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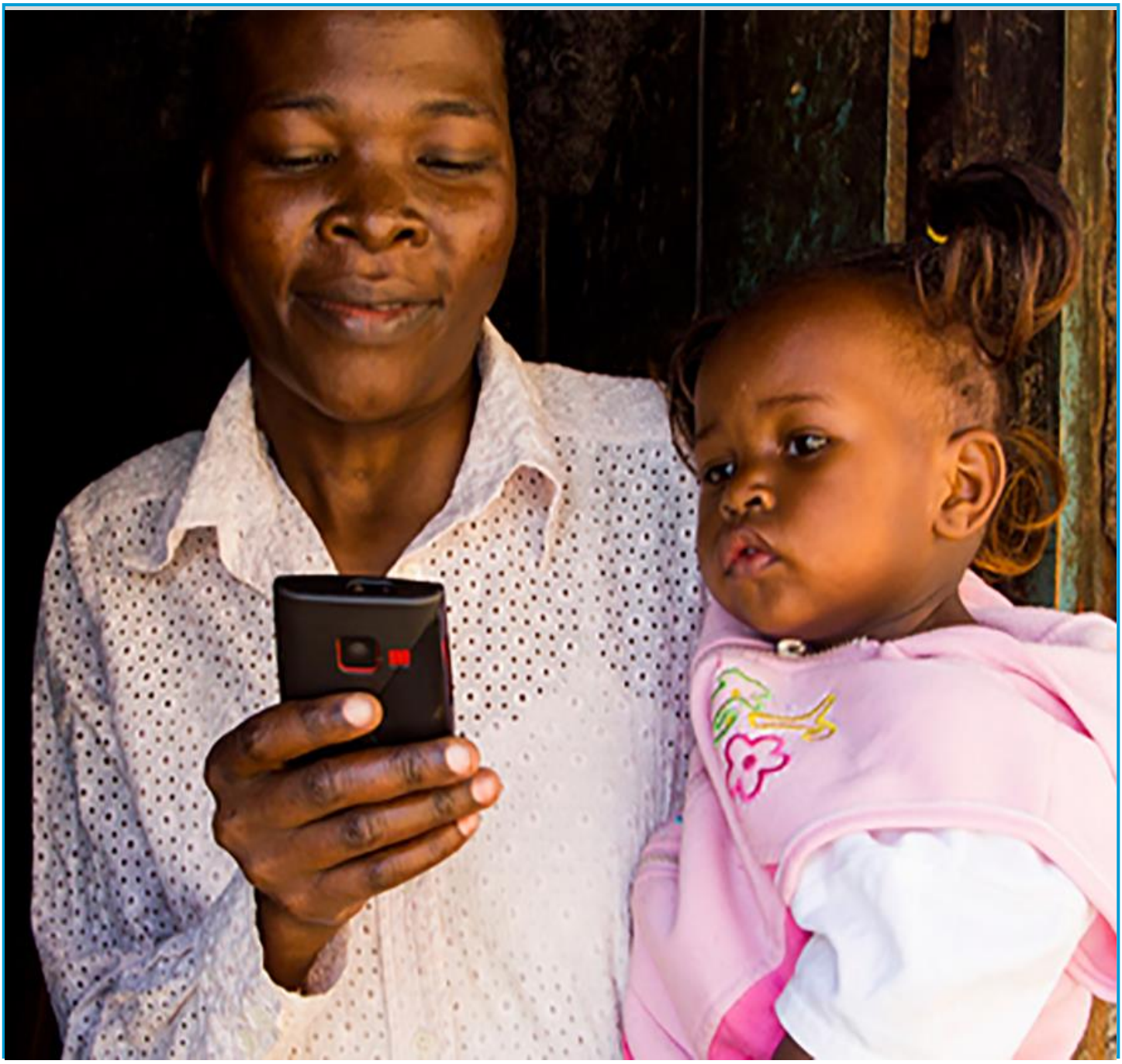
Impact Evaluation
Endline Report: Totohealth

