main source of drinking water for members of this household?	Piped water ----------1 Borehole----------2 Dug well Protected well----------3 Unprotected well----------4 Water from spring Protected spring----------5 Unprotected spring---------- 6 Rainwater collection----------7 Tanker-truck----------8 Dam/ berkad ----------9 Other (specify)----------99
A9	How long does it take to the water source and back home?	Number of minutes---------- I don't know----------00
A10	Who usually goes to this source to collect the water for your household? ***Probe: is this person under age 15? What gender?***	Adult woman (age 15+ years)----------1 Adult man (age 15+ years)----------2 Female child (under 15) ----------3 Male child (under 15)----------4
A11	Do you do anything to the water to make it safer to drink?	Yes----------1 No---------- 2 I don't know---------- 00
A12	What do you usually do to make the water safer to drink? ***Probe: anything else? Record all items mentioned.***	Boil----------1 Add PUR / chlorine----------2 Strain/ filter ----------3 Solar disinfection----------4 Let it stand and settle----------5 Other (specify)----------99
A13	Show me the toilet that your household members use. ***Observe and record the type***	Flush toilet----------1 Pit Latrine----------2 No toilet----------3 Other (specify)----------99

A14	Do you have a place where members of this household usually wash their hands?	Yes----------1 No----------2 I don't know---------- 00
A15	At what critical times should one wash their hands to prevent getting sick?	Before eating or serving food--------- 1 After visiting the toilet----------2 After cleaning a child's bottom --------3 Other (specify)----------99 I don't know---------- 00
A16	Does your household have any mosquito nets that can be used while sleeping?	Yes----------1 No----------2 I don't know---------- 00
A17	How many mosquito nets does your household have?	----------
A18	Did anyone sleep under the mosquito net (s) last night?	Yes----------1 No----------2 I don't know---------- 00
A19	Who slept under the mosquito net (s) last night? ***Depending on the number of nets in A19, probe who else until all the nets are accounted for.***	Husband----------1 Wife----------2 Children under 5 years…..----------3 Children over 5 years----------4 Other adult----------5 Other (specify)----------99 I don't know----------00

SECTION B: MEN'S QUESTIONNAIRE

No.	QUESTIONS AND FILTERS	CODING CATEGORY
B1	Age of the respondent in completed years	----------
B2	What highest level of school have you attended?	Never attended school ----------1 Pre-primary /Nursery----------2 Primary, not completed----------3 Primary, completed----------4 Secondary, not completed----------5 Secondary, completed----------6 College/University----------7 Vocational/ adult education----------8 Other (specify)---------- 99
B3	At what age do men usually marry in this community?	---------- years
B4	At what age do you think a woman should have their first baby?	---------- years
B5	Early pregnancy increases the risk of complications and can lead to death of mother and her child; do you agree, disagree or don't know?	Agree----------1 Disagree----------2 Don't know----------3
B6	In your knowledge, could you mention the methods that can be used to delay pregnancy and for healthy birth spacing?	Sterilization (vasectomy/ tubal ligation)----------1 Implant ----------2 Intra-uterine contraceptive device (IUD)----------3 Injection ----------4 Pills----------5 Condom ----------6 Cycle beads/ safe days----------7 Coitus interuptus ----------8 Breastfeeding----------9 Abstinence---------- 10 Other (specify)----------99 I don't know---------- 00

B7	In this community, where can one get modern birth spacing methods?	Health facility----------1 NGO/CBO----------2 Pharmacy/ medicine shop----------3 TBA/ CHWs----------4 Other (specify)----------99 I don't know---------- 00
B8	At any time, have you and your wife wished to space the birth of your children ?	Yes----------1 ***(Go to B9)*** No----------2 ***(Go to B12)***
B9	When you wished to space the birth of your children did you use any birth spacing methods?	Yes----------1 (Go to B10) No----------2 (Go to B11)
B10	Which method did you or your wife use?	Sterilization (vasectomy/ tubal ligation)----------1 Implant ----------2 Intra-uterine contraceptive device (IUD)----------3 Injection ----------4 Pills----------5 Condom ----------6 Cycle beads/ safe days----------7 Coitus interuptus ----------8 Breastfeeding----------9 Abstinence---------- 10 Other (specify)----------99 I don't know---------- 00
B11	Why didn't you use any birth spacing method?	I don't know of any birth spacing method----------1 I don't know where to get from----------2 My preferred method was not available----------3 Could not afford the cost----------4 Distance to the place where i can find method-----5 Not allowed by our culture----------6 Not allowed by my religion----------7 Fear of side effects----------8 Other (specify)----------99 I don't know---------- 00

