Evaluation of Social Mobilization Network (SM Net): Inception Report

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Evaluation of Social Mobilization Network (SM Net): Inception Report

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ACRONYMS

AFP	Acute flaccid paralysis
C4D	Communication for Development
CDC	United States Centers for Disease Control and Prevention
CHW	Community Health Workers
CM	Community Mobilizers
CMC	Community Mobilization Coordinators
CVDPV2	Circulating vaccine-derived poliovirus type 2
DCP	District specific communication plan
DFA	District Field Assistants
DPO	District Polio Officers
DSMC	District Social Mobilization Coordinator
FAO	United Nations Food and Agriculture Organization
FGD	Focus Group Discussion
FRR	Financial Resource Requirements
FSNAU	Food Security and Nutrition Analysis Unit
GPEI	Global Polio Eradication Initiative
HoA	Horn of Africa
HH	Household
HtR	Hard to Reach
IDI	In-depth Interview
IEC	Information, education and communication
IM	Independent Monitoring
INR	Indian Rupee
IPC	Interpersonal Communication Skills
IPV	Inactivated polio vaccine
IYCF	Infant and Young Child Feeding
KAP	Knowledge, Attitudes and Practices
LQS	Lot Quality Assurance

MoH	Ministry of Health
NGO	Non-governmental organizations
OPV	Oral polio vaccine
PESS	Population Estimation Survey for Somalia
RMO	Regional Medical Officer
RPO	Regional Polio Officer
RSMC	Regional Social Mobilization Coordinator
SIA	Supplementary immunization activities
SM Net	Social Mobilization Network
ToC	Theory of Change
UNICEF	United Nations Children's Fund
USD	US Dollar
USSC	UNICEF Somali Support Center
VfM	Value for Money
WHO	World Health Organization
WPV1	Poliovirus type 1
IYCF	Infant and young child feeding
ZSMC	Zonal Social Mobilization Coordinator

1. INTRODUCTION

In 2013, Somalia was affected by an outbreak of poliovirus type 1 (WPV1) with 194 cases followed by five cases in 2014. Although the last case of WPV1 in Somalia prior to this outbreak was reported six years ago, the country has experienced a continuous transmission of circulating vaccine-derived poliovirus type 2 (cVDPV2) since 2008. The last outbreak of WPV1 initiated in May 2013 and has resulted in 199 WPV1 cases in South Central zone and Puntland including the five cases in Jariban district of Mudug region in 2014 in the months of May and June.

The outbreak was attributed to a large reservoir of children unvaccinated against poliovirus. Approximately one million children had not been immunized between 2009 and 2012 due to restricted access for humanitarian actors especially in the South Central zone. In addition, the cases in 2014 were closely related to nomadic groups, whose movements often make it difficult to track and implement health practices. While access challenges in insecure areas drove the initial waves of transmission, the tail end of the outbreak was seen in populations where access is limited due to remoteness and lifestyle (nomadic/pastoral).

A number of activities were implemented in response to the outbreak. Initially these focused on establishing structures to plan, respond and monitor the implementation of efforts to stem the outbreak. The Social Mobilization Network (SM Net) was also set up with the aim of raising awareness on polio and increasing coverage of the polio vaccine in access-compromised areas. Funding for the SM Net has recently declined. This has translated into a lower number of polio immunization campaigns per year: in 2015, seven campaigns were carried out and in 2016 six campaigns were carried out. Only five campaigns are planned for 2017, and two for 2018. It is anticipated that the SM Net system could be used to deliver other campaigns including other immunizations (such as measles and tetanus), hand-washing practices and infant and young child feeding (IYCF).

In response to the reduction in funding for SM Net, and in order to investigate whether this system could be used to deliver other health interventions, the United Nations Children's Fund (UNICEF) office for Somalia has commissioned an evaluation of the SM Net programme. This inception report presents the work undertaken during the inception phase of the SM Net evaluation. This primarily focused on developing a comprehensive understanding of the programme through the review of reports and secondary data, and the evaluation of similar programmes through an extensive literature review. Together these were used to define the Theory of Change (ToC), research questions, indicators and data collection tools to be employed in evaluating the programme. The report also explains the timeline and action plan for delivery of research outputs.

The report is organized as follows: Section 2. Background to SM Net and Polio in Somalia; Section 3. Literature Review; Section 4. Theory of Change; Section 5. Research Questions; Section 6. Proposed Methodology; Section 7. Key Themes and Data Analysis Plan; Section 8. Data Collection Tools; Section 9. Workplan and Timelines; Section 10. Risks and Assumptions; Section 11. Support and Advisory group and Section 12. Bibliography.

2. BACKGROUND TO SM NET AND POLIO IN SOMALIA

This section provides some background on polio in Somalia and the SM Net activities. It was compiled from a review of the various documents provided by UNICEF Somalia, including 'Legacy and transition planning: Somalia Polio Eradication programme' (UNICEF, 2015a) and other the strategy documents for SM Net including 'Reaching the unreached, Somalia outbreak communication for development strategy and outbreak plan' (UNICEF, 2015b); 'Somalia WPV1 Integrated Outbreak Communication' (UNICEF, 2013); 'Somalia Outbreak Communication Strategy (Communication for Development and Media)' (UNICEF, 2014a); 'Communication for Development Strategy note 2018-2022' (UNICEF, 2016a) and the 'Communication for Development: the GPEI 2013-2018 strategic plan' (GPEI n.d., b). It also includes a review of the demographic and administrative structure of Somalia.

2.1 WHAT IS POLIO AND ACUTE FLACCID PARALYSIS?

Polio is a highly infectious disease caused by a virus which invades the nervous system. It can cause total paralysis in a matter of hours. The virus is spread from person to person through the faecal-oral route or through contaminated water or food. Initial symptoms are fever, fatigue, headache, vomiting, stiffness of the neck and pain in the limbs. It mainly affects children under five years of age. One in 200 infections leads to irreversible paralysis and among those, 5 to 10 percent die when their breathing muscles become immobilized. In 2015, 74 cases were reported globally and this represents a 99 percent decrease since 1988.

Acute flaccid paralysis (AFP) is the sudden onset of paralysis/weakness in any part of the body of a child less than 15 years of age. All cases of AFP among children under fifteen years of age are usually tested for poliovirus within 48 hours of onset. Although AFP is the most common sign of acute polio and is therefore used for surveillance during polio outbreaks, it is also associated with a number of other pathogenic agents, including enteroviruses and echoviruses.

2.2 POLIO IN SOMALIA

Polio eradication was initiated in in Somalia in 1997, and AFP surveillance started in 1998. In 2000, an outbreak was detected in Mogadishu and wild poliovirus cases were reported until 2002. A wild poliovirus outbreak also occurred in 2005 and resulted in 228 cases between 2005-2007 with the last case being reported in March 2007. In April 2013, another outbreak started after importation and 194 cases were reported in that year. The 2013 outbreak also spread to Kenya and Ethiopia with 14 and six reported cases respectively. The number was contained to just five cases in 2014, all of them in the remote Mudug region of Puntland in the North East, among nomads. Inaccessibility, mainly due to security concerns in South Central Somalia and in border areas of north-eastern Kenya, made it difficult for vaccinators to reach all children during campaigns, resulting in suboptimal population immunity. Large population movements helped the virus spread and led to large pools of unvaccinated children in some areas (WHO and UNICEF, 2013). The outbreak was officially declared over in October 2015, 14 months after the last case was identified.

2.3 POLIO IMMUNIZATION

Since the start of the latest polio outbreak, 32 supplementary immunization campaigns have been implemented using 62 million doses of oral polio vaccine (OPV) and targeting children under five, although several campaigns also targeted children under 10 years as well as adults. These supplementary immunization activities (SIAs) are intended to complement, not replace, routine immunization and are a key strategy of the Global Polio Eradication Initiative (GPEI). This aims to immunize every child under five years of age with two doses of OPV, regardless of previous immunization status (GPEI, 2010). However, routine immunization is low in Somalia. In 2014, 48 percent of infants had received at least one dose of pentavalent vaccine through routine immunization (GPEI, 2015). The GPEI, which aims to eradicate polio worldwide, is a public-private partnership led by national governments with five partners: the World Health Organization (WHO), Rotary International, the United States Centers for Disease Control and Prevention (CDC), UNICEF and the Bill and Melinda Gates Foundation.

From past experiences of previous poliovirus importations in the Horn of Africa (HoA), and anticipating the potential scale and spread of the outbreak, GPEI partners employed three special strategies to halt polio transmission in Somalia. The first was a rapid response. When news of the case in Mogadishu broke in May 2013, a sub-national vaccination campaign was organized and implemented in just five days using all available vaccines in the country to reach children under five years of age in the outbreak areas. Within that same month, two more campaigns were conducted among all age groups. The second strategy was to rollout the bivalent polio vaccine. This is effective against both polio type I and type III, and provides stronger immunity in outbreak settings than the trivalent vaccine. The third strategy was to expand the targeted age group. Adults and adolescents are able to carry and shed the virus, and in Somalia and Kenya the polio outbreak resulted in paralysis among both children and young adults. As a result, partners decided to increase the vaccination age cohort to extend protection to children under 10, and then finally to the entire population of Somalia. Three back-to-back campaigns were carried out to ensure that those who had been missed in prior years now had improved immunity against the virus (UNICEF, 2014b).

2.4 EVOLUTION OF SM NET

The SM Net in Somalia was conceived in 2013, when health promotion units were established for the first time in all three zones of Somalia to raise awareness of polio transmission and immunization services. Initially these services began with a limited human resource capacity in each zone, with the focus on advocacy activities to leverage support from the highest level of government, clan, religious and community leaders in all three zones; and mass communication campaigns delivered through interactive SMS and BBC Somalia, often in partnership with other ongoing nationwide health campaigns. As the programme has progressed, the forms of communication have become more targeted towards communication campaigns that are most effective at reaching hard to access groups. A Harvard study on Knowledge, Attitude and Practices (KAP) on polio immunization in Somalia completed in 2014 provided valuable insights on communication sources for hard to reach groups (Harvard Opinion Research Programme, 2014). As such, in 2014 over one million SMS were sent as part of the programme, but by 2016 SMS was no longer used by the programme. Instead there had been a large increase in the number of face to face

meetings, community dialogues and advocacy activities with community leaders (UNICEF, 2016b).

The programme then expanded to include the capacity building of community mobilizers (CMs) in the poliovirus and Interpersonal Communication Skills (IPC) to provide peer to peer sensitization prior to the arrival of vaccination teams in communities. This was the first time that such an initiative used CMs to reach households in Somalia. In 2014, the communication campaign had conducted 607,607 IPCs with households. In the first six months of 2016, it had conducted over one million (UNICEF, 2015b; UNICEF, 2016b).

In 2014, a social mobilization network was established in all three zones. The network comprised of the Regional and District Social Mobilization Coordinators (RSMCs; DSMCs). Their main role was to develop the communication action plans and offer support, supervision, monitoring and reporting.

In addition to communication campaigns in 2014 the SM Net initiated the nomadic tracking strategy and completed the process in Puntland with 303 nomadic elders. On the basis of this a joint micro-plan validation exercise was conducted by the Ministry of Health (MoH) and supported by WHO and UNICEF. This revealed 203 settlements that were not previously covered with OPV (UNICEF, 2015a). An orientation of 404 nomadic elders from Puntland and Somaliland was also carried out on the importance of immunization, vaccination of preventable diseases (including polio), and the role of nomadic elders in getting children immunized. UNICEF also partnered with the United Nations Food and Agriculture Organization (FAO) to conduct a joint human and cattle vaccination campaign in Puntland, with a total of 26,400 vaccinated of which 31 percent were zero dose vaccinated for the first time (UNICEF, 2015b).

SM Net is managed by UNICEF zonal offices in Hargeisa, Garowe and Mogadishu, in coordination with the MoH and WHO. The UNICEF Somali Support Center (USSC) in Nairobi also provides technical assistance to the programme. It currently includes about 3,616 CMs, 131 District Social Mobilization Coordinators and 22 Regional Social Mobilization Coordinators.

SM Net's mandate has evolved over time. While it initially focused on awareness-raising and establishing the network of CMs and the associated administrative structures, the network now increasingly focuses on behavioural change and the 'missed children'. The UNICEF 2015 document 'Legacy and transition planning: Somalia Polio eradication programme' (UNICEF, 2015a) lists a range of responsibilities for SM Net which are summarised in Table 1.

Level	Responsibilities
Zonal Level	• Coordination with MoH and WHO for SM micro-planning and its synchronization with vaccination microplan • Decisions on the vaccine requirements, logistics, and operational dates for the campaigns • Zonal campaign launches and orientations of stakeholders • Liaison with the various ministries for initiating actions related to campaigns • Capacity assessment and capacity building of SM Net and frontline health workers • Preparation of budgets, work-plans and time lines • Media orientations and engagements • Preparing reports and providing timely data for various requirements • Organizing campaign reviews and prioritizing areas and issues for monitoring based on the data • Approve district communication plans and cold chain vaccine and logistics management plans • Approval and inputs for information, education and communication (IEC) materials and messaging • Managing real time monitoring and tracking of vulnerable groups such as nomads and migrants
Regional and district level	• Coordination with MoH and WHO for SM Net micro-planning synchronization • Decisions on the vaccine requirements, logistics, and operational dates for the campaigns • Regional and district campaign launches and orientations of stakeholders • Capacity assessment and capacity building of SM Net and Frontline health workers • Implementation of workplans and time lines • Preparing reports and providing timely data for various requirements • Monitoring SM for campaigns based on prioritized areas and issues • Monitoring and supporting the implementation of district communication plans and cold chain vaccine and logistics management • Implementing real time monitoring and tracking of vulnerable groups such as nomads and migrants
Sub District level	• Implementing District Communication plan, IPC and SM activities and IEC display • Real time monitoring implementation • Counselling and behaviour change for refusals

2.5 THE SOMALI POPULATION

An understanding of the administrative structure and demographics in Somalia is important for identifying the current challenges facing the uptake of polio campaigns. For example, if a large proportion of the population in a region are nomads, then one would expect that the polio campaign in this administrative unit will face challenges in reaching these "hard-to-reach" groups. The first extensive household sample survey to be carried out in decades (Population Estimation Survey for Somalia (PESS)) in 2013/4, found that the Somali population is estimated to be 12.3 million. The survey also showed that 42 percent of the population live in urban areas, 23 percent in rural areas and 9 percent in internally displaced camps, while 26 percent of the population is nomadic (UNFPA, 2014).

Somalia is officially divided into eighteen (18) administrative regions, which in turn are subdivided into ninety (90) districts, though these are in a state of flux. Mudug Region, for example, is now divided into North (in Puntland) and South (in South Central), with Jariban and Northern Galkayo district (also now split) being in Puntland. Northern Somalia is now divided up among the autonomous regions of Puntland (which considers itself an

autonomous state) and Somaliland (a self-declared but unrecognized sovereign state). For the purposes of this evaluation we consider three zones: Somaliland, Puntland and South Central. Table 2 summarizes the population data by Region and Zone from the PESS (UNFPA, 2014).

Table 2. The population data for Somalia (adapted from UNFPA, 2014)

Zone	Region	Total Population (millions)	Percent urban	Percent rural	Percent nomads	Percent IDPs
Somaliland	Awdal	0.67	43	21	35	1
	W. Galbeed	1.24	65	11	21	4
	Togdheer	0.72	67	8	21	4
	Sool	0.32	37	4	57	1
	Sanag	0.54	29	6	65	0
	TOTAL	**3.51**	**53**	**11**	**34**	**2**
Puntland	Bari	0.72	66	9	19	7
	Nugal	0.39	35	8	54	2
	TOTAL	**1.11**	**55**	**9**	**31**	**5**
South Central	Mudug	0.72	53	11	26	10
	Galgaduud	0.57	32	9	38	21
	Hiraan	0.52	16	26	49	10
	Middle Shabelle	0.52	22	48	19	10
	Banadir	1.65	78	0	0	22
	Lower Shabelle	1.20	18	60	13	9
	Bay	0.79	12	58	25	5
	Bakool	0.37	17	37	40	7
	Gedo	0.51	21	35	28	15
	Middle Juba	0.36	15	41	36	7
	Lower Juba	0.49	35	33	25	6
	TOTAL	**2.75**	**36**	**30**	**22**	**13**

Somaliland consists of five Regions with a total population of 3.5 million. The largest population size is in Woqooyi Galbeed (1.2 million), which has both Hargeisa and Berbera as major cities (0.8 million in this region are urban). The nomadic population is also important at 34 percent in Somaliland, with some regions such as Sool and Sanag having more than half the population with a nomadic lifestyle.

Puntland is much smaller with a total population of only 1.1 million and two Regions. A significant proportion of the population are nomads (31 percent), but the majority of the population are urban (55 percent).

South Central hosts the largest population at 2.75 million across 11 Regions. It also has the largest number of IDPs at nearly one million. Although all of the population in Banadir Region are urban (1.28 million) or IDPs (0.37 million), the other Regions have significant numbers of rural and nomadic populations. Important Regions for nomads are Hiraan, Bakool and Galgaduud. Galgaduud also has a significant percentage of IDPs (21 percent).

2.6 SM NET STRUCTURE

The SM Net is composed of a number of actors (see Figure 1 below). At the household level, it operates through CMs and vaccinators. The CMs, which cover about 300 households each, engage with households and community leaders in their designated areas on the topics of polio and are trained in IPC skills. They precede the vaccination teams which immunize children during polio immunization campaigns. The CMs are MoH staff, but financed by UNICEF, and are only temporary staff, engaged during the campaigns for a period of three to five days at a time. They are hired from the communities they live in to ensure a high level of trust from the target beneficiaries of the campaigns. There are different profiles for the CMs depending on the location. In Somaliland, it is usually a combination of a literate youth who is accompanied by an elderly male, who has more influence in the community. In the two other zones, Puntland and South Central, CMs are usually youths, mostly female.

In the recent campaigns, CMs have focused on household behavioural change and the missed children. CMs visit every household in person and use a number of tools, including flipcharts, flash cards and megaphones. However, much of this equipment is managed at the district level. They also receive the list of households with missed children from the WHO, and target these directly by spending more time in these homesteads. As the information on missed children from the WHO lists is not always comprehensive, CMs try to identify missed children in their house-to-house visits and engage their parents. Many CMs also work as "Village Polio Volunteers" when they are not engaged in the campaigns. As of December 2016, there were 1,377 CMs in South Central Zone, 1,312 CMs in Puntland, and 927 CMs in Somaliland (C. Parvez, personal communication, 27 December 2016).

When the SM Net was first established, the CMs were managed directly by the WHO. CMs are now directly supervised by District Field Assistants (DFAs)[1] in Puntland and Somaliland. In the South Central zone, CMs are managed by non-governmental organizations (NGOs), which act as implementing partners[2], in collaboration with the UNICEF state offices. DFAs, which fall under the WHO, coordinate the overall management of CMs and vaccinators, and networking and advocacy at the community level during SIAs. They are only engaged for a few (usually not more than three) days prior to the campaigns in order to manage the CMs. DFAs are usually health workers who take time out to work as DFAs during the campaigns.

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[1] The number of DFAs employed in the three zones was not made available to the Kimetrica Research Team.
[2] The three primary implementing partners are the NGOs Wardi, Swisso Kalm and ANPPCAN. Each of these NGOs have a number of secondary partners.