SPRING Monitoring and Evaluation –June 2019



Impact Evaluation Endline Report: Totohealth

Department for International Development

SPRING Monitoring and Evaluation

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This document has been approved for submission by Coffey's Project Director, based on a review of satisfactory adherence to our policies on:

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Heidi Ober, Programme Director

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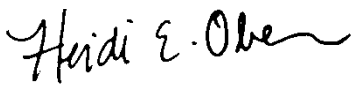

Abbreviations and Acronyms

ANC	Antenatal Care
BPE	Business Performance Evaluation
FGD	Focus Group Discussion
GSP	Girl Safety Protocols
IP	Implementing Partner
KDHS	Kenyan Demographic and Health survey
KSh	Kenyan Shillings
KII	Key Informant Interview
KPI	Key Performance Indicator
MCH	Maternal and Child Healthcare
NGO	Non-Government Organisation
NCD	Non-communicable diseases
PPI	Progress out of Poverty Index
REF	Relevant Explanation Finder
RPA	Research Plus Africa
SMS	Short Message Service
ToC	Theory of Change
ToR	Terms of reference
USAID	United States Agency for International Development
USD	United States Dollar

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Executive Summary

Purpose

This report presents the findings from the endline research for Totohealth, the second of eight grantee businesses selected for inclusion in the SPRING Impact Evaluation. This endline uses contribution analysis, a theory-based evaluation approach used for complex and dynamic settings, to draw conclusions about impact of and learning for the SPRING programme. The contribution analysis allows for measuring impact without the use of baseline data.

About Totohealth and SPRING Prototype

Totohealth is a Kenyan-based service provider for maternal and child health (MCH) advice and supports expectant and new mothers. Totohealth's overall goal is to use mobile SMS technology to help reduce maternal and child mortality and detect developmental abnormalities in early stages of childhood. With the support from SPRING, Totohealth developed a new prototype (Totohealth SPRING prototype), with the aim of providing targeted MCH information to the most vulnerable population — adolescent girls. The core function of the Totohealth SPRING prototype was to provide adolescent-specific MCH information to young mothers during pregnancy and for the first two years of their child's lives. The SMS' provided young girls with information on antenatal care, safe delivery, pregnancy, immunisation, nutrition and breastfeeding, and child health, with the primary aim that these young mothers would experience positive changes in their MCH knowledge, attitudes and practices. With SPRING funding and business development support, Totohealth developed the adolescent-specific SMS content as well as a formal helpdesk support. Additionally, SPRING supported Totohealth's general business development and provided technical assistance in the design and marketing of a maternity product (the Totobag).

Evaluation Questions

This Impact Evaluation is guided by the overall SPRING impact level evaluation questions outlined below and by a set of more specific and detailed evaluation questions applicable to this study, outlined in Section 2.3.

To what extent has access to products, services, and business opportunities provided by SPRING businesses resulted in improved outcomes linked to economic empowerment for adolescent girls?

- To what extent have adolescent girls improved their health as a result of accessing products, services or business opportunities provided by SPRING businesses?
- To what extent have adolescent girls improved their well-being as a result of accessing products, services or business opportunities provided by SPRING businesses?
- How did SPRING contribute to this change, as opposed to other factors?

What have we learned about adolescent girls as end-users or beneficiaries in the value chain?

- What factors helped or hindered adolescent girls from using SPRING products, services, or engaging with business models?
- What have been the unintended consequences of adolescent girls accessing products, services, or engaging with business models provided by SPRING businesses?

Evaluation Methodology[1]

The overall design of the impact evaluation uses the principles of qualitative evaluation and contribution analysis to better understand the impact of Totohealth on adolescent girls.

To assess the SPRING impact of the Totohealth's prototype, a set of qualitative data collection tools were developed and administered. A detailed Theory of Change (ToC) and Relevant Explanation Finder (REF) were used to map out and analyse mechanisms of change, potential influencing factors and alternative explanations that may influence outcomes.

[1] The design of the impact evaluation has changed over the course of the implementation of the SPRING Totohealth prototype. This is largely due to poor sampling data, loss of control group and overall reduction in sample size/attrition rates. Please see Section 2: Methodology of the report for full details.