B12	What would you say is the reason why you haven't wished to space the birth of your children?	Children are given by God----------1 I have no control over when children will come-----2 I don't know any method of child spacing----------3 Fear of side effects from the methods----------4 Prohibited by our religion----------5 Prohibited by our culture----------6 I can afford to bring up many children----------7 My wife is unwilling ----------8 Other (specify)----------99 I don't know---------- 00
B13	A pregnant woman should go for antenatal checkup even if they are not sick. What do you think about that?	I agree----------1 I don't agree----------2 I don't know----------3
B14	In your opinion, where do you think is the best place for your wife to deliver a baby?	At health facility----------1 At home ----------2 Other (specify)----------99 I don't know---------- 00
B15	For what reasons do you think that is the best place for your wife to deliver a baby? ***Circle all mentioned***	Less or no cost----------1 Safer----------2 Better care----------3 Near home----------4 Privacy----------5 Other (specify)----------99 I don't know---------- 00
B16	Who should make the final decision on where a woman should give birth?	The husband----------1 The woman herself----------2 Both husband and wife----------3 Mother/mother in law----------4 TBA----------5 Other (specify)----------99 I don't know---------- 00

B17	What symptoms during pregnancy would indicate that there is something going wrong with the pregnancy? ***Multiple responses possible. Do not read the choices; let the respondent mention based on their knowledge. Encourage more answers by probing:*** ***What else?***	Vaginal bleeding----------1 Pelvic or abdominal pain----------2 Persistent back pain----------3 Gush of fluid from vagina----------4 Swelling of the hands/face----------5 Severe headaches/ blurred vision----------6 Preterm regular contractions----------7 No fetal movement----------8 Other (specify)----------99 I don't know---------- 00
B18	If your wife was to experience any of these symptoms during pregnancy, what first action would you take?	Take her to a health facility----------1 Buy medicine from pharmacy/shop----------2 Seek the help of TBA----------3 Seek the help of Religious leader----------4 Seek the help of relatives----------5 Other (specify)----------99 I don't know---------- 00
B19	What signs/symptoms would indicate that a newborn is sick and in danger?	Lethargy/extreme weakness----------1 Poor suckling----------2 Skin colour change----------3 Vomiting----------4 Diarrhea/ dehydration ----------5 Difficult/ rapid breathing----------6 Fever----------7 Other (specify)----------99 I don't know----------00
B20	If your child is very sick, who would you normally seek help from first? ***Circle one***	Doctor/ Nurse----------1 CHW/TBA----------2 Religious leader----------3 Relatives----------4 Other (specify)----------99 I don't know---------- 00

B21	Let us talk about the nearest health facility? Tell me whether you agree or disagree with what I will say about the health facility (HF):	
		Agree / Disagree / Don't know
	The HF is not far from your home	1 / 2 / 3
	The HF has adequate qualified staff	1 / 2 / 3
	The HF has all the medicines	1 / 2 / 3
	The HF is safe for a woman to give birth in	1 / 2 / 3
	The fees charged are affordable	1 / 2 / 3
B22	In your memory, do you remember hearing or reading any information/messages on your health or the health of your family?	Yes----------1 ***(Go to B23)*** No----------2 ***(Skip to Section C)***
B23	From what source was that information/ message from?	Health worker----------1 CHW----------2 Community/ religious leader----------3 NGO/CBO----------4 Poster----------5 Billboards----------6 School----------7 Radio----------8 Television----------9 Newspaper----------10 Internet----------11 Other (specify)----------99 I don't know---------- 00

SECTION C: INTERVIEW WITH WOMEN OF CHILD BEARING AGE (15-49 YEARS)