DSMCs work in collaboration with District Polio Officers (DPOs) (WHO full time staff) to provide technical support in building strong alliances with the community, develop influencer networks, and work with NGOs and charities at the community level within their district. The DSMCs are responsible for developing a district specific communication plan (DCP) for polio eradication and routine immunization and they coordinate partnership activities in the programme at the district level. The DSMCs also work at the community level to provide support in identifying and immunizing any missed child, and they also indirectly supervise CMs through the DFAs. While they were previously working full-time on the SM Net, since June 2016 they are only engaged on a campaign basis for a period of approximately 23 days (10 days before and after the campaign, and three days during the campaign). Their counterparts, the DPOs, are responsible for polio surveillance and service delivery, including the training and monitoring of vaccinators during polio campaigns. There are 78 DSMCs[3] in South Central Zone, 36 DSMCs in Puntland and 30 DSMCs in Somaliland (C. Parvez, personal communication, 27 December 2016).

DSMCs report to RSMCs who supervise three to five districts each and are responsible for managing communication and social mobilization activities in their region, and supporting DSMCs in mapping out any issues. Similar to DSMCs, RSMCs used to be full time SM Net staff, but since June 2016 they are only engaged on a campaign basis for a period of approximately 23 days (10 days before and after the campaign, and three days during the campaign). The RSMCs and DSMCs were recruited and deployed to their duty stations in Somalia in early 2014 and report to Zonal Social Mobilization Coordinators (ZSMC), who support coordination at the zonal level with the MoH and UNICEF and are engaged on a monthly full time basis around the campaigns. The RSMCs also work closely with Regional Polio Officers (RPOs) (WHO full time staff) and Regional Medical Officers (RMOs) (WHO full time staff). RMOs are not present in the South Central Zone, and in Puntland their responsibilities are covered by RSMCs. There are 12 RSMCs[4] in South Central Zone, seven RSMCs in Puntland and six RSMCs in Somaliland (C. Parvez, personal communication, 27 December 2016).

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[3] The number of DPOs employed in the three zones was not made available to the Kimetrica Research Team.
[4] The numbers of RPOs, RMOs and ZSMCs employed in the three zones were not made available to the Kimetrica Research Team.

The following diagram (Figure 1) shows the structure of the SM Net and shows in blue those that fall under UNICEF, in green those that fall under the WHO and in orange those that fall under MoH.
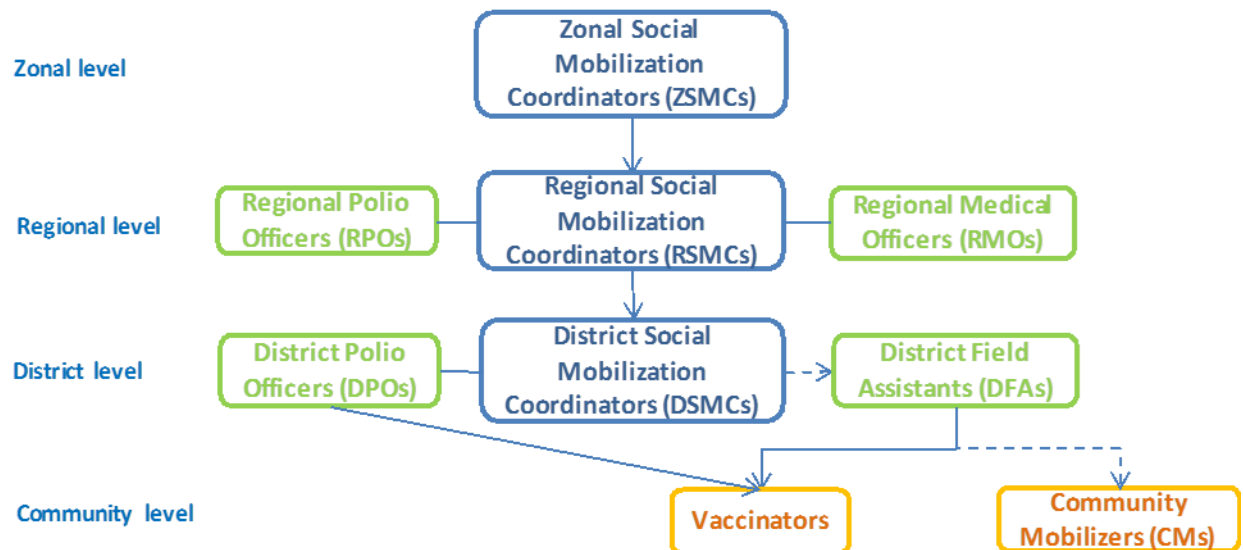
Figure 1. SM Net Structure

3. LITERATURE REVIEW

3.1 APPROACH

The literature provided by UNICEF as part of the SM Net programme was reviewed. A desk review of the existing online literature covering reviews of the GPEI; routine and supplementary immunization campaigns; communication for development (C4D); social mobilization activities and knowledge, attitudes and practices (KAP) studies was also undertaken. The information collected provided contextual knowledge on the SM Net evaluation and direction on the formulation of research design, particularly in identifying the most appropriate indicators for programme evaluation.

This section first looks at the role of the GPEI in global polio eradication and how the work of SM Net fits within this structure. It then summarises the findings of two SM Net evaluations, one in Somalia and one in India. Finally, it reviews the existing literature on immunization, KAP and communication approaches before finishing with a selection of most relevant indicators extracted from the literature.

3.2 THE GPEI

Most information on the GPEI could be found on its website and in its 2013-2018 strategic plan (GPEI, n.d., a). As GPEI enters its final phases, several papers have been published on the key successes and lessons learnt from the GPEI approach, as well as what can be replicated in other health campaigns. These include Aylward and Linkins (2005), Cochi et al. (2014), Closser et al. (2014), and Loevinsohn et al. (2002).

The four key strategic areas of the GPEI are surveillance, routine immunization, SIA and targeted mop-up campaigns with a view to achieving global polio eradication by 2018. Surveillance includes finding and reporting on children with AFP and then isolating and tracking the virus in laboratories. Routine immunization is the implementation of regular immunization services at clinics with the aim of delivering three doses of polio to all children under one year of age. SIA or national immunization days (NIDS) are combined with routine immunization with the intention of eradicating polio by reaching any child below five years of age with two doses of polio drops. Finally, targeted mop-ups are door to door campaigns that target high risk areas (GPEI, n.d., a).

Since its inception in 1988, more than 2.5 billion children have been immunized through the support of 200 countries and 20 million volunteers. Global incidence of polio has reduced by 99 percent. Despite ongoing challenges to eradicate polio in the last 1 percent of cases, the GPEI is generally perceived to be a successful model that has the potential to be replicated by other health campaigns (Cochi et al., 2014; Waisbord and Larson, 2005).

A key component of the GPEI mandate to eradicate polio has been garnering political and social support for the eradication of polio through social mobilization activities including advocacy at government and regional level, the implementation of mass communication campaigns and the engagement of community members. GPEI's focus on building national

support for polio campaigns has been seen as key in ensuring the effectiveness of the programme (Ndiaye, 2014; Waisbord, 2004). Moreover, its focus on community participation and mass communication campaigns has been seen as a key aspects in the success of its work (Cochi et al., 2014; Curry et al., 2014; Nkowane et al., 2009; Obregon and Waisbord, 2010). Finally, the initiatives of the GPEI have been found to have a positive impact on the public health systems of the countries that it has targeted, with evidence of improved practices, funding for immunization and expansion of human resources examples of this in different contexts (Closser et al., 2012; Cochi et al., 2014; Loevinsohn et al., 2002).

3.3 SM NET EVALUATIONS IN SOMALIA

In 2013, the Harvard School of Public Health was commissioned in partnership with UNICEF to deliver high quality, standardized data on knowledge, attitudes and practices of the SM Net target groups to "effectively inform communication strategies for polio and routine immunization" (Harvard Opinion Research Programme, 2014). The study, which was a baseline for communication assessment, was carried out in 2013 prior to the recruitment of DSMCs and RSMCs and to the training of CMs. The main findings are covered in three powerpoint presentations called 'A poll supporting Polio Vaccination: Knowledge, Attitudes and Practices' for each of the three zones: Somalia South-Central, Puntland and Somaliland. The data was collected through interviews with 653 households in the districts of Mogadishu (Banadir Region), Baidoa (Bakool Region) and Afgoye (Lower Shabelle Region) in the South Central zone of Somalia; 696 households in the districts of Garowe (Nugal Region), Bosaso (Bari Region) and Galkayo (Nugal Region) in Puntland; and 666 households in the districts of Hargeisa (Woqooyi Galbeed Region), Burao (Togdheer Region) and Zeila/Borame (Awdal Region) in Somaliland. Key findings of the review were grouped around knowledge and awareness, decision making, sources of communication, key influencers and development priorities. A selection of some of the findings across the three zones are presented in the tables below (Tables 3-5).

KNOWLEDGE AND AWARENESS

The study found a high awareness of polio and an understanding of its severity across respondents in all three zones, although there were fewer respondents who could accurately list the symptoms of polio. Generally, levels of awareness and perception of severity were lowest in Somaliland, as well as levels of concern around children contracting polio, which was also low in Baidoa district of South Central.

Awareness of OPV drops was high in all three zones but an understanding of how often they should be taken by children was only around or just above 60 percent of respondents, with lowest levels of knowledge again found across Somaliland and in Baidoa district of South Central. Across all three zones OPV was considered important for children and highly trusted although some respondents in all three zones still partially believed false messages about the OPV drops. Distrust was in the minority and focused around concerns associated with perceived contraindications, particularly risks of sterility in those that had received drops.

There were much lower reported rates of awareness and trust in the IPV across all zones, a potential issue for the introduction of the vaccine into Somalia. Further, only about half of respondents were aware of a 'group' of vaccines for infants and routine immunization. Many had received a vaccination card but a majority were unable to present their card to research teams.

Table 3. Indicators used in the Harvard KAP study (Harvard Opinion Research Programme, 2014): knowledge and awareness

Selection of Indicators from Harvard KAP study		South Central Somalia			Puntland			Somaliland		
		Mogadi-shu	Baidoa	Afgoye	Garowe	Bosaso	Galkayo	Hargeisa	Burao	Zeila/Borame
Caregiver awareness of polio		99%	100%	100%	100%	100%	100%	95%	88%	91%
Caregiver say they are **concerned** their child will get sick from polio this year.	Very	75%	59%	73%	70%	70%	80%	59%	60%	60%
	Some-what	13%	22%	18%	13%	15%	5%	4%	5%	5%
	Not very	8%	18%	8%	14%	13%	8%	4%	1%	1%
	Not at all	3%	0.5%	0.5%	1%	2%	7%	24%	24%	26%
Caregiver knowledge of most appropriate frequency for polio drops	Every time	74%	55%	61%	60%	60%	63%	53%	55%	60%
	Most of the time	10%	18%	19%	17%	16%	23%	13%	11%	11%
	Just a few times	10%	24%	15%	12%	10%	13%	26%	16%	15%
	Only once	2%	2%	2%	6%	8%	1%	1%	3%	0.5%
	Child does not need drops	1%	0%	1%	4%	5%	1%	0.5%	0.5%	0%
	Don't know	3%	1%	1%	1%	1%	0%	1%	4%	5%

PRACTICES, DECISION MAKING AND KEY INFLUENCERS

The study found that respondents were generally satisfied with the vaccination process, with vaccinators perceived to have delivered services with respect and compassion, and to be knowledgeable. However, around half of the respondents from all three zones had some reservations about the vaccinators, including the fact they were too young, were not from the local community and were not the preferred gender pairing (a combination of one male and one female was typically preferred). Perception of the levels of respect of vaccinators was lowest in Puntland.

The majority of caregivers said they gave their children polio drops when offered at the last round of OPV. Across all three districts in Somaliland, between 51 and 62 percent of respondents intended to give their children polio drops every time they were offered,

compared to South Central zone where rates of intention across all three districts were between 63 and 77 percent.

Decision-making about the vaccination programme was divided between mothers and fathers. In most cases if the father was not present when the vaccination team came, the mother would make the decision. Decision-making also relied on key influencers, the most common of whom were neighbours. Other less frequently mentioned influencers were religious leaders and community leaders.

There was general satisfaction with the vaccination process for OPV, though there was some confusion as to who led the programme, with responses ranging from national or local governments and health services through to international organizations. Somaliland had the highest number of respondents saying that they did not know at all who organized the programme.

Table 4. Indicators used in the Harvard KAP study (Harvard Opinion Research Programme, 2014): practices, feedback on vaccinators

Selection of Indicators from Harvard KAP study		South Central Somalia			Puntland			Somaliland		
		Mogadi-shu	Baidoa	Afgoye	Garowe	Bosaso	Galkayo	Hargeisa	Burao	Zeila/ Borame
Percent of caregivers saying they intend to give their child polio drops.	Every time offered	71%	63%	77%	63%	71%	67%	51%	62%	63%
	Most of the time offered	16%	21%	15%	29%	23%	24%	14%	11%	11%
	Just a few times offered	6%	13%	5%	8%	6%	6%	17%	6%	7%
	Only once	3%	2%	2%	0%	0.5%	1%	2%	1%	3%
	No intention	1%	0%	1%	0%	0%	0.5%	9%	3%	1%
Percent of caregivers saying child at last round.	Received drops	81%	96%	93%	95%	95%	90%	73%	83%	87%
	Did not know	1%	1%	0%	0.5%	0%	3%	0%	0%	0%
	Did not receive	3%	2%	3%	3%	2%	6%	4%	3%	2%
	Not asked	15%	1%	4%	2%	3%	1.5%	22%	15%	11%
Percent of caregivers saying that vaccinators were respectful.	Very	62%	88%	83%	62%	58%	80%	61%	71%	77%
	Somewhat	9%	6%	6%	26%	35%	17%	2%	3%	3%
	Not very	2%	2%	2%	7%	4%	0.5%	0%	1%	0%
	Not at all	0%	0%	0%	0%	0.5%	1%	1%	0.5%	0%
	Not asked	32%	5%	11%	6%	4%	2.5%	35%	24%	18%
Percent of caregivers who said vaccinators were	Not 'trust-worthy'	6%	1%	2%	4%	3%	1%	3%	2%	<0.5%

COMMUNICATION SOURCES

The study found that the most common sources of communication on vaccination programmes were radio, megaphone and poster. However, less than half of survey respondents knew the vaccination teams were coming before they arrived. This was most common in Puntland, where 64 percent of households in Bosaso were not aware that a vaccinator was due to arrive.

Table 5. Indicators used in the Harvard KAP study (Harvard Opinion Research Programme, 2014): communication sources

Selection of Indicators from Harvard KAP study		South Central Somalia			Puntland			Somaliland		
		Mogadi-shu	Baidoa	Afgoye	Garowe	Bosaso	Galkayo	Hargeisa	Burao	Zeila/Borame
Caregiver awareness of vaccinator arrival prior to visit during last round.	Knew	40%	41%	43%	41%	34%	36%	44%	39%	43%
	Did not know	44%	58%	53%	57%	64%	62%	33%	47%	46%
	Not asked	15%	1%	4%	2%	3%	2.5%	22%	15%	11%
How caregivers became aware vaccinators were coming.	Radio	31%	12%	35%	23%	17%	23%	17%	13%	13%
	Mega-phone	5%	16%	12%	15%	12%	11%	19%	16%	22%
	Spokes-person	0%	0%	0%	0%	0%	0%	4%	0%	1%
	Poster	3%	11%	5%	1%	4%	0.5%	0%	0%	0%
	Friends or family	0%	0%	0%	0%	0%	0%	1%	2%	1%
	Not asked	67%	60%	61%	60%	68%	65%	61%	63%	59%

DEVELOPMENTAL PRIORITIES

The study also reported that local context is an important driver in priorities for action. Health was the most important development priority in all three zones, followed by education in Puntland and Somalia and water/clean water in Somaliland. Education, security and hygiene/sanitation were also top priorities.

ADJUSTMENTS TO SM NET WORK PLAN BASED ON KAP STUDY FINDINGS

Based on the Harvard Study the SM Net team devised a new workplan to address some of the issues identified across the three zones. Given the high levels of awareness identified in the study, the team decided to continue the communication campaign, but to use more appropriate communication channels and local community networks and actors (such as local government, health workers and religious leaders) to ensure that there is greater awareness of the campaigns prior to the arrival of vaccination teams.

As the studies found that there was still confusion on the necessary dosage for OPV and some distrust still remained on contra-indications, the team decided to work on developing a clearer message on the fact that under fives need to be immunized every time there is a campaign as well as making clear that drops are safe to use.

Whilst the behaviour of vaccinators and CMs was appreciated, there were several ways in which the relationship in both vaccinators and CMs could be further developed. The SM Net team decided to address this by putting together a set of minimum requirements needed to ensure that team members would be trusted by the community (for example that they should be residents of the community they serve).

3.4 SM NET EVALUATION IN INDIA

Although there have been a number of SM Net programmes throughout the world, only one programme has been comprehensively evaluated. This was undertaken in 2013 and focused on the states of Uttar Pradesh and Bihar in India (Deloitte, 2014). Overall, the evaluation recommended the continued implementation of the programme. Their key findings were grouped around the extent to which the SM Net programme was relevant, effective, efficient, sustainable and delivered impact, and are summarised below.

RELEVANCE

India has struggled with polio eradication efforts, with a particularly high spike of 1,600 cases of wild poliovirus 1 and 3 in 2002. In response to this spike, SM Net was implemented in the two states, Uttar Pradesh and Bihar, where 86 percent of WPV1 cases were identified. The evaluation found that the SM Net interventions have been reflective of the aims of the GPEI as well as the Government of India's National Polio Surveillance.

At the micro level, the evaluation found that SM Net had sufficiently reflected contextual factors when implementing activities. This included addressing issues of trust amongst community members towards the vaccines, recognizing that poor sanitation amongst communities meant that some children would still not be resistant even after four doses of OPV and addressing monitoring and identification of high risk groups through its Underserved Strategy, including those who were highly mobile, such as construction workers, kiln workers, slum dwellers and Muslims, where the virus was most prevalent.

EFFECTIVENESS

The evaluation found that SM Net had delivered against its project objectives and its overall goals to achieve social mobilization for polio immunization. Findings from a meta-analysis of KAP data showed a positive correlation between the behaviour and practices related to polio immunization in the intervention areas over the years. The meta-analysis conducted by Deloitte investigated the linkages between changes in behaviour and the SM Net interventions by using the presence of SM Net frontline workers as a proxy indicator. The analysis found that increases in immunization seeking behaviours and practices in communities correlated to the increase in interaction with the SM Net Community Mobilization Coordinators (CMCs) and other frontline health workers. Deloitte concluded that based on the strong positive linear relationship ($r=0.90$) and the efforts SM Net has made to

strengthen their programme inputs (particularly the more active role of CMCs in the local communities), the communities' increase in behaviours and practices in accessing OPV could be attributed to the SM Net interventions.

Focus group discussions (FGDs) backed up the findings of the meta analysis, finding that the main source of information on polio had been CMCs, through house to house visits and mothers' meetings. These visits had helped to build trust in the OPV and reduce general concerns about contra-indications (sterility fears), and concerns that the vaccine was not *hareem* under the Muslim faith. The use of female CMCs, who were accompanied by local influencers and collaboration with local health services, helped to solidify this trust.

Overall, there was a reduction in refusal rates of 61 and 42 percent in Uttar Pradesh and Bahir respectively, and an increase in the number of children accessing OPV at vaccination booths from 1,425,145 in 2007 to 1,514,647 in 2012. The study accounted for SM Net's effectiveness in achieving its outcomes to face to face engagement with the target population through house to house visits, the implementation of its Underserved Strategy as well as its rigorous monitoring of households with 'missed children', and its partnership building with key local institutions, NGOs and community influencers.