Key Results

Conclusions about Totohealth's impact –- Totohealth's actual contribution — on MCH and well-being outcomes for girl subscribers were drawn by critically analysing the results, including changes in MCH, well-being and confidence outcomes as well as the magnitude the influencing factors had on these outcomes, and assembling Totohealth's 'Contribution Story'.

Totohealth's Contribution Story

We found varying degrees of impact across girls' MCH knowledge, attitudes, proactive health-seeking behaviour and well-being and confidence, as illustrated in Table 1. Overall, Totohealth had a positive impact on health seeking behaviour; however, this has been confounded by several internal and external factors, including:

- Barriers to girls' improving knowledge, attitudes and health-seeking practicing behaviours. The young mothers and pregnant women that comprised Totohealth's subscribers faced adverse circumstances, impediments and disadvantages in knowing about, forming attitudes regarding, and practicing proper MCH. The Totohealth operational context is likely to have affected its impact.
- Although most knowledge outcomes have been found to be directly attributable to Totohealth messaging, access to alternative sources of information presents a crucial alternative explanation, so that knowledge outcomes for certain MCH topics, such as safe delivery, should not be exclusively attributed to Totohealth messaging.

Despite these barriers and possible alternative explanations, this endline study shows that Totohealth contributed significantly to girls' MCH knowledge. Through design of the prototype, including content of the Totohealth's curriculum, the company was able to build a level of trust in the messaging service and consequently achieve a level of compliance with MCH advice provided, which positively affected Totohealth's level of contribution.

However, Totohealth's impact was more fragmented in changing MCH attitudes and behaviours than in increasing MCH knowledge. Changes in MCH attitudes and behaviour mostly focused on later stage topics, such as breastfeeding nutrition and child development. A main assumption of the Totohealth prototype was that providing knowledge to girls will result in behaviour change. However, Totohealth contributed most significantly to knowledge outcomes since the primary feature of Totohealth was to provide information.

With regards to well-being outcomes, it was assumed that, through the results chain, if a girl improved her MCH outcomes, then other areas of her life, such as personal wellbeing and confidence would also be positively impacted. However, Totohealth's impact on girls' own well-being and confidence was limited to areas related to MCH.

Table 1: Assessment of overall impact across SPRING impact pathways

	Health	Health	Health	Wellbeing
Areas	Direct benefit from Totohealth through increased knowledge and awareness of MCH	Direct benefit from Totohealth through a change in attitudes on MCH issues	Direct benefit from Totohealth through a change in health seeking behaviour	Direct benefit from Totohealth through increased well-being and confidence
Expected Impact	High	High	High	Medium
Actual Impact	High	Medium	Medium	Low

Learning

For Totohealth to have its optimal impact on desired outcomes, it should aim to address many of the challenges identified by the girls. The fragmented impact on changing attitudes and behaviours suggests that increasing knowledge is not always a sufficient measure to bring about behavioural change without additional complementary

efforts, and consequently that Totohealth's SPRING prototype may not be the right intervention to elicit behaviour change on its own. This is consistent with behaviour change theories[2] and literature[3].

We found a number of opportunities for learning that present important considerations for future programming, particularly with regards to similar business prototypes;

- A greater level of personalisation, including more interaction and real-life interaction may be needed to effectively address MCH needs of adolescent mothers.
- Additional comprehensive approaches may offer potential to better address MCH needs of adolescent mothers – for instance provision of complementary forms of MCH through working more closely with local health care providers.

The above opportunities suggest that it may be necessary to expand the service through making it more interactive and personalised, and to expand it beyond its current scope to better address needs of adolescent mothers. Such diversification may not be feasible for a messaging service like Totohealth, but the findings do reveal potential opportunities to better address; the needs of adolescent mothers and some of the barriers discussed in Section 3.4; and, increase relevance, improve effectiveness and impact of similar interventions through more comprehensive approaches that include additional forms of MCH provision.