No.	QUESTIONS AND FILTERS	CODING CATEGORY
C1	Age of the respondent in completed years	---------- years
C2	What highest level of school have you attended?	Never attended school ----------1 Pre-primary /Nursery----------2 Primary, not completed----------3 Primary, completed----------4 Secondary, not completed----------5 Secondary, completed----------6 College/University----------7 Vocational/ adult education----------8 Other (specify)---------- 99
C3	Have you ever been pregnant (including now)?	Yes----------1 No----------2 ***(Skip to C8)***
C4	At what age (in years) did you have your first child?	---------- years Carrying first pregnancy now.....00
C5	How many children have you given births to, that are still alive?	----------
C6	How many children have you given births to, that have died after birth?	----------
C7	Have you ever had a pregnancy that miscarried, was aborted, or ended in a stillbirth?	Yes----------1 No----------2
C8	At what age do you think a woman should have their first baby?	---------- years
C9	Early pregnancy increases the risk of complications and can lead to death of mother and her child; do you agree, disagree or don't know?	Agree----------1 Disagree----------2 Don't know----------3

C10	In your knowledge, could you mention the methods that can be used to delay pregnancy and for healthy birth spacing?	Sterilization (vasectomy/ tubal ligation)----------1 Implant ----------2 Intra-uterine contraceptive device (IUD)----------3 Injection ----------4 Pills----------5 Condom ----------6 Cycle beads/ safe days----------7 Coitus interuptus ----------8 Breastfeeding----------9 Abstinence---------- 10 Other (specify)----------99 I don't know---------- 00
C11	In this community, where can one get modern birth spacing methods?	Health facility----------1 NGO/CBO----------2 Pharmacy/ medicine shop----------3 TBA/ CHWs----------4 Other (specify)----------99 I don't know---------- 00
C12	Have you at any time, wished to delay pregnancy or space your births?	Yes----------1 ***(go to C13)*** No----------2 ***(Skip to C16)***
C13	When you wished to space the birth of your children did you use any birth spacing methods?	Yes----------1 (Go to C14) No----------2 (Go to C15)

C14	Which method did you or your husband use?	Sterilization (vasectomy/ tubal ligation)----------1 Implant ----------2 Intra-uterine contraceptive device (IUD)----------3 Injection ----------4 Pills----------5 Condom ----------6 Cycle beads/ safe days----------7 Coitus interuptus ----------8 Breastfeeding----------9 Abstinence---------- 10 Other (specify)----------99 I don't know---------- 00
C15	Why didn't you use any birth spacing method?	I don't know of any birth spacing method----------1 I don't know where to get from----------2 My preferred method was not available----------3 Could not afford the cost----------4 Distance to the place where i can find method----------5 Not allowed by our culture----------6 Not allowed by my religion----------7 Fear of side effects----------8 Other (specify)----------99 I don't know---------- 00

C16	What would you say is the reason why you haven't wished to space the birth of your children?	Children are given by God----------1 I have no control over when children will come----------2 I don't know any method of child spacing----------3 Fear of side effects from the methods----------4 Prohibited by our religion----------5 Prohibited by our culture----------6 I can afford to bring up many children---7 My wife is unwilling ----------8 Other (specify)----------99 I don't know---------- 00
C17	Did you go for health checkups (antenatal care) during the last pregnancy?	Yes----------1 ***(go to C19)*** No----------2 ***(go to C18)***
C18	What made you not to seek antenatal care? ***Multiple responses possible. Probe: what else?***	Not important in pregnancy----------1 Lack of transport----------2 Long distance----------3 High cost of care----------4 I was okay all through----------5 No reason----------6 Other (specify)----------99
C19	At what gestational age did you first go for the antenatal checkup during the last pregnancy? ***If the respondent has difficulty remembering exact month, you can assist by reading the choices "was it…."***	Within the first 3 months----------1 Between 3 and 6 months----------2 Within the last 3 months----------3 I don't know.....00
C20	How many times did you go for antenatal care during your last pregnancy?	---------- times