The model for SM Net has since been expanded into other areas of child and maternal health, including routine immunization. However, survey data still shows a gap in the number of individual accessing routine immunization services.

EFFICIENCY

The study determined that SM Net had utilized funds in an economical manner, with much of the money being spent for implementation and operationalization rather than management and administration, a positive indicator in financial efficiency. The average cost to coverage ratio for SM Net was estimated at Indian Rupee (INR) 167.50 per child per year in Uttar Pradesh and INR 726.76 for Bihar, with the findings in Uttar Pradesh believed to be a more accurate figure. A comparison of SM Net with GPEI estimates cost of coverage per child with OPV at around US Dollar (USD) 3.26 per child per year to distribute OPV in similar countries with high prevalence levels of polio. As such the team estimated that the costs of SM Net were economical. However, there was a sharp rise in miscellaneous costs in 2012, which was cause for concern. In addition, poor financial monitoring during the programme made it difficult for evaluators to do an effective cost analysis of the programme.

Based on projected costs of SM Net for the next decade as part of a Value for Money (VfM) analysis, the team identified a strong case for continuing eradication interventions as the most cost effective option. Based on current costs (2.6 billion INR for the years 2007 to 2012), projected costs were calculated for the next decade until 2022 to be 8.11 billion INR. The team assessed that the alternative, the risk of resurgence of polio, as has occurred in other high risk countries such as Nigeria, would end up with a much larger amount of funding being spent on addressing the outbreak than continuing eradication efforts.

Typically, it would be cheaper to end the programme of eradication and continue with routine immunization activities, switching from a focus on eradicating polio to controlling polio. However, the team argued that whilst this would be cheaper in the first few years the

cumulative costs over time (operational costs, productivity losses and treatment costs) would overtake the costs of following a programme eradication. Further, as the current immunization structure is insufficient to create enough population immunity against polio in high risk areas, SIAs would need to continue in order to ensure no resurgence. SIA activities and structure could potentially address more than one health issue (for example CMCs can also sensitize households on other child health issues such as child nutrition or maternal health) making it even more cost effective.

IMPACT

The study concluded that SM Net had contributed to the overall vision of polio eradication in India. In particular, it had contributed to increased levels of coverage and decline in refusal of OPV amongst houses visited by CMCs. Incidence rates of WPV have occurred in both intervention and non-intervention areas in Uttar Pradesh and Bihar, but the study found that the decline in intervention areas has been much steeper than in intervention areas in Uttar Pradesh. In Bihar the decline in intervention was less steep than in non-intervention up until 2009. However, after 2009 when CMC interventions rapidly increased in the state, the decline in cases rapidly overtook that of the non-intervention areas, showing the value of CMC activities. The intervention also led to some unintended benefits which had not been measured, such as training of health personnel. Ideally, impact should have been measured either by polio incidence or by a proxy indicator like proportion of OPV doses in non-polio AFP but that information was not collected.

SUSTAINABILITY

The study found that CMCs are now accepted as frontline health workers by the target populations. An average of 82 percent of households surveyed in the KAP studies reported the CMC as the source of information for all polio related knowledge, suggesting that the communities acknowledge the CMC as a trusted source. Ninety-five percent of the surveyed populations in the KAP studies reported visits by CMCs in the last month, indicating the potential for effective implementation of other child health interventions. The team also found evidence that the SM Net structure, particularly the CMCs, have started to converge with the public system, with CMCs and frontline workers from the public health system working together.

3.5 ONLINE LITERATURE

The multidisciplinary sites of google scholar and google were used for the online search, as well as sites such as biomed central, Sciencedirect and Oxford journals. These sites were searched using the following key words: "polio," "OPV", "Somalia", "social mobilization", "community sensitization", "community health", "child health", "measles", "Kenya", "Ethiopia", "Horn of Africa". Measles and child health were included in the search in order to broaden the findings on impact by looking at similar social mobilization initiatives in other immunizations and health services. A snowballing methodology was also used to build up a larger body of evidence, through reviewing article bibliographies and citation tracking.

Over 100 publications were identified online that dealt with the priority topics of the literature review and referenced the key search terms. Of these publications, 33 were selected for

inclusion in the literature review of which 15 studies dealt directly with polio and 8 with Somalia.

CAUSES OF LOW IMMUNIZATION RATES

A large body of literature addresses the many reasons why access to health and immunization services amongst children and adults is so low in certain contexts. Some studies selected for this review provide a general overview of the reasons for low immunization (for example Favin et al., 2012; Waisbord and Larson, 2005) while other studies deal with more specific cases, for example Mushtaque et al. (2003) on factors determining unequal access to immunization in Bangladesh, and Ndiaye et al. (2014) on immunization challenges for nomadic groups in Chad.

Health care access is a key determinant in children's access to immunization, with low immunization rates in communities with low access to health care (Waisbord et al., 2006). The most common reasons for low access in these underserved population groups are a lack of access to information, poverty, conflict and other socio-cultural issues (Favin et al., 2012; Waisbord and Larson, 2005).

Population groups with low access to health care often live in conflict zones where it is either too dangerous to access health care, or mass displacement makes it difficult to access consistent services (Mbabazi et al., 2013).

Populations with low levels of immunization are often located far from health centres. Health care can also be costly, reducing incentives for people to visit centres and get treatment. Generally, health care in areas of low immunization is of poorer quality, often with unreliable service delivery, a lack of basic equipment, infrastructure and stocks of medication. This reduces trust in local health services and reduces access even further (Favin et al., 2012; Waisbord and Larson, 2005).

Social and cultural factors also play an important role in access to health care and immunization services. These can include cultural perceptions such as traditional and religious beliefs around ill health and treatment, with some population groups preferring to access traditional healers or use traditional methods for treating ill-health. In addition, certain religious beliefs may deter populations from seeking out health care or there may be distrust in immunization due to previous negative experiences with biomedicine in that particular region (for example the disastrous Pfizer trials in Nigeria) (Nasir et al., 2014; Premji et al., 2016). Further, immunization rates amongst children have been found to be lower amongst those families with women who are less well educated (Mbabazi et al., 2013). In Favin et al.'s (2012) literature review documenting reasons for why children were not immunized, the team found that in certain countries in South Asia (particularly India and Bangladesh) girls were less likely to be vaccinated than boys.

Studies have found that low immunization rates are also more likely to be found in rural, rather than urban populations (Mushtaque et al., 2003) and that reaching nomadic pastoralists, who are often in remote areas, can be a challenge (Ndiaye et al., 2014; Okeibunor et al., 2013). However, studies have found that immunization levels are low in other population groups as well due to a lack of access to information and communication on

immunization processes (Mbabazi et al., 2013; Waisbord and Larson, 2005). Whilst sedentary population groups might be easier to locate, monitor and support, access for these groups can still be difficult. Large agricultural workloads for women (who are most frequently primary caregivers for children) mean they often lack the motivation and time to visit the health clinics to access care. In both urban and rural areas, primary caregivers may also work outside the home, making access difficult (Curry et al., 2014).

Knowledge, attitude and practices are also key factors in determining access to health care and immunization uptake. In the case of immunization, low knowledge (particularly on importance, vaccine type and logistics involved) is strongly linked to low compliance (Favin et al., 2012; Waisbord 2004). While many studies found high levels of awareness of polio and the need to immunize against it, many population groups had mixed levels of knowledge on the causes, symptoms and treatment of polio. This includes misinformation and distrust of immunization (including OPV), and the contra-indications around vaccination treatment (Nasir et al., 2014; Ndiaye et al., 2014; Premji et al., 2016).

The literature shows that decision making at the household level on seeking health care can be complex. There is a general tendency for fathers to have greater influence over decision making than mothers (Brugha and Kevany, 1996; Favin et al., 2012; Okeibunor, 2013). However, findings also show that women tend to have more knowledge of health issues relating to women and children, including immunization. As such, changes in practices will only be successfully achieved by engaging with both genders in the household. Decision making in the household is often heavily influenced by actors outside the household, in particular health care workers, neighbours, community members and religious leaders (Waisbord and Larson, 2005).

HEALTHCARE AND IMMUNIZATION ACCESS IN SOMALIA

Various studies have looked at the context in Somalia for health care access and barriers to immunization. Literature used in this review has looked at the health care seeking behaviours of different groups in the three zones in Somalia (Mazzilli and Davis, 2014; Tilikainen et al., 2016; UNICEF, 2013b). Other literature explains the characteristics of nomadic groups in Somalia and the specific challenges faced in providing immunization services to this community (Anand, 2014a; Frouws, 2014; Haydarov et al., 2016).

In 2014, Mazzilli and Davis conducted a literature review on health care seeking behaviour in Somalia. This included a review of over 100 nutritional assessments conducted by the Food Security and Nutritional Analysis Unit (FSNAU) of FAO and partners. These assessments have been conducted since 2000. The review found that access to health care is low across Somalia, though absolute levels and types of care available (public or private) does vary across zones and population groups. For example caregivers in Puntland more frequently sought health care for children compared to pastoralist groups in the South Central Zone; use of public services was higher in Gedo, Galkayo and Berbera than other districts whilst across Somalia, nomadic groups were more likely to seek out privately run services than more sedentary groups (exceptions to this were Gedo and Middle Juba). There were also differences in health care access between rural and urban groups, with children from urban communities more likely to be immunized than children from rural areas (Mazzilli and Davis, 2014). In Somaliland, children were more likely to have received OPV through routine

immunization services, whilst children outside of Hargeisa were more likely to access OPV through SIAs (UNICEF, 2013b) and children from nomadic groups were also more likely to be vaccinated through SIAs (Mazzilli and Davis, 2014).

Poor quality health services have been reported to be a key barrier to access in Somalia, with unreliable availability of health care workers, low levels of infrastructure and stock outs resulting in low levels of trust amongst community members (LeFond, 1993; Mazzilli and Davis, 2014). Insecurity in the region also remains a key reason for poor access. Around one tenth of the population of Somalia was categorized as displaced between 2006 and 2008, making it hard to provide consistent health delivery (Mazzilli and Davis, 2014).

As with studies in other settings, pastoralists (particularly nomadic) are less likely to access health care services in Somalia than more sedentary groups (Mazzilli and Davis, 2014). Overall this has a detrimental effect on immunization and disease eradication with nomadic groups (like other migratory populations) being at greater risk of contracting vaccination-preventable diseases (Anand, 2014). Nomadic groups' migratory patterns make it particularly difficult for health care providers to monitor and support as often they do not know how to locate them (Frouws, 2014; Haydarov et al., 2016). Guaranteeing cold chains for vaccines in order to reach pastoralist groups, who are often in remote areas, can be an additional challenge (Mazzilli and Davis, 2014). As it is estimated that nomadic groups make up to 25.9 percent of the population in Somalia, this remains a challenge for immunization programmes in the country. In 2014, all five cases of WPV1 in Somalia originated from nomadic pastoralist farmers in the Mudug (Haydarov et al., 2016).

Socio-cultural factors also play a key role in health care access in Somalia. For instance in the South Central Zone many people see disease and outcomes of ill health as in God's hands. (Mazzilli and Davis, 2014). Studies found that generally target populations recognized the importance of vaccination, and perceived them to be effective. However, distrust, misconceptions and misinformation on vaccinations (particularly the perceived danger of sterilization) amongst both men and women were common (LeFond, 2006; Tilikainen et al., 2016). However, several studies have found that failure to immunize based on religious reasons are much less common than other factors, such as lack of awareness and the mother being too busy to immunize (Tilikainen et al., 2016; UNICEF, 2013b; UNICEF 2014c).

The report by Mazzilli and Davis (2014) also found that boys are more likely to receive medical support than girls. In nomadic pastoralists groups in Somalia, women are often unable to visit health centres outside traditional services without either being accompanied, or with the permission of their husbands or fathers. In nomadic groups this can be particularly hard as men are often away with the animals (Frouws, 2014).

Studies have found that low access to health services has various implications on health seeking behaviour in Somalia. Caregivers will typically wait several days before seeking medical treatment. Although Mazzilli and Davis (2014) found that the use of traditional healers was generally low across Somalia, most studies showed that caregivers will revert to traditional medicines and healers for advice (Frouws, 2014; LeFond, 2006; Tilikainen et al., 2016; UNICEF, 2013) or may visit a pharmacy or a private health clinic before using public health services (LeFond, 1993; Mazzilli and Davis, 2014). A study on immunization in

Somalia in 2006 found that polio is also considered to be a spiritually caused disease and therefore can only be healed by God's will and not by western medicine, making it more difficult to convince families to take the vaccine (LeFond, 1993).

In line with the findings in the wider literature, awareness of diseases and health services is just as important as availability of services in terms of increasing access to health care in Somalia. In a survey on routine immunization in Somaliland, lack of awareness was one of the key reasons children were not vaccinated during both routine immunization and child health days (UNICEF, 2013b). Pastoralists often have limited knowledge on health care services, making it hard for them to make decisions on accessing health care (Frouws 2014; Haydarov et al., 2016; Mazzilli and Davis, 2014).

As with the findings of the Harvard KAP study, Tilikainen et al.'s study (2016) in Puntland amongst pastoralist groups found that there was a high awareness of polio and vaccination campaigns, but some misunderstanding of the symptoms and causes of polio amongst local communities. There were also mixed findings on knowledge related to the need for routine immunization, and the availability of vaccination packages for infants. Generally the literature showed that women, across all zones, knew more about maternal and child health issues than men (UNICEF, 2014c).

ROLE OF SUPPLEMENTARY IMMUNIZATION ACTIVITIES (SIAS)

A key component of the GPEI's efforts to increase access to immunization for hard to reach groups and those with limited healthcare access is to provide SIAs in addition to routine immunization services. SIAs, when combined with routine immunization activities, have been shown to increase equity in access to health services, increasing overall coverage, across many settings (Helleringer et al., 2014).

Some studies have examined the potential for knock on effects of SIAs on routine immunization services. Loevinsohn et al. (2002) published a literature review that looked at papers on six polio eradication programmes and their impact on public health systems. Of these none of the studies covered identified any evidence that SIAs had directly improved the degree of routine immunization. Further, a study by the WHO, covering 40 countries, found missed opportunities to 'promote' routine immunization during polio eradication sensitization activities. However, studies within the review identified that SIAs had contributed towards strengthening management capacity in public health systems; improved social mobilization activities and built trust in health workers and local health systems by communities; built effective intersectoral collaboration for immunization and in one study found that it had led to improved funding allocation for routine immunization in two countries: Ivory Coast and Morocco (Loevinsohn et al., 2002).

For such spillovers to be effective there needs to be adequate systems in place to manage routine immunization procedures including funds to support health staff training, surveillance and response mechanisms for polio (Ryman et al., 2008; Walker et al., 2014). Studies have found that staff training, satisfactory employment terms and infrastructure within local health centres can also contribute to increased routine immunization (Nkowane et al., 2009).

COMMUNICATION FOR DEVELOPMENT

In addition to SIAs, a key aspect of GPEI's approach to polio eradication is Communication for Development (C4D). C4D is as an approach to achieve social transformation through activities that focus on advocacy (to raise resources, political and local community support); social mobilization (for wider participation and ownership) and programme communication (to bring about changes in knowledge, attitudes and practices) (UNICEF, 2016a).

The approach recognizes that bringing about behavioural change at the household level relies on also bringing about change at other levels of society, such as local community members, religious leaders, local government etc. It also relies on the programme to be able to influence pre-existing cultural and social factors and to provide an enabling environment through the implementation of policies, legal structures and services that can affect a household's ability to adopt new practices (UNICEF, 2016a).

Social mobilization

Studies have found that campaigns that engage the wider community will see improved coverage rates, particularly if IPC services are extended to community and religious leaders as well as influential community groups (Jarrett et al., 2015; Ndiaye, 2014; Waisbord and Larson 2005). Further, research has shown that the use of community mobilization services, particularly house to house visits by both health workers and non-health workers to track households (via community maps), and to sensitize families not reached by routine immunization can fill the gap in services provided by local health services. In several cases across the world, house to house visits resulted in a marked increase in vaccination coverage including polio (Brugha et al., 1996; Curry et al., 2014; Jarrett et al., 2015). However, the success of these campaigns depends very much on the ability of workers to build trust and respect amongst communities (Waisbord 2004).

Engaging with religious leaders through training and community engagement can often be pivotal in earning the community trust that is needed to ensure that national polio immunization campaigns are successful (Nasir et al., 2014; Premji et al., 2016). In addition, training in IPC skills and involvement of community members in the vaccination process can facilitate this building of trust and respect. Studies have shown that communities have greater trust in workers selected by community members or who come from the same communities (Kok et al., 2015; Ryman et al., 2008). IPCs and canvassing by Community Health Workers (CHWs) have been shown to be the most effective way of increasing coverage and reducing refusal rates and polio incidents, particularly amongst vulnerable groups (Curry et al., 2014).

Social mobilization in Somalia

Male and female members of the household tend to be influenced by different types of actors, with women more influenced by health workers and neighbours, and men by community members and religious leaders. This highlights the importance of having a holistic approach to community engagement in order to have the greatest influence on behavioural change.

There is some division in the literature on who is the decision-maker in the household. In some studies, decision-making is said to be the sole responsibility of the father, in others

that this is split between mother and father, although the father will make a decision on the administration of polio vaccine, if present in the house (Frouws, 2014; Mazzilli and Davis, 2014). Some studies say that women have greater decision making in agro-pastoralist rather than nomadic households (Haydarov et al., 2016). It is worth noting that studies also found that women's decision making tends to be led by neighbours and males in the household. Further trust in vaccination comes from personal experience, with a study in 2006 in Somalia finding that women came to trust the measles immunization when measles spread through their village and immunized children did not fall sick (LeFond, 1993). Furthermore, women tend to be less influenced by community and religious leaders, who they do not have as much contact with (UNICEF, 2014c). In Somalia, decisions to seek care may depend on the nature of the illness, its perceived severity and consequences. Decisions may also be based on knowledge of the disease and what causes it (Mazzilli and Davis, 2014; UNICEF, 2013b).

Criticism of health services staff was a reason given for avoiding health services, with clinic staff criticized for being young, inexperienced and practicing favouritism towards friends and relatives (LeFond, 1993) vaccination campaign approaches, as well as behaviour of vaccinators, have also been raised by target populations. In particular, vaccinators were sometimes considered too young and not from the community (UNICEF, 2014c). Moreover, nomadic groups often felt excluded by vaccinators who were unsystematic in their approach to reaching these groups (UNICEF, 2014c).

Communication methods and effective community campaigning

Alongside community mobilization, mass communication campaigns, through radio, television and mobile phones have the potential to reach a large number of people and a variety of different populations groups across a country, raising awareness of key health services. Two studies in the literature review look at successful communication campaigns in specific contexts such as the Philippines (Zimicki et al., 1994) and Kenya (Mbabazi et al., 2014). Other studies look at the role of communication campaigns in immunization programmes across the world (Curry et al., 2014; Ryman et al., 2013; Waisbord, 2004; Waisbord and Larson, 2005).

Findings from reviews by Waisbord (2004), Waisbord and Larson (2005), Ryman et al. (2008) and Curry et al. (2014) all found that mass communication campaigns, particularly through radio and television, but also through printed materials and megaphones can increase awareness and vaccination rates.The study from the Philippines found a direct relationship between the implementation of a mass media campaign using radio, television and printed materials and improved knowledge on immunization and increased coverage rates amongst the population (Zimicki et al., 1994).