Additionally, with regards to girls as end-users in the value chain, we found a number of learning opportunities, of which the most crucial to the SPRING programme are the following:

- The assumption that an increase in knowledge will necessarily lead to a change in behaviour is flawed. Achieving behavioural change in this regard may be beyond the reach of a business like Totohealth without complementary MCH services. Through the provision of knowledge, Totohealth offers a crucial first step, but additional comprehensive approaches are needed to bring about behavioural change – for instance provision of additional MCH services through working more closely with local health care providers.
- Using mobile phones as a platform presents an efficient way to reach young mothers as well as provide easily accessible information. However, this approach does come with several pitfalls that may limit potential reach.

Finally, the study found the following two positive outcomes outside of the prototype's intended impact:

- Although this does fall into SPRING's definition of well-being, it is important to highlight two ways in which Totohealth improved girls' lives beyond the MCH-specific content of their service. First, MCH knowledge helped two mothers juggle their role as provider (mother) as well as earner. Having more certainty on how to take care of an infant allowed attention and energy to be allocated towards employment. Secondly, one respondent informed that knowledge gained through Totohealth made her opinions about her family more credible and authoritative within her home, whereas prior, her opinions had been marginalised.
- Another unintended consequence is the widespread distribution through sharing Totohealth messages with others. This impact is unmeasured by the business metrics but is important for the evaluation. In its own right, improved healthcare has a substantial multiplier effect. If Totohealth was able to generate this positive chain-reaction, the total impact of Totohealth's services on MCH extends beyond the subscribers themselves.

[2] See: USAID. (2015). The Behaviour Change Framework: A template for accelerating the impact of behaviour change in USAID-supported MCH programs in 24 priority countries.
[3] See: Kelly, M & Barker, M. (2016). Why is changing health-related behavior so difficult. *Public Health*.

1. Introduction and Context

1.1 Purpose and structure of this document

This report presents the findings from Totohealth's endline research, the second of eight SPRING businesses selected for inclusion in the SPRING Impact Evaluation[4]. This endline uses contribution analysis, a theory-based evaluation approach used for complex and dynamic settings, to draw conclusions about impact of and learning for the SPRING programme. The contribution analysis allows for measuring impact without baseline data. For more information about contribution analysis, see Section 2.

The report is structured as follows:

- **Section 1**: Introduces Totohealth, outlines its SPRING prototype and explains its selection for impact evaluation.
- **Section 2**: Provides an overview of the research methodology for the overall Impact Evaluation and the research methodology used to gather information to inform the report. A detailed methodology is presented in Annex B.
- **Section 3**: Presents findings and analysis around the prototype's impact and draws conclusions about its achieved impact.
- **Section 4**: Presents findings and draws conclusions pertaining to learning experienced from implementing the SPRING Totohealth prototype.
- Additionally, five Annexes are included that present the SPRING Impact Evaluation Methodology, a detailed Impact Evaluation Methodology specific to the Totohealth study, Endline data collection tools and data analysis, and the Endline Concept Note.

1.2 Introduction to Totohealth

Description of the Business

Every day, nearly 830 women die from preventable causes related to pregnancy and childbirth. Ninety-nine percent of all maternal deaths occur in developing countries, of which more than half in sub-Saharan Africa.[5] Young adolescents face a higher risk of complications and death as a result of pregnancy than other women. Skilled care before, during and after childbirth can save the lives of women and new born babies.[6]

Totohealth is a Kenya-based start-up company providing products and services to mothers and fathers during pregnancy and the first five years of their children's lives.[7] The company has two main business lines. The first is an SMS-based service that provide health and child development advice based on the stage of the mother's pregnancy or the age of the child. This includes a series of questions that aim to detect health conditions that the child or mother might have to help reduce maternal mortality, child mortality and detect early stage developmental abnormalities. The second business line is focused on the sale of products (in bags/packs) needed for safe childbirth and essential items for baby care after delivery. Before SPRING, approximately 15,000 users were using the Totohealth platform across the continent.[8]

Description of the SMS Technology and Content

Totohealth developed their own technology platform for distribution of SMS and voice services. Subscribers receive messages during pregnancy and once a child is born. Messages are sent twice a week during pregnancy and less frequently once a child is born.