C21	The last time you went for antenatal care, who examined you? ***Probe: Was it a man or a woman?***	Male----------1 Female----------2
C22	Would you have preferred being examined by a male or female?	Male----------1 Female----------2
C23	During the last pregnancy, did you know the date that the baby was expected to arrive?	Yes ----------1 No----------2
C24	During the last pregnancy, did you plan where you would deliver the baby?	Yes----------1 No----------2
C25	Where did you plan to deliver the baby?	Health facility----------1 ***(go to C26)*** Home----------2 ***(go to C27)*** Other (specify)----------99
C26	***(For those saying health facility in question C25)*** For what reasons did you prefer to deliver in health facility?	Safer to deliver there ----------1 Skilled care from health workers---------2 Health facility is near----------3 Recommended by relative----------4 Other (specify)----------99
C27	***(For those saying home in question C25)*** For what reasons did you prefer to deliver at home?	No fees charged/ cheaper----------1 High transport costs ----------2 Do not trust/like health facility----------3 Better care at home----------4 To attend to my other children----------5 Recommended by relative----------6 Other (specify)----------99

<table>
<tr><td>C28</td><td>What do you think about the following statements regarding giving birth at a health facility <u>(probe if they agree, disagree or do not know)</u>
<table>
<tr><th>Question</th><th>Agree</th><th>Disagree</th><th>I don't know</th></tr>
<tr><td>The cost of transport to high facility is afford-able</td><td></td><td></td><td></td></tr>
<tr><td>The health workers at the health facility are adequately skilled</td><td></td><td></td><td></td></tr>
<tr><td>The health facility has all the medicines and equipment to make delivery safe</td><td></td><td></td><td></td></tr>
<tr><td>The health facility has adequate privacy</td><td></td><td></td><td></td></tr>
<tr><td>There is no problem even if the health worker assisting the delivery is a male.</td><td></td><td></td><td></td></tr>
</table></td><td></td></tr>
<tr><td>C29</td><td>When you were pregnant with your last child, who made the final decision on where you would give birth?</td><td>Myself----------1
My husband----------2
My mother/mother in law----------3
Other relative----------4
Other (specify)----------99</td></tr>
<tr><td>C30</td><td>During the last pregnancy, did you have ready transport arrangements in case labor began or in case a complication developed?</td><td>Yes----------1
No----------2</td></tr>
<tr><td>C31</td><td>What are the symptoms during pregnancy that would indicate that there is something going wrong with the pregnancy?
<u>Multiple responses possible. Do not read the choices; let the respondent mention based on their knowledge. Encourage more answers by probing: What else?</u></td><td>Vaginal bleeding----------1
Pelvic or abdominal pain----------2
Persistent back pain----------3
Gush of fluid from vagina----------4
Swelling of the hands/face----------5
Severe headaches/ blurred vision---------6
Preterm regular contractions----------7
No fetal movement----------8
Other (specify)----------99
I don't know---------- 00</td></tr>
<tr><td>C32</td><td>Did you experience any of these signs during your last pregnancy?</td><td>Yes----------1 <u>(go to C33a)</u>
No----------2 <u>(go to C33b)</u></td></tr>
</table>

C33a C33b	What action did you take when you experienced these signs? What action should a woman take if she experiences these signs? ***Circle all mentioned***	Seek advice/treatment from health facility----------1 Seek advice/treatment from TBA----------2 Purchase medicine from pharmacy/ shop----------3 Seek prayers from religious leader------4 Take rest----------5 Nothing/ wait for problem to heal--------6 Other (specify)----------99 I don't know---------- 00
C34	After noticing these signs, how long should a woman take **(did you take)** before seeking care? ***Rephrase depending on response for C32***	Less than 12 hours ----------1 12-24 hours----------2 Over 24 hours----------3 Other (specify)----------99 I don't know---------- 00
C35	After how long did you breastfeed your baby when you gave birth?	Within 1 hour----------1 (***skip to C37***) Within 12 hours----------2 After 12 hours----------3
C36	Why was the baby not put on breast within 1 hour?	Mother was unwell----------1 Taboo----------2 Breast not producing milk----------3 Colostrums not good for baby----------4 Other (specify)----------99 I don't know---------- 00
C37	At what age did you start giving your child other drinks/food apart from your breast milk?	----------age in months If less than one month----------00