However, the success of these campaigns is highly dependent on the ability of community members to access the channels used (Ryman et al., 2013). Mass media campaigns tend to focus on reaching the greatest number of people and therefore tend to only have one or two key messages. However, for hard to reach groups, particularly those that have refused immunization services previously there may be too many messages and issues that need to be addressed and therefore mass media approaches will not be relevant for these groups (Waisbord, 2004). The study in Kenya found that by implementing extensive house to house visits in urban areas one to two days prior to a measles vaccination campaign, there was increased awareness of the campaign, with house visits more remembered (70 percent)

compared to other sources of information such as megaphones (41 percent) and radio (37 percent). Furthermore, 25 percent of households stated that they would have been likely to miss the measles supplementary dose if they had not received a house visit. In addition, women specifically preferred face to face interaction with health service providers (Ryman et al., 2013).

There is also evidence for a positive impact of introducing 'mid method' communication approaches, such as wall writing, posters and banners, that sits somewhere between mass media and IPCs (Curry et al., 2014).

Combining social mobilization and vaccination campaigns with other campaigns related to health or livestock, has also been shown to be successful at distributing the message and increasing coverage both in Somalia and in other parts of the world. Combining vaccinations with other health needs such as oral rehydration solution and sanitization services has provided a further incentive for hard to reach children, opening up opportunities to reach the 'missing child' (Cochi et al., 2014; Ndiaye et al. 2014).

Communication methods and effective community campaigning in Somalia

The most common sources of information on immunization access from mass communication campaigns in Somalia have come from those that use either announcements by megaphone or radio. Although there is an increasing role for mobile phones in communication campaigns, mass distribution of information by SMS is not always helpful as target groups have high illiteracy levels. Similarly, printed and written materials have proven to be less successful sources of communication. Generally, approaches that have used more the one mass communication approach, for example radio and mobile phones, have been most effective (UNICEF, 2013b; UNICEF, 2014c).

Target groups, particularly nomadic pastoralists have preferred face to face and community interactions, and oral communication. Reasons given for this include low literacy levels amongst target populations but also the opportunity face to face interactions give to seek clarifications and build trust. In addition, nomadic groups often get their news from a vast oral network and so prefer to receive information on health activities this way as well (Frouws, 2014; UNICEF, 2014c).

3.6 LESSONS LEARNT AND BEST PRACTICE

The literature review points to some key contextual factors that affect impact as well as key lessons learnt and best practices in delivering impact through SIAs and communication for development activities. The review has also shown a lot of overlap in the findings across the globe and in Somalia specifically, indicating that lessons learnt elsewhere can also be relevant to immunization activities in Somalia.

The review shows that barriers to accessing immunization services are complex both in Somalia and more widely. They include challenges in accessing general health services, that can be caused by poor quality health infrastructure and services, conflict and lack of security

to access facilities, migration patterns of target groups, lack of access to information on health services and immunization, poverty and other socio-cultural issues.

GPEI's approach to addressing polio eradication aims to address these complexities by implementing a holistic approach to immunization. This includes implementing SIAs in addition to routine immunization activities, as well as approaches that are encompassed under communication for development including advocacy, social mobilization and communication.

The literature review found that in high risk areas, SIAs are required over and above routine immunization procedures as health services are generally insufficient to maintain resistance to polio. Furthermore, certain communities (particularly nomadic groups) will need to be specifically targeted until their access to public health services can be improved.

The review also showed the value of understanding the contextual factors that determine access to health services, particularly in hard to reach groups such as nomadic pastoralists. This includes ensuring greater community involvement in the process, and a clear understanding as to who are the key influencers (including religious and community leaders) and decision makers in child immunization, as well as the main communication sources for these groups. There is a need to focus on adopting both mass communication campaigns (particularly radio), as well as house to house visits through social mobilization in order to raise general awareness. Specific communities also need to be targeted with appropriate messaging. Finally, studies have also shown the economic value of combining vaccination efforts with other health care support, be it for livestock or health services for children or adults.

3.7 COMMON INDICATORS IDENTIFIED IN THE LITERATURE

Of the 30 articles reviewed, 19 studies focused on project or programme impact and included indicators relevant for this evaluation. Studies included assessments from Bangladesh (Mushtaque et al., 2003), Chad (Ndiaye et al., 2014), Ethiopia (Kok et al., 2015), Ghana (Brugha and Kevany, 1996), Kenya (Mbazazi et al., 2014), Nigeria (Nasir et al., 2014; Okeibunor et al., 2013; Premji et al., 2016), Somalia (Haydarov et al., 2016; Mazzilli and Davies, 2014; Tilikainen et al., 2016; UNICEF, 2014c), South Sudan (Mbazazi et al., 2013) and Zambia (Nkowane et al., 2009). The focus of the studies varied and included:

- KAP assessment of target communities towards immunization (measles/polio);
- Impact of campaigns on immunization coverage, incident rates, refusal rates and 'missed' children;
- Impact of community leader engagement in polio eradication campaigns;
- Assessment of different communication methods in polio campaigns;
- Assessment of campaign structure and immunization processes in polio eradication; and
- Impact of immunization campaigns on human resources in government healthcare and health worker capacity.

Although the actual phrasing of the indicator varied from study to study, there were many commonalities between studies in indicators used. These indicators are summarised below in Table 6 together with the frequency they have been used. They were used as reference points in designing the themes to be covered in this evaluation of SM Net. The table also indicates which of these indicators was used in the KAP study by Harvard (Harvard Opinion Research Programme, 2014) and the Deloitte assessment of SM Net in India (Deloitte, 2014) as the two most relevant studies for this evaluation.

Table 6. Key indicators for evaluating campaigns identified in the literature

Theme	Indicator Title	Use of indicator	Used in India SM Net assessment	Used in Harvard KAP study
Knowledge and awareness of	Polio campaigns and different messages on polio *	++	x	x
	Polio and treatment *	+++	x	x
	Polio prevention	++	x	x
	Concern around polio infection*	++		x
	Immunization process *	+++	x	x
	Importance of polio vaccine **	++	x	x
	Convergence activities (i.e. other topics covered by CMs such as diarrhoea, exclusive breastfeeding etc.)	+	x	-
	Key distributors of IPV and OPV in local communities and **	+	x	x
	If key distributors of IPV or OPV have visited their communities	+	x	x
	Arrival of key distributors of IPV or OPV before their arrival in previous SIAs	+	-	x
Perceptions and behaviours related to	**Key beliefs** in top messages on polio and polio drops* (both those from and not from polio campaigns)	++	x	x
	Key barriers and opportunities for service delivery by different programme implementers	+	-	-
	Satisfaction of community members, health workers and CMs (and other stakeholders) in the implementation of social mobilization programmes	+	x	-
	Appropriateness and behaviour of vaccinators and community health workers (including gender, origin, compassion, knowledge, respect)*	++	x	x
	Access and quality of basic health services as perceived by target households	++	-	x
	Decision making processes of accessing health care and polio drops by target households	++	-	x

	Trust of local institutions, health workers disbursing OPV/IPV, CMs (and in case of SM Net other SM Net personnel)	+++	x	x
	Key influencers role in decision making and their perceptions towards the polio vaccine and polio campaign	++	x	x
	Response to illness by target households	+	-	-
	Priorities for government interventions and health care*	++	x	x
	Prefered and trusted methods of communication by health campaigns*	+++	x	x
	Media use, including radio, mobiles and social media*	+	-	x
Process Outputs	Number of workers 1) trained and 2) mobilized to disburse communication materials in local communities***	++	x	-
	Number and type of communication sources for primary caregivers on 1) OPV and IPV; 2)and poliovirus	+++	x	x
	Design of interventions and type of mobilization activities, catering to community needs	+	x	--
	Number of communication activities delivered by the programme, disaggregated by type	+++	x	-
	Number and type of partnerships with local governmental and non-governmental organisations for effective programme service delivery	++	x	-
	Observed roles/ involvement of personnel of SM Net in polio rounds	+	x	-
	SM Net's method of target group identification	+	x	-
	SM Net programme design and structure, human resourcing	+	x	-
	Comparison of actual vs. budgeted expenditure of SM Net	+	x	-
	Value for Money for SM Net analysis using benefits estimation and net present value method	+	x	-
	Stakeholder perspectives about gaps, challenges and facilitators in SM Net operations	+	x	-
	Changes in intervention design (communication channels, target groups etc.) over time keeping with changing needs	+	x	-

Coverage outputs	Percentage of primary caregivers who 1) have the intention to; 2) already have ensured their children have received the polio vaccine.	+++	x	x
	Retention/evidence of Immunization cards by primary caregivers	++	-	x
	Uptake of routine immunization services by target households	+	x	x
	OPV or IPV coverage rates through 1) routine immunization or 2) supplementary immunization****	+++	x	x
	Decrease in resistance to OPV in CMC areas as indicated by changes in SM Net/NPSP data	+	x	-
	Most common sources of information on 1) poliovirus or 2) campaign*	+++	x	x
Impacts	Annual polio incident rate amongst target communities in the last calendar year and trend	+++	x	-
	Level of government spending on polio eradication	+	-	-

* by 1) primary caregivers 2) CMs and health workers 3) local community and religious leaders
**by 1) local community and religious leaders 2) primary caregivers
***by 1) Community health workers 2)Volunteers/CMs
**** SIAs can include child health days (CHDs) and National Immunization day (NIDs)
+ Indicator was used in 1-2 studies in literature review, ++ Indicator was used in several studies in the literature review. +++ Indicator was used in most studies in the literature review.
x indicates this was used in the Harvard KAP study in Somalia or the Deloitte evaluation of SM Net in India, and - that it was not.

4. THEORY OF CHANGE

A ToC is a visual diagram that articulates the assumptions about how short, medium and long-term change occurs as a result of programme intervention and how these changes inter-relate and ultimately lead to the overall goals of the intervention.

A ToC was developed for the evaluation to articulate how interventions by the SM Net programme may lead to its overall goals (see Figure 2). It was also used as a framework to refine the research questions, and to develop the key themes.
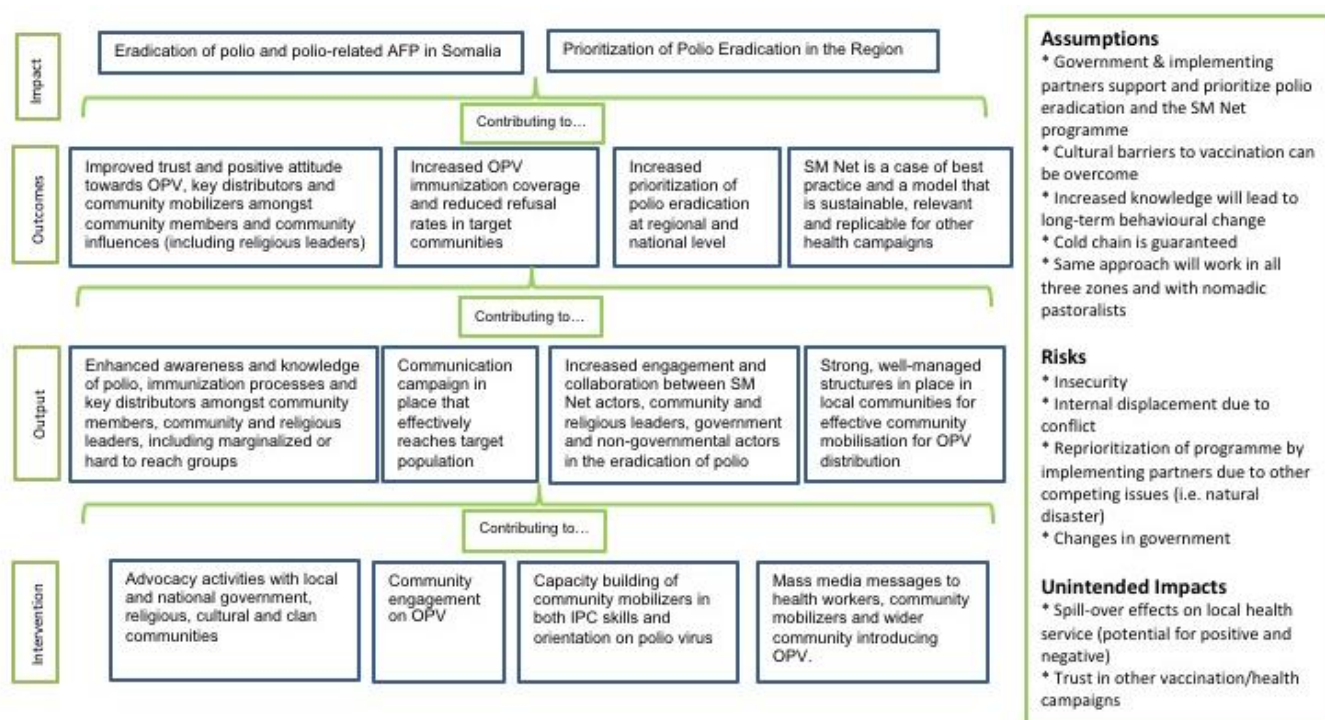
Figure 2: SM Net ToC

The ToC was developed in consultation with the SM Net strategy documents including the 2014 Somalia Outbreak Communication Strategy (UNICEF, 2014a), the 2015 strategy document 'Reaching the Unreached: Somalia Outbreak Communication for Development Strategy and Action plan" (UNICEF, 2015b) and the UNICEF 2016 Communication for Development Strategy note 2018-2022 (UNICEF, 2016a). The four types of intervention outlined in the ToC fall in line with these and involve advocacy activities, community engagement, capacity building of CMs, and mass media messaging. The assumed outputs of these interventions are enhanced knowledge and awareness; a communication campaign that reaches the target population; increased engagement and collaboration between partners; and a functioning infrastructure for effective community mobilization. Together these would result in improved trust and positive attitude towards OPV and the frontline staff; increased coverage of OPV and reduced refusal rates; and increased prioritisation of polio vaccine at the regional and national level. These would all impact on the overall goal of the GPEI of eradicating polio and AFP in Somalia. An additional outcome is that the SM Net model is then applied to other health campaigns as it represents best practice and an approach which is sustainable, relevant and replicable.

Movement through this ToC is, of course, highly dependent on a number of assumptions. These include logistical assumptions such as the cold chain being guaranteed, and the assumption that increased knowledge, skill and capacity development will translate into long-term behavioural change. Political will as well as the will of key influencers such as local community and religious leaders is also key, as well as overcoming any barriers to accessing and influencing specific population groups such as nomadic pastoralists. Issues around knowledge and attitudes towards OPV remain among the main bottlenecks to improving immunization coverage in Somalia.

SM Net may have led to unintended outcomes as observed in other evaluations of similar programmes. One outcome which may be either positive or negative are changes that SM Net has had on local and national health service provision, including possible positive or negative effects on human resourcing, the cold chain or government priorities in relation to health or immunization. Moreover, SM Net may have also had unintended outcomes on the overall trust in health providers and health campaigns. Any negative experience may impact negatively on other health programmes, but similarly a positive experience may result in increased trust and use of other health interventions. There are also a number of risks and contextual factors that may affect programme delivery, and these are discussed below.

4.1 RISK FACTORS THAT MAY AFFECT PROGRAMME DELIVERY AGAINST PROPOSED OBJECTIVES

Several factors both internal and external to the programme have the potential to affect the delivery of outputs and outcomes within the defined ToC. The two most important factors in Somalia are related to the political and security situation. Changes in government during the programme cycle could have important implications for programme deliverables. First, they may change the level of access to different geographical areas. Second, the investments made in engaging certain political leaders in the polio campaign may be lost as government officials are replaced. This effect may also spin off into the local implementing partners in South Central Zone who are linked closely with local and national government. With changing governments there is the risk that local implementing partners will change as well, leading to a loss in capacity in these districts to implement the programme activities.

Insecurity may also lead to changes in the accessibility of certain geographical areas, affecting the programme's ability to achieve targets and deliverables in certain areas. Insecurity in the region may also lead to displacement of target population groups, making it harder to implement immunization campaigns and monitor programmes effectively.

Another externality which could impact the ToC would be any natural disasters which may result in the reprioritization of the programme to deal with this competing emergency.

A further risk is that SM Net will be unable to build the cross-sectoral collaboration and conduct the advocacy needed to raise awareness and profile of polio immunization across the three zones in Somalia. This may be due to inadequate funding or political will and priorities.

4.2 OTHER CONTEXTUAL FACTORS WHICH MAY INFLUENCE APPROACHES AND OUTCOMES

There are several contextual factors that may influence how activities are implemented on the ground, and possible outcomes. One of the most important is the administrative location. The programme is being implemented in three different zones in Somalia: South Central Zone, Puntland and Somaliland.

The greatest challenge in South Central is insecurity and instability. There is ongoing political fighting and three government changes in the past three years. Targeted attacks on civilians and humanitarian workers are common. As a result, many areas have not been accessed by SM Net. The south of this zone is particularly vulnerable to food shortages and flooding. Puntland is a disaster prone area affected by drought and some conflict, mainly in the State borders with Somaliland and South Central. Cyclones also affect the country. Puntland operates as a member state of Somalia with a high degree of decentralisation of powers, that has translated into a quite vibrant dynamic and a proliferation of new ventures, such as universities, new businesses, as well as presence of local and international NGOs. Somaliland claims status as an independent State with all its powers, institutional systems and tools in place without international recognition. Security is quite acceptable, and Somaliland lives in a tense calm with its neighbour Puntland with whom it disputes territories of Sanaag and Sool provinces. Somaliland capacity and humanitarian access is the highest in the Somali territories. These differences in governance and insecurity will also affect the ways in which SM Net is implemented in each zone, with cases of best practice in one zone not necessarily being replicable across the other two zones.

Similarly, the target population for immunization is not homogenous in its characteristics and is spread across rural, semi-urban and urban communities as well as between those that are classified as nomadic and those that are semi-permanent and permanent households. The knowledge, attitudes and practices, as well as the approach towards each of these population groups will be different and needs to be considered by the programme for effective service delivery. As outlined in Section 2.5 on "The Somali Population", the demographic structure of the population also varies across the zones, with most IDPs being in South Central, and over a third of Somaliland residents being nomads. However, within zones there is also marked variations in the numbers of urban, rural, nomadic and IDP populations.

Although identified as a decreasingly important issue in accessible areas, the Harvard KAP study in 2014 found that there were still a small percentage of people who did not want to take the polio vaccine because of religious reasons or because they did not trust the contents of the OPV (Harvard Opinion Research Programme, 2014). As a result, understanding and working with religious leaders was a key aspect of the SM Net programme communication campaign. This KAP study also found that primary caregivers for children receiving the OPV were most likely not the decision makers in the household on whether the child received OPV or not. Generally this would be the father or an elderly relative in the household. Furthermore, both primary caregivers and decision makers were influenced by a broad range of sources, most commonly neighbours, but also health workers, traditional birth attendants, religious and community leaders. As such it was

important for SM Net to implement communication campaigns and approaches that would reach a variety of influencers in local communities. In addition to complexities at the community level the differences between the three zones in Somalia in terms of administrative and political structures also suggests that communication campaigns implemented by SM Net will have to be flexible to these differences. The evaluation will look to examine these in more detail.

5. RESEARCH QUESTIONS

Given the declining funding for the SM Net, UNICEF Somalia has commissioned an evaluation of the network to explore not only the successes and failures of this approach, but also whether it could be used for other health campaigns. More specifically it will assess: the impacts of the SM Net on community knowledge and awareness, community level trust and support for immunization; the strength, efficiency and effectiveness of its management and structure; the impact on coverage and refusal rates; and the feasibility of SM Net to deliver on other child survival and development interventions.