[4] Details of the overarching framework of impact evaluation for the SPRING programme detailing: grantee selection, methodology are provided in Annex A.
[5] See; WHO (2015) Maternal Mortality Factsheet, No. 348.
[6] See; WHO (2015) Maternal Mortality Factsheet, No. 348.
[7] Totohealth has recently changed their focus from the first five years to the first two years of children's lives. It is unclear when exactly this was introduced.
[8] This is based on numbers that were self-reported by Totohealth at the time of selection for SPRING participation.

SMS content is a mix of informative messages and 37 so called 'detection triggers', i.e. messages which are YES/NO questions with the objective to detect problems and issues. Examples of these issues include behaviour challenges, clubfoot, speech development, motor developmental issues, epilepsy or visual impairment.

SMS content for pregnant teenagers proposes a greater emphasis on psychological support and nutritional advice. According to Totohealth, the latter aspect is a focus due to the risk that pregnant teenagers start dieting to hide their pregnancy.

The Totohealth customer help desk[9] complemented the SMS system. It monitored customer replies, sent individual follow-up questions and encouraged parents to go to a nearby clinic or hospital if they consider an issue to be serious. Totohealth then follows up after two weeks to see if parents sought help and/or if the problems persisted.

Totohealth's SPRING Journey

Totohealth Kenya is one of 18 businesses from East Africa (Uganda, Kenya, and Rwanda) in SPRING's first cohort (Cohort 1). Between June 2014 and March 2015, Totohealth participated in SPRING's nine-month business accelerator programme. At the time of SPRING participation, Totohealth was reaching approximately 15,000 users.[10] The accelerator programme uses a combination of technical assistance (including on investor readiness, human-centred design principles (HCD), and understanding girls to support businesses to prototype and develop products, services, and business models that benefit girls.

The programme began with a two-week Bootcamp, in which businesses worked to; refine their business models with advisers, mentors, coaches and peers; identify barriers to growth and how to overcome them; identify ways of creating products, services, opportunities for adolescent girls; and create plans and strategies.

Following this, entrepreneurs returned home to research, refine and test ideas from bootcamp to begin prototype development. Businesses were then coached in how to pitch their prototype and were linked with potential investors both locally and globally. Lastly, as part of the programme, in Cohort 1 businesses were provided with grant funding of approximately $80,000USD to support various business activities.

Description of Prototype

Totohealth has received a wide array of support from donors in different areas (including financial assistance, technical assistance in the areas of investor readiness and HCD), which have broadly supported both the business and the development of the prototype. Therefore, for the purposes of this impact evaluation, the evaluation will focus on particular elements of Totohealth's activities.

For the purposes of this impact evaluation, we have defined Totohealth's prototype as the **development and integration of targeted voice and SMS content for adolescent girls**.

- **Prototype girl impact problem**: Young mothers, with a secondary school education and below, make up the greatest numbers of maternal and child deaths. They often live in marginalised and hard to reach communities, affected by the lack of access to health information. In particular, these adolescent mothers are often neglected by families and communities.
- **Prototype description:** With SPRING support, Totohealth developed content targeted towards adolescent mothers for its Health SMS and voice services on feature phones which helped the subscribers to monitor their pregnancy and the health of their children under five[11]. The content was not only aimed at adolescent mothers, but also for those living in marginalised communities who were unable to access other sources of health information. The newly developed messages were integrated into the existing platform ready to be sent to them.

According to Totohealth's Theory of Change (See Annex B), by providing an accessible voice and SMS messaging service with targeted content, Totohealth anticipated having an impact on adolescent girls according to the following Girl Impact pathways;

[9] Due to financial and regulatory challenges, Totohealth had to terminate the Helpdesk feature of the service. For more details, see Table 2.
[10] It is unclear what percentage of its 15,000 suscribers constituted adolescent girls. Totohealth was unable to provide data on age, and rather provided a list of what it thought were potential adolescent girl subscribers; 436 girls.
[11] Totohealth has recently changed their focus from the first five years to the first two years of children's lives. It is unclear when exactly this was introduced.