<table>
<tr><td>C38</td><td>What signs/symptoms would indicate that a newborn is sick and in danger?</td><td>Lethargy/extreme weakness----------1
Poor suckling----------2
Skin colour change----------3
Vomiting----------4
Diarrhea/ dehydration ----------5
Difficult/ rapid breathing----------6
Fever----------7

Other (specify)----------99
I don't know---------- 00</td></tr>
<tr><td>C39</td><td>Does your last born child have a health card?</td><td>Yes----------1 (go to C40)

No----------2 (go to C41)</td></tr>
<tr><td>C40</td><td>If yes, check the card and tick all the immunizations that have been given.</td><td>
<table>
<tr><th>Vaccine</th><th>Yes</th><th>No</th></tr>
<tr><td>BCG</td><td></td><td></td></tr>
<tr><td>OPV 1</td><td></td><td></td></tr>
<tr><td>OPV 2</td><td></td><td></td></tr>
<tr><td>OPV 3</td><td></td><td></td></tr>
<tr><td>DPT1/PENTAVA-LENT1</td><td></td><td></td></tr>
<tr><td>DPT2/PENTAVA-LENT2</td><td></td><td></td></tr>
<tr><td>DPT3/PENTAVA-LENT3</td><td></td><td></td></tr>
<tr><td>Measles</td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td>C41</td><td colspan="2">If card is not available ask the mother the following questions:
<table>
<tr><th>Questions</th><th>Yes</th><th>No</th></tr>
<tr><td>Has the child ever been given an injection in the arm that left a scar?</td><td></td><td></td></tr>
<tr><td>Has the child ever been given immunization drops to prevent him/her from getting disease?</td><td></td><td></td></tr>
<tr><td>If YES, how many times had he/she been given the drops?</td><td colspan="2">_____</td></tr>
<tr><td>Has the child been given an injection in the thigh to prevent him/her from getting disease?</td><td></td><td></td></tr>
<tr><td>If YES, how many times had he/she been given the injection?</td><td colspan="2">_____</td></tr>
<tr><td>Has the child ever been given an injection in the upper right arm at the age of 9 months or older, to prevent him/her from getting disease?</td><td></td><td></td></tr>
<tr><td>If YES, how many times has he/she been given the injection?</td><td colspan="2">_____</td></tr>
</table>
</td></tr>
</table>

C42	***If the card indicates some vaccination were not given or if any of the answers to questions above is NO ask the mother the following question.*** I see your child is not fully immunized. Can you tell me why?	<u>Lack of information</u> Unaware of need for immunization-------1 Unaware of need for completing all doses ----------2 Not aware of place or time of immunization----------3 Fear of side effects----------4 <u>Obstacles:</u> Health facility too far----------5 Time of immunization inconvenient--------6 Vaccinator absent----------7 Vaccine not available----------8 Mother too busy/sick----------9 Child ill----------10 Long waiting time on the queue----------11 Unpleasant treatment by health worker----------12 Other (specify)----------99 I don't know---------- 00
C43	Has any of your children under five years had diarrhea in the last 2 weeks?	Yes----------1 No----------2 Don't know----------3
C44	If a child has diarrhoea, should he or she be given less to drink than usual, the same amount to drink as usual or more to drink than usual? ***Circle one***	Less than usual----------1 The same as usual----------2 More than usual----------3 Other (specify)----------99 I don't know----------00

C45	Has any of your children under five years had fever in the last 2 weeks?	Yes----------1 No----------2 Don't know----------3
C46	Has any of your children under five years had an illness with cough, fast or difficult breathing in the last 2 weeks?	Yes----------1 No----------2 Don't know----------3
C47	Did you seek advice or treatment during any of these times that the child was sick?	Yes----------1 ***(Go to C48)*** No----------2 ***(Go to C50)***
C48	Where did you seek this advice or treatment?	Health facility ----------1 CHW----------2 Traditional practitioner----------3 Religious leader/Quran----------4 Relative ----------5 Pharmacy/ medicine shop----------6 Other (specify)----------99
C49	How long after you noticed the child was sick did you seek advice or treatment?	Same day----------1 Next day----------2 Two days----------3 Three or more days----------4 1 week----------5 Other (specify)----------99
C50	Why didn't you seek advice of treatment	Could not afford the cost----------1 Long distance----------2 Condition not serious----------3 Other (specify)----------99 I don't know---------- 00
C51	In the last 3 months, have you heard or read about health of mothers and children?	Yes----------1 No ----------2