Key research questions have been developed which are categorised according to the standard evaluation criteria of relevance, effectiveness, efficiency, sustainability, and impact (see Table 7). Research questions were developed with reference to the original RFP, the developed ToC, as well as the key findings of the literature review, including the most commonly used indicators. The literature review included internal papers from SM Net, as well as research and impact evaluations from similar initiatives identified from the online review, including polio eradication campaigns in other countries (including India, Chad, Ethiopia, Kenya and South Sudan) and similar approaches to eradicate measles.

Some of these research questions will be addressed using primary data, others through analysis of secondary data if it is deemed amenable. A discussion on the suitability of the current secondary data made available to Kimetrica is outlined in Section 6 Proposed Methodology.

For the collection of primary data, five different target groups were identified (more information is provided on these in the next section: Section 6.2 Primary Data Collection). These include SM Net Partners (Group 1); SM Net Coordinators (Group 2); vaccinators and DFAs (Group 3); CMs (Group 4) and community members (Group 5). Both Groups 3 and 4 constitute frontline workers, but different approaches will be used in data collection. It should be noted that key influencing groups such as community and religious leaders, and local health workers will not be targeted for interview. Although these have been used in evaluations of other immunisation campaigns they were not identified in the RFP as a target group. Similarly, at the zonal level there is also one Polio Coordinator and one C4D specialist under UNICEF, but they were not identified in the RFP and are therefore not included.

Table 7. Research questions and target groups

Evaluation Criteria	Main Research Questions	Target group
Relevance	Are the interventions by SM Net in line with programme needs?	Groups 1, 2
	Is the SM Net approach appropriate to the local context?	Groups 1-5
	What were the key constraints and difficulties in implementation and how were they addressed?	Groups 1, 2, 3 and 4
	Was the SM Net approach able to respond to changes in priorities or programme strategies?	Groups 1, 2
Effectiveness	Has the SM Net increased knowledge and awareness of polio, immunization and local polio campaigns amongst community members, including hard to reach groups?	Groups 3, 4 and 5
	Has SM Net changed attitudes towards polio immunisation, with increased demand and positive behaviours?	Groups 3, 4 and 5
	How effective is collaboration between SM Net actors and other external stakeholders (e.g. local government and religious leaders)?	Groups 1 and 2
	How robust and effective was the SM Net management and coordination structure?	Groups 1 and 2
Efficiency	Have the resources allocated for the programme been used efficiently?	Groups 1 and 2 Desk-based cost analysis
	How do the costs for reaching the most excluded communities for polio and immunization compare with alternative delivery systems?	Groups 1 and 2 Desk-based cost analysis
Impact	To what extent has the SM Net programme contributed to increasing OPV coverage and reducing refusal rates in target communities?	Secondary data analysis of independent monitoring data
	To what extent has the SM Net programme contributed to increasing the profile and prioritisation of polio vaccination?	Groups 1 and 2
Sustainability	To what extent has the network been able to build trust, acceptance and ownership amongst community members in frontline workers?	Groups 3, 4 and 5
	Are community members satisfied with the information and support provided by programme actors, such as frontline workers in preparation for and delivery of polio services?	Groups 5
	Are the frontline workers satisfied with the campaign and resources available to them?	Groups 3 and 4
	What communication interventions were most effective in reaching target communities, particularly marginalized or hard to reach groups?	Groups 4 and 5
	What aspects of the SM Net model ensure sustainability and could be applied to other vaccination and public health campaigns?	Groups 1-5

6. PROPOSED METHODOLOGY

The methodology will use a mixed methods approach, qualitative and quantitative data, assimilated from both primary and secondary sources.

6.1 SECONDARY DATA SOURCES AND ANALYSIS

The quantitative data on impact will be undertaken from secondary data analysis sourced from the key partner agencies, UNICEF and WHO. Databases, spreadsheets, powerpoint presentations and reports were shared during this inception phase, and the data was reviewed and evaluated.

KAP SURVEYS

The KAP survey data by Harvard was only a cross-sectional survey conducted in three districts in each of the three zones. The data is available in the form of percent values in the powerpoint presentations for each indicator evaluated for each of the three districts per zone. There is limited spatial analysis that can be done on this data. If the original database was made available, which held information on the household characteristics, some secondary data analysis on correlates with KAP indicators could be performed. Unlike the SM Net evaluation in India (Deloitte, 2014), the only data currently available is from the Harvard KAP powerpoint presentation and is limited to household percentages for the various outcome indicators for a single time point only.

IMPACT ANALYSIS

The secondary data includes outputs from the SIA internal monitoring as well as from the Independent Monitors (IM). There is significant overlap in the type of data collected between SIA and IM. The impact analysis will be conducted utilizing one of these datasets. The dataset to be used will be determined following discussions with UNICEF regarding their reliability and consistency.

In addition to the most obvious research questions related to evaluating impact through changes in refusal rates and coverage rates over time and space, there are several other questions we wish to answer with the secondary data analysis:

1) What are the most effective sources of information on SIA? In other words, which type of information source is most likely to result in compliance of immunization?
2) Does remoteness of an area or the population density play a role in both the refusal rate and the main type of SIA information source?

The first question can be explored using a logistic regression analysis where the response variable is the percentage of vaccinated children. The explanatory variables are the various sources of information on SIA, as represented by percentage of households (HHs) who received information by the particular source. Ideally, we would conduct the regression on an individual HH level; however, due to the limitations of the data, the regression will be done on the district level. The coefficients of the explanatory variables (sources of information) will represent how a one unit increase or decrease in the percent of HHs which obtained their

information from a particular source affects the probability of immunization. This gives one a sense of the most effective sources of information.

In addition to conducting a logistic regression, there is much value added in simple geo-spatial maps of the major sources of information. If up-to-date geo-spatial shapefiles can be obtained at the district level, we will represent the sources of information at a district level.

We will attempt to answer the second question by introducing external sources of data. More specifically with accessibility as defined as the travel time to the nearest city of a population of 50,000 or more people. The accessibility dataset was developed at the European Commission Joint Research Centre (Nelson, 2008). The data set represents the cost required to travel across grid cells based on the friction surface. The friction surface contains information on the transport network as well as slope and elevation of the terrain. For the population density dataset we will either use Worldpop (Linard et al., 2012) or Somalia census data, depending on the availability and spatial resolution of the Somalia census data. We will explore Generalized Linear Models to attempt to explain refusal rates based on remoteness and population density. We will also classify regions based on source of information and attempt to explain the classifications based on remoteness and population density. The following images show the population density (Figure 3) and accessibility (Figure 4) maps for Somalia.
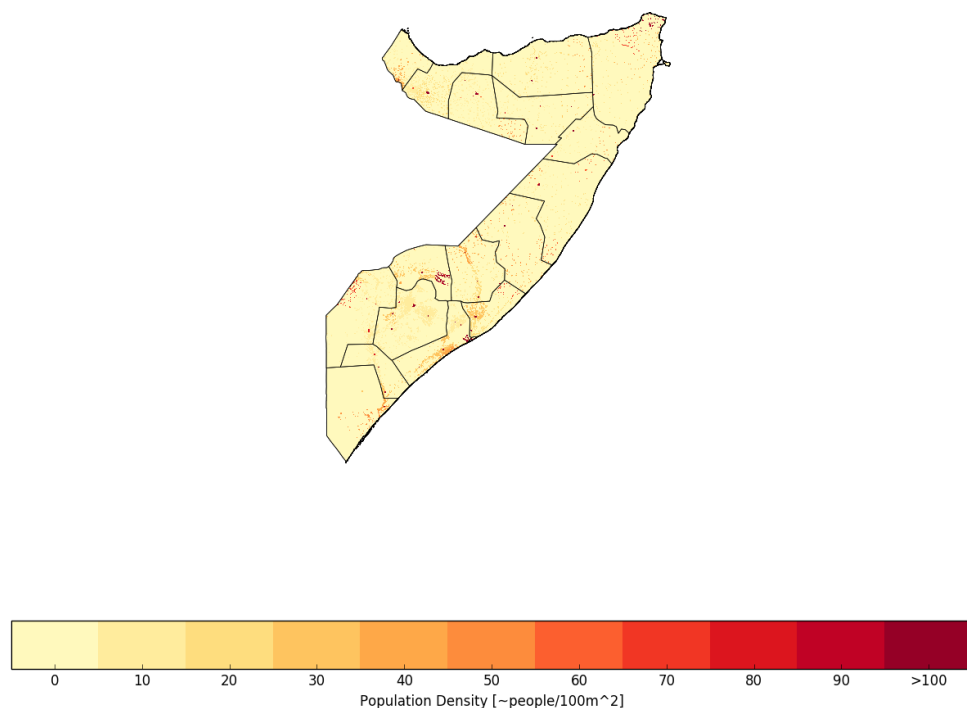

Population Density [~people/100m^2]

Figure 3. 2015 Population density (people per 100m2 grid cell) estimate of Somalia adjusted to UN national estimates

Travel time in minutes to nearest large city
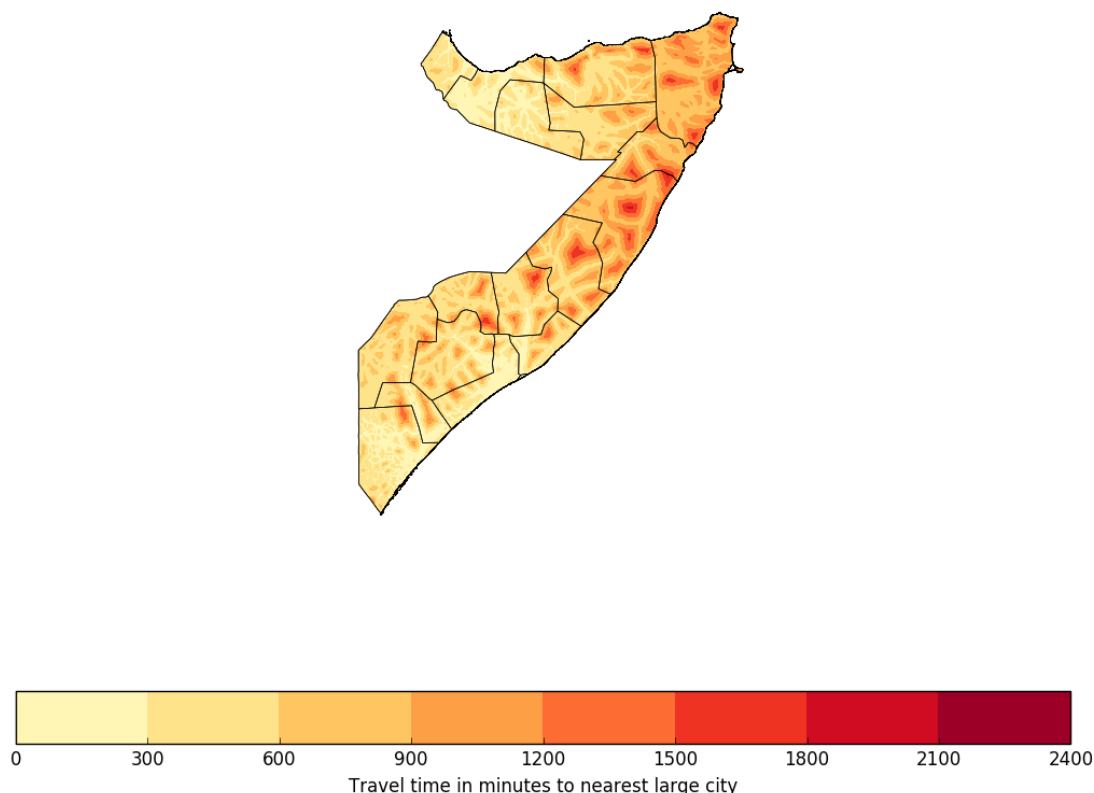
Figure 4. Time (in minutes) to travel to the nearest city with a population greater or equal to 50,000

Although IM data exists for 2013, 2014, and 2015 due to the inconsistent nature of this data we will concentrate our analysis on the 2016 dataset which appears to be the most complete dataset. The data is split between the regular SIA activity and HtR (Hard to Reach) campaign. The HtR campaigns are focused on reaching nomadic populations and two rounds of this data exist, one in June and the other in August. Data exists for Puntland and Somaliland for the first round and limited data on Puntland for the second round.

If in consultation with UNICEF the data for the preceding years can be cleaned and made complete, then some temporal analysis on changes in refusal rates can also be undertaken.

It was also suggested in the RFP, that there were non-intervention areas that could be used as a counterfactual. Discussions with UNICEF suggests that there are 16 districts where no immunisation takes place, and more than 20 districts where only partial immunisation takes place[5]. It is not evident from the documents and databases provided if there is information on IM and SIA for those districts not receiving SM Net because they are inaccessible. The initial impression is that these districts would not have been surveyed if the campaign and vaccinators were not able to access, and therefore it is unlikely that counterfactuals can be used. The October 2016 IM summary spreadsheets suggests that there are many districts

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[5] As of August 2016, there were 16 districts that were not accessible: Galgadud Region (El Garas, Galhareri, El Dhere, Galad), M Shabelle (Aden Yabal, Runingod), L Shabelle (Awdheeg, Sablale), M Juba (Sakowe, Salagle, Buale, Jilib East, Jilib West) L Juba (Jamame East, Jamame West Hagar); and 23 districts that were partially accessible: L Juba (Badade, Kismayo, Afmadow), Gedo Region (Bardera, Burdubo, Garbahare), Bakool Region (Rabdure, Hudur, Wajid), Bay REGION (Baidoa, Bardale, Qansah Dere, Dinsor, Burhakaba), L Shabelle (Brava, Kurtun Waarey, Qoryole, Marka), M Shabella (Adale), Hiran Region (Belet Weyne, Tieglobulo Burti, Jalalaqsi) and Galgadud (El Bur) (Ministry of Health et al., 2016).

deemed partially accessible that were surveyed. These include for example, Kismayo and Afmadow in Lower Juba, and Baidoa, Bardale, Burhakaba and Qansah Dere in Bay Region. However, because it is not clear when they were accessible and when they were not, their use as a counterfactual is also limited. It is also likely that periods when they were not accessible for the vaccination teams, they were also inaccessible for the IM surveys.

However, additional information on districts not covered by SM Net, SIA or even routine polio immunisation, combined with population estimates may be used to determine overall polio coverage rates. Again, this is dependent on data being made available to Kimetrica by UNICEF.

COST ANALYSIS

In the technical bid it was proposed that a cost analysis of the SM Net programme in selected districts will also be undertaken, and then compared with effectiveness data (for example coverage rates) to compare the cost and cost-effectiveness in different districts. This analysis would require detailed information on resources consumed (quantities) and unit costs for each campaign round in each district, region or zone. The only cost data made available to Kimetrica during the Inception Phase were budgets for grouped resource line items disaggregated by zone only for a single year (exact year not made available to Kimetrica). Even though for some of the resource group lines detailed information was given on the inputs quantities and unit costs, these did not always equate with the total costs provided. Using the total costs provided, and summing these over the main activities, it is possible to come up with a comparison of the three zones for the given year (see Table 8). The programmes differ in each zone and use different sets of resources, which also have different durations. For example, although these all cover three campaigns, the duration for the cold chain and vaccine management is six months in South Central Zone and Puntland, but three months for Somaliland. Similarly for core functions, durations vary between one and six months depending on the zone and the resource grouping. This could be combined with the effective coverage achieved in each zone for this period, but given the limitations of the unit cost and quantity data it is not amenable to development of itemised costing menus which would enable predictive cost analysis. This also limits the ability to compare SM Net costs with other similar programmes since in this composite form one would require data from the same year in the same place or at least with the same level of coverage. Given all the above, it is suggested that a comprehensive cost analysis is not possible with the data available.

Table 8. The budgeted cost in USD of SM Net in a single year in the three zones

Resource activity group	Puntland	Somaliland	South Central
1. Immunisation activities, SM	186,000	186,713	236,955
2. Cold chain and vaccine management	49,200	27,870	279,438
3. Core functions and infrastructure for community engagement	228,680	220,920	263,160
4. Nomadic/pastoralist special SM	101,859	-	-
Total cost (USD)	**565,739**	**435,503**	**779,553**

Kimetrica was also shared on a number of documents related to the financing of SM Net. The first was a Financial Resource Requirements (FRR) report which documents the budget for GPEI (WHO, 2016). This covers all the activities globally and the only cost data available for Somalia is financial costs for 2016 given alongside all other countries and broken down into activities of OPV Campaign (USD 1.8 million), Operational cost (USD 9.06 million), Core community engagement/SIA SM (USD 3.75 million), Technical assistance (USD 4.64 million), Surge capacity (USD 2.31 million), Surveillance and running costs (USD2.83 million), and Other immunization activity (USD 0.80 million). Although it is possible to compare across countries the total costs and the costs under these different activity headings, without information on outputs or impacts these comparisons are of limited value in assessing efficiency. For example, although the total costs for Afghanistan were three times that for Somalia, without information on outputs it is impossible to evaluate whether this was because Somalia was more efficient, or that it reached less people.

A further document was a VfM analysis comparing the cost and coverage data for Somalia with Afghanistan (Anand, 2014b). Afghanistan was chosen rather than a neighbouring country to Somalia because the cost data could not be disaggregated, and it was the only country with a similar programme in a similar setting. Since the population size of Afghanistan is 2.5 times that of Somalia, the analysis evaluated the cost to reach one under five year old child. Combining the total financial costs for 2014 with the administrative coverage, resulted in a cost per round per child of USD 0.55 in Somalia compared with USD 0.62 in Afghanistan. A major assumption here was that the circumstances are similar in these two countries, and indicates the limitations of working with the data available. Based on this, Kimetrica also suggests that a comparative VfM analysis would not be able to add anything new given the limited cost data available.

6.2 PRIMARY DATA COLLECTION

The primary data collection addressing the research questions and indicators already described will be collected from in-depth interviews (IDIs) of key stakeholders and programme implementers, and FGDs with CMs and community representatives in all three zones of Somalia.