C52	What messages about mother and child's health do you still remember? ***Probe: what else?***	Hygiene messages----------1 Immunization----------2 Antenatal care----------3 Disease specific messages----------4 Other (specify)----------99 1 ---------- 2 ---------- 3 ----------
C53	From what sources did you hear or read about this? ***Multiple responses possible. Probe: What other source?***	Radio----------1 TV ----------2 Newspaper----------3 Internet----------4 Billboard/ posters/wall chart----------5 Hospital / health centre staff----------6 Community health worker----------7 Imam/mosque/ religious leader----------8 NGO/CBO/ women group----------9 Community meeting----------10 Husband/ relatives----------11 Others (specify): ----------99
C54	What source of information on mother and child's health do you (or would you) trust **most?** ***Only one response***	Radio----------1 TV ----------2 Newspaper----------3 Internet----------4 Billboard/ posters/wall chart----------5 Hospital / health centre staff----------6 Community health worker----------7 Imam/mosque/ religious leader----------8 NGO/CBO/ women group----------9 Community meeting----------10 Husband/ relatives----------11 Others (specify): ----------99

Appendix 3: Key informant interview guide for healthcare workers and officers

Consent

Good morning/afternoon, my name is ... ….and I am working for Save the Children. Currently we are conducting a survey on mother and child health in your community. The information will be useful for us, the government and other agencies in planning and delivery of health services

I want to start by thanking you for agreeing to participate. We are very interested to hear your valuable opinion on the health of mothers and children in this community.

I also wish to assure you that the information you give us is completely confidential, and we will not associate your name with anything you say. You may refuse to answer any question or withdraw from the study at anytime. However, we hope you can participate fully since your opinion and information are very important.

The interview will take approximately 40 minutes

Do you have any questions before we begin? Can I now proceed?

Questions

1. What is your view on the knowledge and attitudes of the communities in Karkar region on issues of maternal and child health?
   a. Are the communities knowledgeable on the requirements during pregnancy? What is the knowledge on: Maternal nutrition, Antenatal care, skilled deliveries, and Family planning?
   b. Are the communities knowledgeable on child health? What is the knowledge on: IMCI, Vaccination against preventable diseases, Nutritional requirements for children?
   c. How do these factors impact on the uptake of available services?
   d. What is the practice and uptake of MNCH services in this region?
   e. What are the gender differences in knowledge of the MNCH services offered in this community?
2. Describe the health sectors response to maternal and child health issues?
   a. Do you think the health system has enough capacity to deal with maternal and child mortality in Karkar region?
      - Comment on the maternal mortality in Karkar region? What factors explain this state?
      - Comment on the child mortality in this Karkar region? What factors explain this state?
   b. What are the MNCH services are being provided in the health facilities in Karkar region?
   c. Are the MNCH services offered by the health facilities adequate? What are lacking?
   d. What is the capacity of the health care system to provide MNCH services?
   - Probe for Human resources;

- availability of resources/commodities

e. What are the challenges faced by the health sector in dealing with MNCH?
f. Are there established and functioning referral systems for MNCH services?
g. What are the existing monitoring and evaluation tools for MNCH services?