SAMPLED DISTRICTS

As mentioned in Section 2.5, there are 18 pre-war regions. The number of districts are in a state of flux. Figure 5 shows one of the most comprehensive maps of districts available but is from 2005, and some districts, such as Galkayo, have now split. The latest maps we were provided with on districts accessibility suggest that there are now 105 districts compared to the 90 noted during the PESS in 2013/4.
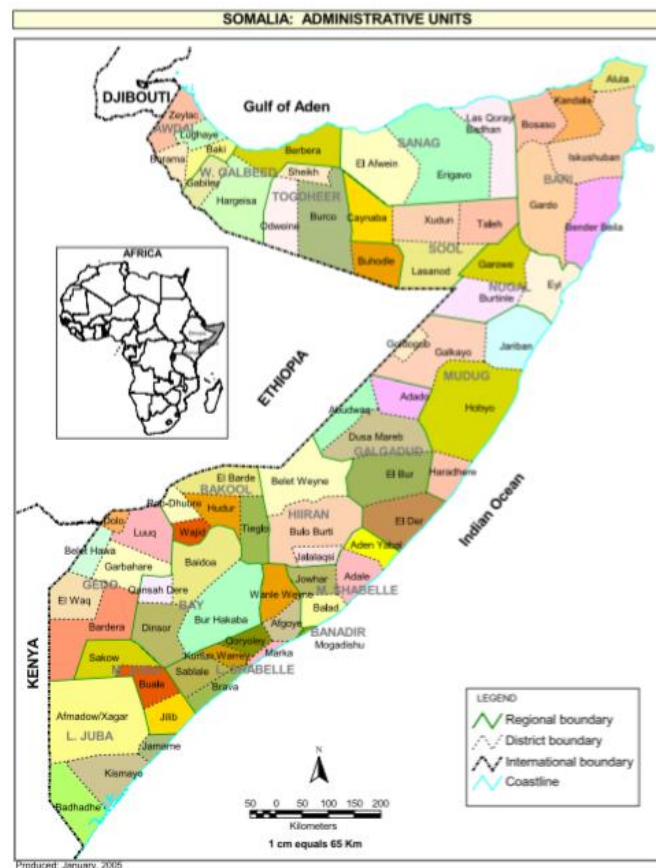
Figure 5. Administrative units of Somalia in 2005 from the Food Security and Nutrition Analysis Unit (FSNA)[6]

Primary data collection will take place in 14 districts across the three zones (7 in South Central, 4 in Puntland and 3 in Somaliland). The proposed districts are summarised in Table 9. These have been selected by UNICEF or Forcier, and have been refined and approved by UNICEF as part of the Inception Report review process. Interestingly, all the districts surveyed by the Harvard KAP survey (Bosaso, North Galkayo and Garowe in Puntland; Hargeisa, Borama and Burco in Somaliland; and Afgoye, Baidoa and Mogadishu in South Central) have also been selected for this evaluation. It is unclear whether this is intentional or not, or due to reasons of ease of accessibility in terms of either transport or insecurity. However, it should be noted that some of the districts are currently deemed partially accessible. Furthermore, in one zone, neighbouring districts have been chosen, namely Berbera and Hargeisa in W. Galbeed, when it may have been better to choose non-neighbouring districts.

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[6] Available at: http://www.fsnau.org/products/maps/administrative-maps.

Table 9. Districts to be sampled during primary data collection

Zone	Region	District	Chosen by:	Accessibility[7]	Description of population's main livelihood
Puntland	Bari	Bosaso	Unicef	Accessible	Pastoralist (nomadic) and main port
	(North) Mudug	(North) Galkayo	Unicef	Partially accessible*	Mainly pastoralist (nomadic)
	Nugall	Garowe	Unicef	Accessible	Pastoralist (nomadic) and capital of Puntland
Somaliland	Wooqoyi Galbeed	Berbera	Unicef	Accessible	Pastoralist (nomadic) and main port
		Hargeisa	Unicef	Accessible	Urban, capital of Somaliland
	Togdheer	Burao	Unicef	Accessible	Mainly pastoralist (nomadic)
	Awdal	Borama	Forcier	Accessible	Agriculture and pastoralist (nomadic)
South Central	Bay	Baidoa	Unicef	Partially accessible	Agro-pastoralist
	Galgadud	Dusamareb	Unicef	Partially accessible*	Mainly pastoralist (nomadic)
	Lower Juba	Kismayo	Unicef	Partially accessible	Agro-pastoralist and main port
	Banadir	Mogadishu	Unicef	Accessible	Urban
	Lower Shabelle	Afgoye	Forcier	Partially accessible*	Agriculture
	Middle Shabelle	Jowhar	Forcier and UNICEF	Accessible	Agro-pastoralist
	Gedo	Dollow	Forcier	Accessible	Pastoralist (nomadic)

Since all the districts selected have a main town, it is suggested that the team survey both urban and rural areas, which would include some nomadic pastoralists if possible. It would be useful if UNICEF Somalia could also provide information on how often these districts are targeted by the campaign (always, sometimes, rarely).

INTERVIEWEE GROUPS

Five different groups of stakeholders have been identified as interviewees, totaling 483 respondents (119 through IDIs and 364 through FGDs) across 14 districts. Table 10 summarizes the detailed breakdown of interviewees by the five stakeholder groups.

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[7] This was accessibility as defined by Forcier which was slightly different than that reported by Ministry of Health et al. (2016). Accessibility levels marked with an asterisk are those that were different: North Galkayo and Dusamareb were changed from 'accessible' to 'partially accessible', and Afgoye was changed from 'inaccessible' to 'partially accessible'.

Table 10. Summary of interviewees by stakeholder group

Method	Interviewee Type	Total number of respondents across the 14 districts
IDIs	**Group 1: Partners** Global partners: In Nairobi[8]: ● UNICEF ● WHO In Somalia, at the Zonal level: ● UNICEF ● WHO ● MoH Local partners[9] in South Central Zone ● 3 primary implementing partners and 3 secondary implementing partners in South Central (NGOs[10])	**17 Partners:** ● 2 global partners in Nairobi ● 9 global partners in Somalia (3 per zone) ● 6 implementing partners
	Group 2: Coordinators District level functionaries (2 per district) ● DSMCs (MoH) ● DPOs (WHO) Regional level functionaries (5 per group, 15 total) ● RSMCs (MoH) ● RMOs (MoH) ● RPOs (WHO) Zonal level functionaries (1 per zone) ● ZSMC (MoH)	**46 Coordinators:** ● 28 District level functionaries (1 DSMC and 1 DPO per district) ● 15 Regional level functionaries (spread across the sampled Regions) ● 3 ZSMCs (3 total)
	Group 3: Frontline Workers (vaccinators and DFAs) ● Vaccinators (2 per district) ● DFAs (2 per district)	**56 Frontline Workers (vaccinators and DFAs):** ● 28 Vaccinators ● 28 DFAs
FGDs	**Group 4: Frontline Workers (CMs)** ● 182 CMs (2 mixed male-female FGDs per district)	**182 Frontline Workers (CMs):** ● 28 FGDs with 182 CMs
	Group 5: Community Members ● 182 community members (1 mixed male-female FGD in urban areas and 1 mixed male-female FGD in rural areas per district)	**182 Community Members** ● 28 FGDs with 182 community members

The first group (Group 1) are the key partners, and include UNICEF, MoH, WHO and the NGOs implementing activities in South Central: Wardi, Swisso Kalm and ANPPCAN. Partners in Nairobi (UNICEF and WHO) will be interviewed by the Kimetrica Research Team, while those in Somalia will be interviewed by Forcier staff. A total of 17 partners will be interviewed: two global partners in Nairobi, nine global partners in Somalia and six implementing partners in the South Central zone; implementing partners in Puntland and Somaliland are captured through the other interviewee groups.

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[8] These IDIs will be conducted by Kimetrica.
[9] Contacts for implementing partners will be provided by the Zonal UNICEF staff.
[10] The three primary partners in South Central are Wardi, Swisso Kalmo and ANPPCAN. Each of these partners have secondary partners.

The second group (Group 2) are the coordinators of the SM Net and include: DSMCs, DPOs, RSMCs, RPOs, RMOs, and ZSMCs. A total of 46 coordinators will be interviewed through IDIs by Forcier enumerators across the three zones.

Groups 3 and 4 are frontline workers, the personnel on the ground who are in direct contact with community members. The third group will be interviewed through IDIs, and is composed of vaccinators and DFAs. A total of 56 frontline workers (28 vaccinators and 28 DFAs) in Group 3 will be interviewed across the three zones. The fourth group is composed of CMs, who will participate in 28 FGDs. Two mixed male-female FGDs will be conducted in each district (one with CMs that cover urban areas and one that covers rural, ideally also capturing those serving nomads). In total, 182 CMs are expected to participate.

The final group (Group 5) are the recipients of the service, community members. These will be randomly selected from the pool of households visited during the February and March campaigns, across the 14 sampled districts. Two mixed male-female FGDs will be held with community members in each district (one in the urban areas and one in the rural areas, ideally also capturing nomads), for a total of 28 FGDs. In total, 182 community members are expected to participate.

FIELDWORK IMPLEMENTATION PLAN

Field level implementation of the fieldwork will be conducted by Forcier in each of the three zones of Somalia. Implementation teams will consist of two staff in each district for an average of 18 days to conduct all data collection in each district, including IDIs with district level functionaries (vaccinators, DSMCs, DFAs, and DPOs), regional level functionaries (RSMCs, RMOs, and RPOs), and zonal staff (from the MOH, SM Net, UNICEF, WHO, and implementing partners), as well as FGDs with community mobilizers and community members.

Fieldwork will be carried out concurrently by seven teams: two in Puntland, two in Somaliland and three in South Central Somalia. Given the extent of the proposed fieldwork, data collection is expected to last six weeks. During fieldwork, Forcier staff will liaise directly with local UNICEF personnel to locate all individuals to be included in fieldwork activities.

Table 11 details the fieldwork plan per team. The duration of fieldwork varies across districts due to different numbers of regional or zonal interviewees.

Table 11. Detailed fieldwork plan per team

Team	Zone	Region	District	Duration of fieldwork (days)
1	Puntland	Bari	Bosaso	20
	Puntland	Nugaal	Garowe	21
2	South Central	Galgaduud	Dhusamareb	18
	Puntland/South Central	Mudug	Galkayo	15
3	South Central	Banadir	Magadishu/Banadir	26
	South Central	Lower Shabelle	Afgoye	18

4	South Central	Gedo	Luuq	16
	South Central	Gedo	Dollow	18
5	Somaliland	Sahil	Berbera	16
	Somaliland	Togdheer	Burao	16
6	Somaliland	Awdal	Borama	18
	Somaliland	Maroodi Jeex	Hargeisa	21
7	South Central	Lower Juba	Kismayo	18
	South Central	Bay	Baidoa	18

As mentioned above, the teams will be composed of two members who will both be trained and are experienced qualitative researchers. The researchers will be chosen keeping in mind the clan composition and other relevant factors in each location of research. The researchers will both be able to conduct IDIs and FGDs and take notes. As the fieldwork consists of in-depth qualitative interviews conducted using paper forms, it is important to have a designated note-taker for each interview. The researchers will thus take turns in taking notes. As per Forcier standard procedures, every interview will be recorded in order for the researchers to be able to improve on the quality of the notes should that be necessary.

At the end of each work day, researchers will record the interview notes in a template on a computer and send it to the office for review. Where the internet connection permits, the audio files will also be uploaded for review at the office.

TRAINING AND QUALITY CONTROL

Prior to the rollout of fieldwork in Somalia, Kimetrica will lead a three-day project training at Forcier's Hargeisa office. Enumerators will be instructed on the goals of the exercise, research tools to be employed, fieldwork implementation procedures, and quality control protocols. The training will involve practical exercises, including conducting at least one test FGD.

Where the network connectivity permits, all data collected will be sent nightly to Hargeisa where it will be reviewed by the project's quality assurance officers. IDIs and FGDs notes will be reviewed to ensure that the primary research aims have been met in each instance, and where not, will be sent back to primary field based research staff for further follow-up and correction. Special care will be taken in the beginning of fieldwork to make sure all discussion points have been covered in the FGDs and IDIs. Notes will be checked for consistency and completion using the audio recordings. Throughout implementation, qualitative outputs will be conducted, reviewed, and submitted concurrently with data collection.

7. KEY THEMES AND DATA ANALYSIS PLAN

Key themes for the study were identified under the main research questions (see Table 12) based on the following criteria:

1. Frequency of use in previous studies;
2. Relevance for the study (effectively measures outputs, outcomes and impacts on the programme ToC);
3. Viability: are cost effective and feasible to collect either through secondary data sources or primary sources selected for inclusion in this evaluation.

The themes are also developed to capture lessons learnt, a cross-cutting issue across all the research questions. Table 12 only focuses on the primary data analysis. The initially proposed cost-effectiveness analysis under efficiency has now been removed following a review of the data available (see Section 6.1). The impact analysis is now considered separately as outlined in the same section.

Table 12. Key themes to be addressed by research question

Main Research Questions	Key themes
Are the interventions by SM Net in line with programme needs?	• Perceptions on compatibility of SM Net with programme requirements • Existing gaps • Possible ways SM Net could be improved to fill these gaps
Is the SM Net approach appropriate to the local context?	• Perceptions on appropriateness of the activities to local contexts • Possible ways SM Net could be improved to be more reflective of local contexts
What were the key constraints and difficulties in implementation and how were they addressed?	• Perceptions on key constraints and difficulties to implementation • Processes implemented to overcome these • Constraints and difficulties which could not be overcome and why • Possible solutions to these existing constraints and difficulties
Was the SM Net approach able to respond to changes in priorities or programme strategies?	• Perceptions on ability of SM Net to adapt to changes in priorities or programme strategies • Examples of failures • Possible improvements to how SM Net adapts to changes in priorities or programme strategies
Has the SM Net increased knowledge and awareness of polio, immunization and local polio campaigns amongst community members, including hard to reach groups?	• Knowledge and awareness of polio and immunisation • Knowledge and awareness of polio campaign, CMs and vaccinators • Specific differences between accessible and hard to reach groups
Has SM Net changed attitudes towards polio immunisation, with increased demand and positive behaviours?	• Attitudes (positive and negative) towards polio immunisation • Changes that have occurred since the start of SM Net • Possible solutions to negative attitudes • Perceptions on changes in polio vaccine demand or other positive behaviours
How effective is collaboration between SM Net actors and other external stakeholders (e.g. local government and religious leaders)?	• Perceptions on whether collaborations established were effective • Collaborations which were effective and why • Collaborations which were not effective and why • Possible solutions to ineffective collaborations
How robust and effective was the SM Net management and coordination structure?	• Perceptions on strengths and effectiveness of the system • Perceptions on weaknesses of these systems • Possible solutions to perceived weaknesses

Have the resources allocated for the programme been used efficiently?	● Perceptions on value for money from stakeholders ● Perceptions on efficient resource allocations ● Possible solutions to inefficiencies
How do the costs for reaching the most excluded communities for polio and immunization compare with alternative delivery systems?	● Perceptions on the efficiency of SM Net in reaching the most excluded ● Perceptions on alternative strategies for reaching the most excluded ● Perceptions on costs of different approaches to reaching the most excluded compared to existing strategy
To what extent has the SM Net programme contributed to increasing OPV coverage and reducing refusal rates in target communities?	● Perceptions on changes in coverage throughout the region ● Perceptions on challenges in increasing coverage
To what extent has the SM Net programme contributed to increasing the profile and prioritisation of polio vaccination?	● Perceptions on changes in profile and prioritisation of polio vaccination ● Perceptions on challenges in increasing profile and prioritisation of polio vaccination
To what extent has the network been able to build trust, acceptance and ownership amongst community members in frontline workers?	● Trust and acceptance in the CMs and vaccinators ● Possible solutions to issues of mistrust ● Perceptions on community involvement in the SM Net programme
Are community members satisfied with the information and support provided by programme actors, such as frontline workers in preparation for and delivery of polio services?	● Satisfaction (positive and negative) with the support, information and services provided by CMs and vaccinators during the polio campaign and vaccination process ● Possible solutions to grievances
Are the frontline workers satisfied with the campaign and resources available to them?	● Satisfaction (positive and negative) with campaign; and support, tools and other resources available to frontline workers ● Possible solutions to grievances
What communication interventions were most effective in reaching target communities, particularly marginalized or hard to reach groups?	● Perceptions on the effectiveness of different types of communication interventions ● Possible solutions to ineffective communication interventions
What aspects of the SM Net model ensure sustainability and could be applied to other vaccination and public health campaigns?	● Perceptions on sustainability of different aspects of the SM Net model ● Possible solutions to unsustainable aspects ● Perceptions on applicability of different aspects to other campaigns ● Possible challenges in applying to other campaigns

The findings under these key themes will be disaggregated by key variables which include geographical location (zone, region and district), demographic group (urban, rural, nomadic) and community member characteristics (sex and possibly age). The secondary data analysis is addressed in section 6.1. For the primary data analysis, both qualitative and quantitative information will be collected. Quantitative data processing will be done by estimating means of the rankings in the IDIs, and percentages of interviewees under different categories with various responses. The qualitative data processing will include narratives, and the coding of main themes.

8. DATA COLLECTION TOOLS

Groups 1-3 will be interviewed using a structured questionnaire through an IDI, whereas Groups 4 and 5 will participate in FGDs which will be guided by checklists. A separate data collection tool will be developed for Groups 1-2, 3, 4 and 5 (four tools in total). The data collection tools are outlined in Annex 1 and Table 13 summarises the key sections and target group for each tool.

Table 13. The key sections and the target group for each tool

	Targeted group	Key Sections
Tool 1: IDI for Group 1 and 2	SM Net Partners including UNICEF, MoH, WHO and the NGOs in South Central Zone which oversee the implementation of the SM Net (Group 1) and SM Net coordinators including DSMCs, DPOs, RSMCs, RPOs, RMOs and ZSMCs (Group 2).	1. Identifying information 2. Compatibility of SM Net with programme needs 3. Appropriateness of SM Net to the local context 4. Constraints and difficulties in implementation 5. Adaptability to programme changes 6. Engagement and collaboration with external stakeholders 7. Management and coordination structure 8. Resource allocation and efficiency 9. Reaching most excluded communities 10. Impact on polio vaccination coverage and refusal rates 11. Impact on polio profile and prioritisation 12. Sustainability and applicability to other campaigns
Tool 2: IDI for Group 3	SM Net frontline workers, namely vaccinators and DFAs.	1. Identifying information 2. Appropriateness of SM Net to the local context 3. Constraints and difficulties in implementation 4. Knowledge and awareness of community 5. Attitudes and positive behaviours of community 6. Trust, acceptability and ownership amongst community 7. Satisfaction with SM Net and resources available 8. Sustainability and applicability to other campaigns
Tool 3: FGD for Group 4	CMs	1. Most effective communication approaches 2. Relevance of the approach to local context 3. Satisfaction with the resources and other support 4. Constraints and difficulties in implementation 5. Improvements in knowledge and awareness, trust and positive attitudes 6. Applicability to other types of campaigns
Tool 4: FGD for Group 5	Community members	1. Most effective communication approaches 2. Relevance of the approach to local context 3. Satisfaction with the information and support provided 4. Improvements in trust and community involvement 5. Improvements in knowledge, awareness and positive behaviours 6. Applicability to other types of campaigns

Overall, the data collection tools have been designed to address the evaluation's research questions and address the themes selected to evaluate the programme. Certain topics will be covered by all the tools, such as how SM Net could be replicated to deliver on other child survival and development interventions and anticipated challenges of doing so, while others will only be explored with some of the target groups, such as the effectiveness of the SM Net communication model which will be investigated with frontline workers and community members only.

9. WORKPLAN AND TIMELINES

In addition to this Inception Report (Deliverable 1), the main outputs of this consultancy will be as follows: the completion of fieldwork and primary data collection (Deliverable 2), a report on the analysis of existing secondary data (Deliverable 3), and a draft and final evaluation report (Deliverables 4 and 5). These reports will be finalized after consultation and feedback from UNICEF and the SM Net Advisory Group. A slide-deck will also be prepared and the findings will be presented to UNICEF and the SM Net Advisory Group. The workplan and timelines for deliverables are outlined in Table 14.

Table 14. Proposed workplan and deliverables

In the Gantt chart below, **B** denotes a blue (activity) cell and **R** denotes a red (deliverable) cell.