3. What are the community related factors influencing provision and uptake of MNCH services in this region?
   a. What cultural beliefs influence the MNCH?
   b. What are the driving factors influencing places of child birth in this community?
   c. What is the level of immunization uptake in the region?
   d. What is the level of ANC uptake among women of reproductive age in Karkar region?
   e. What are the socio-economic factors influencing the provision of MCH services in this region?
4. In your view, what are the priority actions that need to be taken to improve maternal and child health services?
5. What health promotion and behaviour change initiatives is your office undertaking to promote uptake of maternal and child health services?
   a. What are the notable successes?
   b. What have been the challenges faced and how did you overcome them?
6. What BCC strategies/channels on how to reduce maternal and child morbidity and mortality have being implemented in the region?
   a. Are there any strategies put in place to encourage facility deliveries including voucher systems?
   b. How has his impacted on the health seeking?
   c. How critical is CHW role in antenatal and postnatal care and in identifying danger signs in pregnancy and labour for timely referral to Health Centres?
   d. What strategies are there for inclusion of TBAs in the provision of MNCH services? Is there resistance to the inclusion of TBAs?
7. Who are the key stakeholders and implementers involved in BCC and interventions for MNCH?
   a. Who are the priority target audiences for the BCC and interventions for MNCH activities? Probe for the policy makers, healthcare workers, CHEWs/CHWs/CHCs, communities and others a like
   b. What are the key behaviours identified in BCC activities being promoted among different populations?
   c. What are the specific activities and IEC materials for the above target audiences have been planned and actually rolled-out?
   d. What channels have been used for the above activities?
   e. Are there any coordination mechanisms in place for BCC and interventions for MNCH?
8. What obstacles prevent or can prevent the implementation and funding of BCC and interventions for MNCH?
   a. Why do these obstacles exist and how can they be overcome?
   b. What opportunities exist for addressing these obstacles?

c. What communication gaps exist? And how can the gaps be overcome?
d. What are the key barriers to successful acquisition of positive healthy behaviours among the different target groups

9. How do communities participate in different BCC and interventions for MNCH activities and in what capacities?
   a. How do they get involved?
10. What are the three most important behaviour change communication needs?
    a. What are the preferred communication channels for MNCH appropriate for maximum impact in this region?
       i. Comment about reaching youths/adolescents with health information.
    b. What are the appropriate materials for communication?
    c. Who are the trusted persons to communicate the desired messages?
    d. What existing platforms or programs can the BCC activities for MNCH build on to maximize results in the region?
    e. What do you see as the potential BCC platform in the region which will be the entry point for all stakeholders working at the community?
    f. In your view, which maternal and child health messages should be given priority?

11. What are your final thoughts and recommendations concerning the ACSM communication strategy for the CHS approach

Thanks you for participating and sharing your views to this crucial process

Appendix 4: Focus group discussion guide for men and women

Consent

Good morning/afternoon, my name is ... …. and I am working for Save the Children. Currently we are conducting a survey on mother and child health in your community. The information will be useful for us, the government and other agencies in planning and delivery of health services

I want to start by thanking you for agreeing to participate. We are very interested to hear your valuable opinion on the health of mothers and children in this community.

I also wish to assure you that the information you give us is completely confidential, and we will not associate your name with anything you say in the focus group. You may refuse to answer any question or withdraw from the study at anytime. However, we hope you can participate fully since your opinion and information are very important.

The group discussion will take approximately one hour and I wish to kindly ask all of you to actively participate in the debate.

Do you have any questions before we begin? Can I now open the discussion?

Sitting Arrangement

	Organization	Designation	Gender	Respondent ID	Signature

Sitting Arrangement

Indicate in the box below the position for sitting arrangement

{Moderator (MD), note-taker (NT), audio-tape (AT) and individual respondents (by their ID)}

Questions

1. What is the general understanding, practice and uptake of MNCH services in this region?
   a. Are the communities knowledgeable on the requirements during pregnancy? What is the knowledge on:
   - Maternal nutrition?
   - Antenatal care?
   - Skilled deliveries?
   - Family planning?

   b. Are the communities knowledgeable on child health? What is the knowledge on:
   - IMCI
   - Vaccination against preventable diseases
   - Nutritional requirements for children

   c. What are the gender differences in knowledge of the MNCH services offered in this community?
2. What are the MNCH services are being provided in the health facilities in Karkar region?
   a. Are the MNCH services offered by the health facilities adequate? What are lacking?
3. Are there any strategies put in place to encourage facility deliveries including voucher systems? How has his impacted on the health seeking behaviour of women?
4. What are the factors influencing the provision of MNCH services in this region?
   a. What cultural beliefs influence the MNCH?
   b. What are the driving factors influencing places of child birth in this community?
   c. What are the socio-economic factors influencing the provision of MCH services in this region?
5. What BCC strategies/channels on how to reduce maternal and child morbidity have being implemented in the region?
   a. Who are the priority target audiences for the BCC and interventions for MNCH activities?
   b. What are the specific activities and IEC materials for the above target audiences have been planned and actually rolled-out?
   c. What channels have been used for the above activities?
6. What are the key barriers to successful acquisition of positive healthy behaviours among the different target groups
7. What are the three most important behaviour change communication needs?
8. What are the preferred communication channels for MNCH appropriate for maximum impact in this region?
   a. What are the appropriate materials for communication?
   b. Who are the trusted persons to communicate the desired messages?
9. What are your final thoughts and recommendations concerning the MNCH ?

We have come to the end of the discussion. Thank you for participating actively.

Appendix 5: Key informant interview guide for religious leaders

Consent

Good morning/afternoon, my name is … ….and I am working for Save the Children. Currently we are conducting a survey on mother and child health in your community. The information will be useful for us, the government and other agencies in planning and delivery of health services

I want to start by thanking you for agreeing to participate. We are very interested to hear your valuable opinion on the health of mothers and children in this community.

I also wish to assure you that the information you give us is completely confidential, and we will not associate your name with anything you say. You may refuse to answer any question or withdraw from the study at any time. However, we hope you can participate fully since your opinion and information are very important.

The interview will take approximately one hour.

Do you have any questions before we begin? Can I now proceed?

Questions

1. What are your views on the health status of mothers and children in this community?
2. Let us talk in more details about healthy birth spacing, what are your views on this?
   a. What birth spacing methods do you recommend and why?
   b. What role can the religious sector/ leaders play to promote healthy birth spacing?
3. Let us talk about giving birth. Why do you think so many women prefer to give birth at home rather than in health facilities?
   a. What role can the religious sector/ leaders play to promote safe deliveries in health facilities?
4. Often people seek faith healing when they are sick. Comment about how this relates with health services delivered in hospital/MCH/HP and how the two could be complimentary.
5. More generally, what roles do you think the religious sector/ leaders should play in disseminating health promotion and behavior change messages?
6. Are there health messages that in your views are in conflict with Islamic teachings? How do you think such issues should be handled?

Thank you for sharing this information with us.

Appendix 6: Key informant interview guide for traditional birth attendant (TBA)

Consent

Good morning/afternoon, my name is ... …. and I am working for Save the Children. Currently we are conducting a survey on mother and child health in your community. The information will be useful for us, the government and other agencies in planning and delivery of health services

I want to start by thanking you for agreeing to participate. We are very interested to hear your valuable opinion on the health of mothers and children in this community.

I also wish to assure you that the information you give us is completely confidential, and we will not associate your name with anything you say. You may refuse to answer any question or withdraw from the study at anytime. However, we hope you can participate fully since your opinion and information are very important.

The interview will take approximately one hour.

Do you have any questions before we begin? Can I now proceed?

Questions

1. Tell me about your role as a TBA in this community?
   a. For how long have you undertaken this role?
   b. From where/ how did you learn your skills?
   c. What benefits do you derive from providing the services to this community?
2. On average, how many births do you attend to in a month? What do you think is the opinion of the community about your services? Tell me more.
3. Have you attended to women with complicated births?
   a. What was your experience managing those complications?
   b. Has any women died during your care?
   c. DO you sometimes refer mothers for delivery in the hospital in case of complications?
4. The Ministry of Health recommends that all women should give birth at health facilities. What is your opinion about this?
   a. What do you think about birth attendance at the local hospital/MCH/HP?
   b. What is your relationship with the local hospital/MCH/HP staff?
   c. What are the driving factors influencing places of child birth in this community?
   d. Are there any strategies put in place to encourage facility deliveries? Probe for voucher systems
   e. Have there been attempts by the health professionals trying to reach you to encourage health facility deliveries?
   f. Have there been attempts by the health professionals to use you as a means of passing information on matters health of mothers and children?
5. In your view, what is the level of knowledge in this community on matters of health of mothers and children?
   a. What role do you play, or would wish to play in improving this level of knowledge?
6. What are your final thoughts and recommendations concerning the MNCH?

We have come to the end of the discussion. Thank you for participating actively.

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