Activities/Deliverables	Dec 1	Dec 2	Dec 3	Dec 4	Jan 1	Jan 2	Jan 3	Jan 4	Feb 1	Feb 2	Feb 3	Feb 4	Mar 1	Mar 2	Mar 3	Mar 4	Apr 1	Apr 2	Apr 3	Apr 4	May 1	May 2	May 3	May 4	Jun 1	Jun 2	Jun 3	Jun 4
1. Inception Phase																												
Inception Meeting			B																									
Desk review of relevant literature and collection of secondary data			B	B																								
Key Informant Interviews with UNICEF			B																									
Development of the data collection tools				B																								
Submission of Draft Inception report					B																							
Feedback on draft report from UNICEF						B																						
Inception Report (Deliverable 1)							R																					
2. Data Collection Phase (Secondary Data Analysis and Primary Data Collection)																												
Training of enumerators (6-10 February)									B																			
Primary data collection including FGDs and IDIs with community level stakeholders and partners										B	B	B	B	B														
Completion of field work (Deliverable 2)															R													
Secondary data analysis (Meta-analysis of KAP and SIA, and cost analysis)									B	B	B																	
Draft Report on Secondary Data Analysis											B	B																
Feedback from Advisory Group on draft report													B															
Final Report on Secondary Data Analysis (Deliverable 3)															R													
3. Synthesis and Reporting Phase																												
Data cleaning															B	B												
Data analysis of primary data																	B	B	B									
Report writing																	B	B	B									
Draft Evaluation Report (Deliverable 4)																				R								
Feedback on Draft Evaluation Report and presentation																					B	B						
Revision of Draft Evaluation Report																								B	B			
Submission of Final Evaluation Report (Deliverable 5)																										R		
Preparation of powerpoint presentation																											B	
Powerpoint presentation of findings and recommendations to the Advisory Group and UNICEF																												B

10. RISKS AND ASSUMPTIONS

The proposed secondary data analysis is highly dependent on the relevant data being made available to Kimetrica by UNICEF. The current review of the cost data suggests that there is limited scope for a cost-effectiveness analysis. Similarly, without access to the raw KAP database which includes household characteristics, there is little of interest that can be done with this data. In contrast, the data from the IM and SIA monitoring does hold some potential as outlined in Section 6.1. However, the proposed analysis will only be possible if the data is provided in a cleaned and comprehensive format. Furthermore, the analysis will be limited to the specificity of the data available. Based on the questions asked in the IM and SIA surveys, we will be able to evaluate the population's awareness of polio and the source of information by which people learnt about the SM Net programme. However, we will not be able to answer more specific questions such as the accuracy of people's knowledge of the disease or the commonly held beliefs about effects of the vaccine. For example, in the KAP study it was found that while almost everyone (>95 percent of people) knew about polio, far fewer were aware of the exact effects of the disease or had confidence that the vaccine would work. Such specific information may be of use in planning vaccination education programmes such as SM Net.

Additionally, we want to stress that the analysis will be performed on regionally-aggregated data as opposed to household-level surveys because the data available is reported in zonal/district percentages and never at the household level. This will limit the specificity of linking individuals' responses both through time as well as across one questionnaire. For example, we will not be able to link an individual's awareness of the SM Net programme with their decision to get vaccinated, instead we will only be able to correlate the total percentage of the population reported for each. This method allows for the definition of larger trends but reduces the ability to prove causal relationships between variables.

Moreover, while Section 6.2 outlines a provisional fieldwork implementation plan, the numbers of completed interviews will depend on the UNICEF zonal contacts providing Forcier with contacts for each of the target interviewees, including for the secondary implementing partners in South Central Zone. Collaboration from local authorities and implementing partners will be crucial for the successful completion of fieldwork. This can be ensured by a timely and visible communication from UNICEF, alerting all relevant parties of the upcoming research and requesting for their participation and collaboration in the study.

The primary data collection phase will also be highly dependent on the accessibility and security situation of the selected districts. This is undoubtedly a concern in each of the regions of Somalia, to varying degrees. Particularly parts of Banadir, Galgaduud and Mudug are likely to experience acts of violence and conflict that may cause unexpected delays and risk to researchers. However, Forcier's experience in managing large-scale research throughout the country has allowed them to build the requisite protocols and procedures to identify, manage, and adjust as needed. Moreover, researchers will be chosen based on their familiarity and connections with the district that they work in, and this should mitigate many of these risks. Forcier will closely monitor the situation in the selected districts in order to anticipate, to the extent possible, any problems. In the event that a district becomes inaccessible, another district with similar demographic characteristics will be chosen.

11. SUPPORT AND ADVISORY GROUP

An Advisory Group was set up to guide and advise the evaluation of the SM Net conducted by Kimetrica. The Advisory Group is composed of representatives of UNICEF Somalia (Dr. Saumya Anand, Chaudhary Mohd Parvez Alam, and James Hedges (Monitoring and Evaluation Officer)), and the WHO (Abdinoor Mohamed). An inception meeting was held between Kimetrica and the Advisory Group on 13 December 2016 to present the purpose of the evaluation and initial findings by Kimetrica. It is envisaged that the Advisory Group will meet on a yearly basis, but that all the deliverables of this evaluation, including this inception report, will be presented to the Group for feedback before being finalized.

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The four data collection tools are provided below.

IDI QUESTIONNAIRE FOR GROUP 1 (SM NET PARTNERS) AND GROUP 2 (COORDINATORS)

1. Identifying information	x101. Name of Interviewer	
	x102. Date of Interview *(dd.mm.yy)*	
	x103. Zone of operation: *(1=South Central, 2=Somaliland, 3=Puntland)*	
	x104. Region of operation: *(if South Central, 1=Bay, 2=Galgadud, 3=Lower Juba, 4=Banadir, 5= Lower Shabelle, 6=Middle Shabelle, 7=Gedo; If Somaliland, 1= Sahel and Maroodi Jeex, 2=Togdheer, 3=Awdal; If Puntland, 1=Bari, 2=North Mudug, 3=Nugall)*	
	x105. District of operation: *(if South Central, 1=Baidoa, 2=Dusamareb, 3=Kismayo, 4=Mogadishu, 5= Afgoye, 6=Jowhar, 7=Dollow; If Somaliland, 1= Berbera, 2=Hargeisa, 3=Burao, 4=Borama; If Puntland, 1=Bosaso, 2=North Galkayo, 3=Garowe)*	
	x106. Village(s)/town(s) of operation: *(text)*	
	x107. Name of respondent: *(text)*	
	x107b. Sex of respondent *(1=male, 2=female)*	
	x108. Type of stakeholder: *(1=UNICEF, 2=MoH, 3=WHO, 4=NGO (specify), 5=DSMC, 6=DPO, 7=RSMC, 8=RPO, 9=RMO, 10=ZSMC)*	
	x109. Organization: *(1= UNICEF, 2= MoH, 3=WHO, 4=NGO (specify), 5=other (specify))*	
	x110. Position within organization: *(text)*	
	x111. Part-time or full time *(1=full time, 2= part-time)*	
	x111b. If full-time, years in this position: *(numeric)*	
	x111c. If part-time, days worked in 2016: *(numeric)*	
	x111d. If part-time, describe any other positions you have: *(text)*	
	x111. What is your **main role** within the SM Net: *(1=coordination, 2= advisory, 3=management, 4=combination of these (specify the code numbers), 5=other (specify))*	
	x112. At which level do you mostly work? *(1=National – Federal*	

	Somalia, 2= Zonal, 3= Regional, 4=District, 5=Other (specify))		
2. Compatibility of SM Net with programme needs	x201. In your opinion what were the **main programme needs** of SM Net? *(text)*		
	x202. How did SM Net address those needs? *(text)*		
	x203. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate **the performance of SM Net in meeting these needs**? *(1=very poor, 2=poor, 3= average, 4=good, 5=very good)*		
	x204. In your opinion, what gaps are there in SM Net interventions in meeting these needs? *(text)*		
	x205. How could SM Net be improved to fill these gaps? *(text)*		
3. Appropriateness of SM Net to the local context	x301. In your opinion, what are the **most important contextual factors** (e.g. related to religion, culture, geography) that need to be taken into account for SM Net operation? *(1=religion, 2=culture, 3= geography, 4=combination of these (specify the code numbers), 5=other (specify))*		
	x301b. Please explain the reasons for your answer. *(text)*		
	x302. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate **the appropriateness of SM Net to the local context**? *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*		
	x303. How could SM Net be improved to be more reflective (or considerate) of contextual factors? *(text)*		
4. Constraints and difficulties in implementation	x401. What were the **major constraints and difficulties** faced in the implementation of SM Net? *(text)*		
	x402. What were the processes put in place to overcome these? *(text)*		
	x403. What were the constraints or difficulties that could not be overcome? *(text)*		
	x404. Why could these constraints or difficulties not be overcome? *(text)*		
	x405. How could these constraints or difficulties be overcome in the future? *(text)*		
	x406. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate **the ability of SM Net to overcome these constraints**? *(1=very poor, 2=poor, 3= average, 4=good, 5=very good)*		
5. Adaptability to programme changes	x501. What were the **main changes in priorities or programme strategies** since the start of SM Net in Somalia? *(text)*		
	x502. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate **the ability of SM Net to**		

	respond to these changes? *(1=very poor, 2=poor, 3= average, 4=good, 5=very good)*	
	x503. Can you give any examples of when SM Net failed to adequately respond to changes? *(text)*	
	x504. How could SM Net improve its ability to adapt to changes in priorities or programme strategies? *(text)*	
6. Engagement and collaboration with external stakeholders	x601. Who are the **most important external stakeholders** that have collaborated or could collaborate with the SM Net programme? *(text)*	
	x602. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate **the effectiveness of the collaborations between external stakeholders and SM Net**? *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	x603. Which were the collaborations that were the **most effective**? *(text)*	
	x603b. Why were they the most effective? *(text) Note for each collaboration separately*	
	x604. Which were the collaborations that were the **least effective**? *(text)*	
	x604b. Why were they the least effective? *(text) Note for each collaboration separately*	
	x605. How do you think ineffective collaborations can be improved in the future? *(text)*	
7. Management and coordination structure	x701. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate the **effectiveness of the management and coordination structure of SM Net**? *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	x702. What do you consider to be the **main strengths** of the management and coordination structure? *(text)*	
	x703. What do you consider to be the **main weaknesses** of the management and coordination structure? *(text)*	
	x704. How do you think these weaknesses could be improved in the future? *(text)*	
8. Resource allocation and efficiency	x801. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate the **Value for Money** (i.e. maximising impact given existing financial resources) **of the overall SM Net programme**? *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	x802. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate the **efficiency** (ie. optimisation of resources, both time and money, in meeting objectives) **of SM Net in allocating resources**? *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	x803. What were the activities/resource allocations which were	

	most efficient? *(text)*	
	x803c. Why were these activities/resource allocations the most efficient? *(text)*	58
	x804. What were the activities/resource allocations which were **most inefficient**? *(text)*	
	x804c. Why were these activities/resource allocations the most inefficient? *(text)*	
	x805. How do you think these inefficient resource allocations could be improved in the future? *(text)*	
9. Reaching the most excluded communities	x901. In your opinion who are the **most excluded communities or hard to reach groups** for SM Net? *(text)*	
	x902. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate the **efficiency** (ie. optimisation of resources, both time and money, in meeting objectives) **of SM Net in reaching these excluded communities**? *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	x903. What strategies used by SM Net have been **most effective** in reaching the most excluded communities? *(text)*	
	x904. What are alternative strategies that could be used to reach these excluded communities? *(text)*	
	x905. How would the costs of these alternative strategies compare with the ones that were used by SM Net? *(1=higher, 2=lower, 3=the same, 4=don't know)*	
	x906. How would the benefits of these alternative strategies compare with the ones that were used by SM Net? *(1=higher, 2=lower, 3=the same, 4=don't know)*	
10. Impact on polio vaccination coverage (the proportion of children vaccinated) and refusal rates	x1001. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate the **impact of SM Net on increasing polio vaccination coverage (the proportion of children vaccinated)** throughout the region? *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	x1002. Were there geographical areas or specific groups where polio vaccination coverage (the proportion of children vaccinated) <u>increased significantly more</u> than in other areas/groups? *(1=yes and 0=no)*	
	x1002b. If yes, which geographical areas or specific groups? *(text)*	
	x1002c. If yes, why did polio vaccination coverage increase significantly more in these areas/groups than in others? *(text)* *Note for each group/area separately*	
	x1003. Were there geographical areas or specific groups where polio vaccination coverage (the proportion of children vaccinated) <u>increased more slowly or not at all</u>? *(1=yes and 0=no)*	

	x1003b. If yes, which geographical areas or specific groups? *(text)*	
	x1003c. If yes, why did coverage increase more slowly or not at all in these areas? *(text) Note for each group/area separately*	
	x1004. How do you think coverage could be improved in the future? *(text)*	
	x1005. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate the **impact of SM Net on reducing refusal rates** throughout the region? *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	x1006. Were there geographical areas or specific groups where refusal rates <u>dropped significantly more</u> than in other areas/groups? *(1=yes and 0=no)*	
	x1006b. If yes, which geographical areas or specific groups? *(text)*	
	x1006c. If yes, why did they refusal rates in these areas or groups drop more significantly than in others? *(text) Note for each group/area separately*	
	x1007. Were there geographical areas or specific groups where refusal rates <u>dropped more slowly or not at all</u>? *(1=yes and 0=no)*	
	x1007b. If yes, which geographical areas or specific groups? *(text)*	
	x1007c. If yes, why did the refusal rates drop more slowly or not at all in these areas/groups? *(text) Note for each group/area separately*	
	x1008. How do you think refusal rates could be reduced more in the future? *(text)*	
11. Impact on polio profile and prioritisation	x1101. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate the **impact of SM Net on raising the profile of polio (i.e. increasing the attention polio gets) and prioritisation of polio eradication** in the region? *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	x1102. Were there areas or specific groups where the polio profile and prioritisation <u>increased significantly more</u> than in other areas/groups? *(1=yes and 0=no)*	
	x1102b. If yes, which geographical areas or specific groups? *(text)*	
	x1102c. If yes, why did the polio profile and prioritisation increase more significantly in these areas/groups? *(text) Note for each group/area separately*	
	x1103. How was the SM Net success most visible (eg. increased funding, support)? *(text)*	

	x1104. Were there areas or specific groups where the polio profile and prioritisation <u>increased more slowly or not at all</u>? *(1=yes and 0=no)*	
	x1104b. If yes, which geographical areas or specific groups? *(text)*	
	x1104c. If yes, why did the polio profile and prioritization increase more slowly or not at all in these areas/groups? *(text)* *Note for each group/area separately*	
	x1105. How do you think the polio profile and prioritisation in these areas/groups could be improved in the future? *(text)*	
12. Sustainability and applicability to other campaigns		
Sustainability	x1201. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate the **overall sustainability (i.e. the ability to be maintained) of SM Net?** *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	x1202. What were the parts of the SM Net model which are **most financially sustainable (i.e. able to be maintained at same cost)**? *(text)*	
	x1202b. Why were they the most financially sustainable? *(text)*	
	x1203. What were the parts of the SM Net model which are the **least financially sustainable**? *(text)*	
	x1203b. Why were they the least financially sustainable? *(text)*	
	x1204. How do you think these least financially sustainable aspects of SM Net could be improved in the future? *(text)*	
	x1205. What were the parts of the SM Net model which are **most operationally sustainable (i.e. structures that would enable continuity)**? *(text)*	
	x1205b. Why were they the most operationally sustainable? *(text)*	
	x1206. What were the parts of the SM Net model which are the **least operationally sustainable**? *(text)*	
	x1206b. Why were they the least operationally sustainable? *(text)*	
	x1207. How do you think these least operationally sustainable aspects could be improved in the future? *(text)*	
Applicability	x1208. Is the SM Net approach **suitable for other health campaign messaging** (in isolation or with polio)? *(1=yes and 0=no)*	
	x1208b. Which campaign topics do you think it would be **most suitable** for? *(text)*	
	x1208c. Why would it be most suitable for these campaign	

	topics? *(text)*	
	x1208d. Which campaigns topic do you think it would be **least suitable** for? *(text)*	61
	x1208e. Why would it be least suitable for these campaign topics? *(text)*	
	x1208f. Do you think it will be feasible to add on another health campaign messaging to the existing polio messaging? *(1=yes and 0=no)*	
	x1208g. If yes, how many different types of health campaign messages can be covered in the same campaign? *(numeric)*	
	x1208h. Please list what the top priorities would be. *(text)*	
	x1209. What are likely to be the major challenges faced in using SM Net for other campaigns? *(text)*	
	x1210. What aspects of the SM Net system could be improved to make it more suitable for campaigns that cover multiple topics? *(text)*	

IDI QUESTIONNAIRE FOR GROUP 3 (VACCINATORS AND DFAS)

This tool will be used to interview two types of frontline workers: vaccinators and DFAs.

1. Identifying information	y101. Name of Interviewer	
	y102. Date of Interview *(dd.mm.yy)*	
	y103. Zone of operation: *(1=South Central, 2=Somaliland, 3=Puntland)*	
	y104. Region of operation: *(if South Central, 1=Bay, 2=Galgadud, 3=Lower Juba, 4=Banadir, 5= Lower Shabelle, 6=Middle Shabelle, 7=Gedo;* *If Somaliland, 1= Sahel and Maroodi Jeex, 2=Togdheer, 3=Awdal;* *If Puntland, 1=Bari, 2=North Mudug, 3=Nugall)*	
	y105. District of operation: *(if South Central, 1=Baidoa, 2=Dusamareb, 3=Kismayo, 4=Mogadishu, 5= Afgoye, 6=Jowhar, 7=Dollow;* *If Somaliland, 1= Berbera, 2=Hargeisa, 3=Burao, 4=Borama;* *If Puntland, 1=Bosaso, 2=North Galkayo, 3=Garowe)*	
	y106. Village(s)/town(s) of operation: *(text)*	
	y107. Do you work in other villages or districts or regions than those mentioned above? *(1=yes and 0=no)*	
	y107b. If yes, please specify *(text).*	
	y108. Name of respondent: *(text)*	
	y108b. Sex of respondent *(1=male, 2=female)*	
	y109. Type of stakeholder: *(11=DFA, 12=vaccinator)*	
	y110. Part-time or full time *(1=full time, 2= part-time)*	
	y110b. If full-time, years in this position: *(numeric)*	
	y110c. If part-time, days worked in 2016: *(numeric)*	
	y110d. If part-time, describe any other positions you have *(text)*	
	y111. What is your **main role** within the SM Net: *(1=coordination, 2= supervision of vaccinators and vaccination campaigns, 3=management, 4=combination of these (specify the code numbers), 5=other (specify))*	
2. Appropriateness of SM Net to the local context	y201. In your opinion, what are the **most important contextual factors** (e.g. related to religion, culture, geography) that need to be taken into account for SM Net operation? *(1=religion, 2=culture, 3= geography, 4=combination of these (specify the code numbers), 5=other (specify))*	

	y202b. Please explain the reasons for your answer. *(text)*	
	y202. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate the **appropriateness of SM Net to the local context**? *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	y203. How could SM Net be improved to be more reflective (or considerate) of contextual factors? *(text)*	
3. Constraints and difficulties in implementation	y301. What were the **major constraints and difficulties** faced in the implementation of SM Net? *(text)*	
	y302. What were the processes put in place to overcome these? *(text)*	
	y303. What were the constraints or difficulties that could not be overcome? *(text)*	
	y304. Why could these constraints or difficulties not be overcome? *(text)*	
	y305. How could these constraints or difficulties be overcome in the future? *(text)*	
	y306. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate **the ability of SM Net to overcome these constraints**? *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
4. Knowledge and awareness of community		
Polio, the disease	y401. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate the **effectiveness of SM Net in increasing the knowledge and awareness of communities on polio, the disease**? *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	y402. Were there geographical areas or specific population groups where knowledge and awareness **on polio, the disease** was <u>increased significantly more</u> than others? *(1=yes and 0=no)*	
	y402b. If yes, which geographical areas or specific groups? *(text)*	
	y402c. If yes, why did knowledge and awareness on polio, the disease, increase significantly more in these areas/groups? *(text) Note for each group/area separately*	
	y403. Were there geographical areas or specific population groups where knowledge and awareness **on polio, the disease** <u>increased more slowly or not at all</u>? *(1=yes and 0=no)*	
	y403b. If yes, which geographical areas or specific groups? *(text)*	
	y403c. If yes, why did knowledge and awareness on polio, the disease, increase more slowly or not at all in these areas/groups? *(text) Note for each group/area separately*	

	y404. How do you think knowledge and awareness **on polio, the disease**, can be improved in these specific groups or geographical areas in the future? *(text)*	
Polio Immunisation	y405. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate the **effectiveness of SM Net in increasing the knowledge and awareness of communities on polio immunisation**? *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	y406. Were there geographical areas or specific population groups where knowledge and awareness **on polio immunisation** was <u>increased significantly more</u> than others? *(1=yes and 0=no)*	
	y406b. If yes, which geographical areas or specific groups? *(text)*	
	y406c. If yes, why did knowledge and awareness on polio immunisation increase significantly more in these areas/groups? *(text) Note for each group/area separately*	
	y407. Were there geographical areas or specific population groups where knowledge and awareness **on polio immunisation** <u>increased more slowly or not at all</u>? *(1=yes and 0=no)*	
	y407b. If yes, which geographical areas or specific groups? *(text)*	
	y407c. If yes, why did knowledge and awareness on polio immunisation increase more slowly or not at all in these areas/groups? *(text) Note for each group/area separately*	
	y408. How do you think knowledge and awareness **on polio immunisation** can be improved in these specific groups or geographical areas in the future? *(text)*	
Polio Campaign	y409. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate **the effectiveness of SM Net in increasing the knowledge and awareness of communities on the local polio campaign and immunisation rounds**? *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	y410. Were there geographical areas or specific population groups where knowledge and awareness of **the local polio campaign and immunisation rounds** was <u>increased significantly more</u> than others? *(1=yes and 0=no)*	
	y410b. If yes, which geographical areas or specific groups? *(text)*	
	y410c. If yes, why did knowledge and awareness of the local polio campaign and immunisation rounds increase significantly more in these areas/groups? *(text) Note for each group/area separately*	
	y411. Were there geographical areas or specific population groups where knowledge and awareness of **the local polio**	

	campaign and immunisation rounds <u>increased more slowly or not at all</u>? *(1=yes and 0=no)*	
	y411b. If yes, which geographical areas or specific groups? *(text)*	
	y411c. If yes, why did knowledge and awareness of the local polio campaign and immunisation rounds increase more slowly or not at all in these areas/groups? *(text) Note for each group/area separately*	
	y412. How do you think knowledge and awareness of **the local polio campaign and immunisation rounds** can be improved in these specific groups or geographical areas in the future? *(text)*	
Roles of vaccinators and community mobilizers	y413. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate **the effectiveness of SM Net in increasing the knowledge and awareness of communities on the roles of the vaccinators and community mobilizers**? *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	y414. Were there geographical areas or specific population groups where knowledge and awareness **on the roles of the vaccinators and community mobilizers** was <u>increased significantly more</u> than others? *(1=yes and 0=no)*	
	y414b. If yes, which geographical areas or specific groups? *(text)*	
	y414c. If yes, why did knowledge and awareness on the roles of the vaccinators and community mobilizers increase significantly more in these areas/groups? *(text) Note for each group/area separately*	
	y415. Were there geographical areas or specific population groups where knowledge and awareness **on the roles of the vaccinators and community mobilizers** <u>increased more slowly or not at all</u>? *(1=yes and 0=no)*	
	y415b. If yes, which geographical areas or specific groups? *(text)*	
	y415c. If yes, why did knowledge and awareness on the roles of the vaccinators and community mobilizers increase more slowly or not at all in these areas/groups? *(text) Note for each group/area separately*	
	y416. How do you think knowledge and awareness **on the roles of the vaccinators and community mobilizers** can be improved in these specific groups or geographical areas in the future? *(text)*	
Hard to reach groups	y417. In addition to the above, are there any specific **differences in the knowledge and awareness of accessible populations compared to the hard to reach groups**, such as nomads or other excluded groups? *(text)*	
	y418. What are the specific challenges in increasing knowledge	

	and awareness of these hard to reach groups? *(text)*	
	y419. What could be done to overcome these challenges? *(text)*	
5. Attitudes and positive behaviours of community		
Attitudes (positive and negative)	y501. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate the **effectiveness of SM Net in increasing positive attitudes of communities to polio vaccination**? *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	y502. Were there geographical areas or specific population groups where **positive attitudes to polio vaccination** were <u>increased significantly more</u> than others? *(1=yes and 0=no)*	
	y502b. If yes, which geographical areas or specific groups? *(text)*	
	y502c. If yes, why did positive attitudes to polio vaccination increase significantly more in these areas/groups? *(text) Note for each group/area separately*	
	y503. What were the main signs/indications that positive attitudes towards the vaccination had increased/changed? *(text)*	
	y504. Were there geographical areas or specific population groups where **positive attitudes towards polio vaccination** <u>increased more slowly or not at all</u>? *(1=yes and 0=no)*	
	y504b. If yes, which geographical areas or specific groups? *(text)*	
	y504c. If yes, why did positive attitudes towards vaccination increase more slowly or not at all in these areas/groups? *(text) Note for each group/area separately*	
	y505. How do you think positive attitudes towards polio vaccination can be encouraged in these specific population groups or geographical areas in the future? *(text) Note for each group/area separately*	
	y506. What were the **specific negative attitudes towards polio vaccination**? *(text)*	
	y506b. In which geographical areas or specific groups? *(text)*	
	y506c. Why did they occur? *(text)*	
	y507. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate **the effectiveness of SM Net in overcoming negative attitudes of communities to polio vaccination?** *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	y508. How do you think these negative attitudes can be overcome in the future? *(text)*	
	y509. In addition to the above, are there any **specific differences in attitudes (positive or negative) of accessible**	

	population compared to the hard to reach groups such as nomads? *(1=yes and 0=no)*	
	y509b. If yes, what are the specific differences? *(text) Note for each group separately*	
	y510. What are the specific challenges in **increasing positive attitudes** of these hard to reach groups? *(text)*	
	y511. What could be done to overcome these challenges (for increasing positive attitudes)? *(text)*	
	y512. What are the specific challenges in **reducing negative attitudes** of these hard to reach groups? *(text)*	
	y513. What could be done to overcome these challenges (for decreasing negative attitudes)? *(text)*	
Demand and other positive behaviours	y514. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate **the effectiveness of SM Net in increasing demand for polio vaccination (or intention to treat)?** *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	y515. Were there geographical areas or specific population groups where **demand for polio vaccination (or intention to treat)** was increased significantly more than others? *(1=yes and 0=no)*	
	y515b. If yes, which geographical areas or specific groups? *(text)*	
	y515c. If yes, why did demand for polio vaccination (or intention to treat) increase significantly more in these areas/groups? *(text) Note for each group/area separately*	
	y516. What were the main signs/indications that demand for polio vaccination had increased/changed? *(text)*	
	y517. Were there geographical areas or specific population groups where **demand for polio vaccination (or intention to treat)** increased more slowly or not at all? *(1=yes and 0=no)*	
	y517b. If yes, which geographical areas or specific groups? *(text)*	
	y517c. If yes, why did demand for polio vaccination (or intention to treat) increase more slowly or not at all in these areas/groups? *(text) Note for each group/area separately*	
	y518. How do you think **demand for polio vaccination (or intention to treat)** can be improved in these specific population groups or geographical areas in the future? *(text)*	
	y519. Can you describe any other positive behaviour changes by communities towards polio vaccination that you experienced? *(text) Note details on who, and what they were*	
	y520. In addition to the above, are there any specific differences in **demand for polio vaccination (or intention to treat)** among hard to reach groups such as nomads, compared to more	

	accessible populations? *(1=yes and 0=no)*	
	y520b. If yes, what are the specific differences? *(text) Note for each group separately*	
	y521. What are the specific challenges in increasing **demand for polio vaccination (or intention to treat)** of these hard to reach groups? *(text)*	
	y522. What could be done to overcome these challenges? *(text)*	
6. Trust, acceptability and ownership amongst community		
Trust and acceptability in **SM Net community mobilizers and vaccinators**	y601. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate **the trust and acceptability of community members in SM Net community mobilizers and vaccinators?** *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	y602. Were there geographical areas or specific population groups where there was **greater trust and acceptability in SM Net community mobilizers and vaccinators**? *(1=yes and 0=no)*	
	y602b. If yes, which geographical areas or specific groups? *(text)*	
	y602c. If yes, why was there greater trust and acceptability in SM Net community mobilizers and vaccinators in these areas/groups? *(text) Note for each group/area separately*	
	y603. Were there geographical areas or specific population groups where there was **less trust and acceptability in SM Net community mobilizers and vaccinators**? *(1=yes and 0=no)*	
	y603b. If yes, which geographical areas or specific groups? *(text)*	
	y603c. If yes, why was there less trust and acceptability in SM Net community mobilizers and vaccinators in these areas/groups? *(text) Note for each group/area separately*	
	y604. How do you think these low levels of trust and acceptability could be overcome in the future? *(text)*	
	y605. In addition to the above, are there any specific differences in **trust or acceptability (positive or negative) towards SM Net community mobilizers and vaccinators** among hard to reach groups such as nomads, compared to more accessible populations? *(1=yes and 0=no)*	
	y605b. If yes, what are the specific differences? *(text) Note for each group separately*	
	y606. What are the specific challenges in increasing **trust and acceptability towards SM Net community mobilizers and vaccinators** of these hard to reach groups? *(text)*	
	y607. What could be done to overcome these challenges? *(text)*	

Sense of community involvement in the implementation of the SM Net programme	y608. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate **the level of community involvement in the SM Net programme?** *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	y609. Were there geographical areas or specific population groups (i.e. hard to reach groups such as nomads) where the level of community involvement <u>increased significantly more</u> than others? *(1=yes and 0=no)*	
	y609b. If yes, which geographical areas or specific groups? *(text)*	
	y609c. If yes, why did the level of community involvement significantly increase significantly more in these areas/groups? *(text) Note for each group/area separately*	
	y610. Were there geographical areas or specific population groups (i.e. hard to reach groups) where the level of community involvement <u>increased more slowly or not at all</u>? *(1=yes and 0=no)*	
	y610b. If yes, which geographical areas or specific groups? *(text)*	
	y610c. If yes, why did the level of community involvement increase more slowly or not at all in these areas/groups? *(text) Note for each group/area separately*	
	y611. How do you think the level of community involvement in the SM Net programme can be improved for these specific groups or geographical areas in the future? *(text)*	
7. Satisfaction with SM Net and resources available	y701. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate **your sense of satisfaction with the management** of the SM Net programme**?** *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	y702. What aspects of the management of the SM Net programme are you **most satisfied** with? *(text)*	
	y702b. Why are you most satisfied with these aspects? *(text)*	
	y703. What aspects of the management of the SM Net programme are you **least satisfied** with? *(text)*	
	y703b. Why are you least satisfied with these aspects? *(text)*	
	y704. How do you think the management of the SM Net programme could be improved to address these concerns? *(text)*	
	y705. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate **your sense of satisfaction with the support, tools and other resources available to you** as part of the SM Net programme**?** *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	y706. What aspects of the resourcing are you **most satisfied** with? *(text)*	

	y706b. Why are you most satisfied with these aspects? *(text)*	
	y707. What aspects of the resourcing are you **least satisfied** with? *(text)*	70
	y707b. Why are you least satisfied with these aspects? *(text)*	
	y708. How do you think the SM Net programme could be improved to address these concerns? *(text)*	
8. Sustainability and applicability to other campaigns		
Sustainability	y801. Overall, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest, how would you rate **the sustainability (ie. the ability to be maintained)** of SM Net? *(1=very poor, 2=poor, 3=average, 4=good, 5=very good)*	
	y802. What were the parts of the SM Net model which are **most operationally sustainable (i.e. structures that would enable continuity)**? *(text)*	
	y802b. Why were they the most operationally sustainable? *(text)*	
	y803. What were the parts of the SM Net model which are the **least operationally sustainable**? *(text)*	
	y803b. Why were they the least operationally sustainable? *(text)*	
	y804. How do you think these least operationally sustainable aspects could be improved in the future? *(text)*	
Applicability	y805. Is the SM Net approach **suitable for other health campaign messaging** (in isolation or with polio)? *(1=yes and 0=no)*	
	y805b. Which campaign topics do you think it would be **most suitable** for? *(text)*	
	y805c. Why would they be most suitable for these campaign topics? *(text)*	
	y805d. Which campaign topics do you think it would be **least suitable** for? *(text)*	
	y805e. Why would it be least suitable for these campaign topics? *(text)*	
	y805f. Do you think it will be feasible to add on another health campaign messaging to the existing polio messaging? *(1=yes and 0=no)*	
	y805g. If yes, how many different types of health campaign messages can be covered in the same campaign? *(numeric)*	
	y805h. Please list what the top priorities would be. *(text)*	
	y806. What are likely to be the major challenges faced in using the SM Net for other campaigns? *(text)*	

| | y807. What aspects of the SM Net system could be improved to make it more suitable for campaigns that cover multiple topics? *(text)* | |

TOOL 3: FGD CHECKLIST FOR GROUP 4 (CMS)

<u>Introduction and purpose of FGD:</u>
As Community Mobilizers (CMs) for the Social Mobilization Network (SM Net), you have been recently engaged for the February/March polio vaccination campaign in [*district/zone name*]. We would like to have a focus group discussion today, to gather some information about the general functioning of the SM Net, your experience as Community Mobilizers and your opinions on a few key topics.

Forcier Consulting is an independent research organization, working together with Kimetrica (which is based in Kenya). We are working together to evaluate the SM Net in Somalia, and as part of this evaluation we are interviewing a number of actors who are involved in the network. Our purpose today is to collect information, and report it back to the organizations supporting the SM Net.
[*introduction of Forcier staff present*]

At the start of the FGD a form will be completed which identifies the name, age, sex, residence, villages they work in and contact number. Each participant will then be seated and assigned a number so that responses given can be assigned to each participant.

The following key questions will be presented to the group. A maximum of 10 minutes will be spent on any one question.

Key themes:

1. Most effective communication approaches
- Which of the different communication approaches and tools you use during your household visits are most effective in conveying the key messages on polio/of SM Net to the communities?
- How do house visit approaches compare to mass media campaigns (i.e. using radio, television, SMS) in terms of effectively conveying the message on polio to households in your area?
- Are there differences in which tools work best for different population groups, for example hard to reach groups such as nomads; women rather than men?
- Do you think these approaches and tools can be improved upon?
- How would you improve them?

2. Relevance of the approach to the local context
- Do you think the way the SM Net was delivered took into account the important local and cultural factors (i.e. political, economic, social, etc.)?
- Were there cases when they were not relevant?
- What could be done to make the approaches more relevant to communities they work in?

3. Satisfaction with the resources and other support
- Are you satisfied with the resources that were made available to you for you to do community mobilization? This includes both the tools, support from the rest of the SM Net team and management and other resources.
- Which parts were you most satisfied with?
- Which parts were you less satisfied with?
- What improvements could be made to the resources available to you?

4. Constraints and difficulties in implementation
- Did you face any difficulties or constraints in acting as community mobilizers?
- What were these?
- How did you overcome them?
- Is there anything that could be done to improve SM Net in the future so that these issues do not arise?

5. Improvements in knowledge and awareness, trust and positive attitudes
- Do you think the mobilization you did led to increased community knowledge and awareness of polio and the vaccination process? In which ways?
- Did it lead to increased community trust and positive attitudes? In which ways?
- Are there any groups that were less receptive?
- What can be done to improve this?

Prompts: Do you think that the communities have trust in you and the vaccinators? Are there any groups of people that have less trust, in, for example, vaccines and health workers? Do you think there has been an increase in demand of the vaccine? Have you seen any other positive behaviours as a result of the SM Net campaign? For example, are more people also now seeking health care for other conditions, or asking you about other diseases?

6. Applicability to other types of campaigns
- Do you think the SM Net could be used for other important health issues in the communities you work in? If yes, which ones?
- Do you think it could cover more than one issue at the same time or would it be better if the campaigns only focused on one?
- What do you think would be the challenges and how could these be prevented or addressed?

Prompts: Could it be used for example for infant and young child feeding practices? Or conveying the importance of handwashing? For general immunization campaigns? For using treated bed-nets against malaria?

TOOL 4: FGD CHECKLIST FOR GROUP 5 (COMMUNITY MEMBERS)

<u>Introduction and purpose of FGD:</u>
As members of the community you have been exposed to the Social Mobilization Network (SM Net) programme. You have been visited by community mobilizers who have explained the importance of vaccination against polio, and by vaccinators who have come to vaccinate your children against polio. We would like to have a focus group discussion today, to gather some information on this programme.

Forcier Consulting is an independent research organization, working together with Kimetrica (which is based in Kenya). We are working together to evaluate the SM Net in Somalia, and as part of this evaluation we are interviewing a number of actors who are involved in the network. Our purpose today is to collect information, and report it back to the organizations supporting the SM Net.
[*introduction of Forcier staff present*]

At the start of the FGD a form will be completed which identifies the name, age, sex, residence, and contact number. Each participant will then be seated and assigned a number so that responses given can be assigned to each participant.

The following key questions will be presented to the group. A maximum of 10 minutes will be spent on any one question.

Key themes:

1. Most effective communication approaches
- Which of the different communication approaches and tools used on polio (i.e. radio, megaphones, posters, SMS, television, face to face visits by community mobilizers) were most useful in accessing information on polio and polio vaccinations?
- Were the tools used sufficiently clear?
- How could they be improved?

2. Relevance of the approach to the local context
- Do you think the approaches used to communicate on the polio vaccine and deliver the vaccine to your children were relevant to you and your situation?
- Do you think they should have used different approaches or different messaging?
- How could they be made more relevant to you?

3. Satisfaction with the information and support provided
- Were you satisfied with the information and services provided to you during the polio campaign and vaccination process?
- Was it sufficient or would you have preferred more information?
- What information was missing?
- Did you feel any questions you had were addressed by the community mobilizers and the vaccinators? What additional support would you have liked?

- How can the services provided by community mobilizers and vaccinators be improved?

4. Improvements in trust and community involvement
- Do you trust the community mobilizers and vaccinators? Why?
- Are there any aspects of them or the work they do that you do not trust?
- How could your trust in them be improved?
- Do you feel that the community had sufficient involvement in the polio campaign (i.e. delivery of the vaccine and communication around the campaign)?
- How could community involvement in the SM Net campaign be improved?

5. Improvements in knowledge, awareness and positive behaviours
- Do you feel that your knowledge and awareness around polio (the disease) and polio vaccination (including the vaccinators) has increased since the community mobilizers started visiting your homes?
- Has the campaign made you change how you view vaccination and other health care interventions?

6. Applicability to other types of campaigns
- Do you think the community mobilizers could be used to provide information on other important health issues in the community? If yes, which health issues?
- What problems do you foresee in using this campaign for other health issues?
- Do you think the campaign could cover more than one health issue at the same time or would it be better if it only focused on one?

Prompts: Could it be used for example for infant and young child feeding practices? Or conveying the importance of handwashing? For general immunization campaigns? For using treated bed-nets against malaria?