- **Impact on adolescent girls' health**: Adolescent girls (those who are pregnant or are already mothers) who subscribe to Totohealth's Health SMS Service will increase their knowledge (health literacy) and awareness of MCH issues[12], which will encourage them to change their attitudes towards MCH issues. This will increase their practice of health-seeking behaviours (such as accessing health services) and lead to an improvement in their health and their child's health outcomes.
- **Impact on adolescent girls' well-being:** Through the increased knowledge and awareness of MCH issues, adolescent girls will become more confident in making decisions on their and their child's health, allowing them to learn how to prioritise health and increasing their well-being and self-awareness on MCH issues.

The below Table 2 summarises the activities undertaken for Totohealth's prototype rollout and the associated dates.

Table 2: Timeline of Totohealth's prototype rollout

Date	Description of Activities
Jul 2015	SPRING Boot Camp in Nairobi
Sep 2015	Developed the Interactive Voice Response platform; developed adolescent girl SMS and voice content
Dec 2015	Integrated new content and voice system, and maintenance Tested SMS/Voice; reduced time of voice messages from 1min to 20sec Created gendered content (male voice for male subscribers; female voice for female subscribers)
Mar 2016	Rolled out new dashboard interface
Jun 2016	Piloted in Garissa Built and tested Version 2 of the Totohealth platform; new platform can handle over 200,000 subscribers Added two counties (Samburu and Makueni) and rolled out to Turkana county A total of 18000 parents subscribed
Mar 2017	Introduction of a charge for the helpdesk of 250KSH per annum. Amendment to all trigger questions to direct subscribers to healthcare professionals and not back to Totohealth helpdesk. Paid for subscriptions (those sponsored by Governments or NGOs) are provided free for a year under a new standard contract. Thereafter, subscribers are required to pay for the service.
Jun 2017	Introduction of charge of KES200/year for SMS and KES500 for use of the helpdesk; USD3000 revenue generated from paying users. A total of 1651 parents paying for the service directly through MPESA. However, pricing has negatively impacted the number of new girl subscribers. Reached of total of 2006 adolescent parents for this period (total 21,000 parents) Sent out a total of 600,000 messages (highest ever sent) Content translated to 2 additional local languages (Turkana and Luo) Acquired an ethical approval for carrying out monitoring and evaluation amongst the teenage mothers; another additional approval letter from the Ministry of Health for the content developed for teenage mothers. Girl content revised after 1 year of testing. Conducted active recruitment of parents in Turkana, Homa Bay County and Siaya County

[12] This includes pregnancy, ante, and post-natal health, and child nutrition and development.

Jun 2017 – Nov 2018	Totohealth now fully operates on a commercial model, with 80% of subscriptions coming in through partnerships with governments or NGOs. Individual counties have shown a great interest in rolling out campaigns with Totohealth. The remaining 20% of subscriptions are done through self-registration. Due to challenges with signing up to the service, Totohealth has had to simplify the registration process by drastically shortening the subscription form and consequently limiting the amount of data it collects. It currently only collects data on: age of mother (and child), name, length of pregnancy and language preference. Paid for subscriptions (those sponsored by Governments or NGOs) are provided free for a year under a new standard contract. Thereafter, subscribers are required to pay for the service. At the time of reporting, renewal rates were around 96%. Teen specific content has not been changed significantly since the SPRING prototype as it was given approval from the Minister of Health and changing it would be arduous. Although the Helpdesk still exists as a supplementary paid service for old subscribers, Totohealth is slowly phasing this out due to financial and resourcing challenges. As Totohealth employed only one medical professional, it was unable to respond to the huge demand of the Helpdesk service. Hiring a full-time medical professional was financially not possible. Furthermore, the helpdesk exposed Totohealth to a host of regulatory issues pertaining to the provision of medical advice. Since changing it to a supplementary paid service, demand has been limited and fewer girls have been using the Helpdesk feature so that it no longer is a fundamental feature of the SMS service.

1.3 Selection for Impact Evaluation

In consultation with SPRING, Totohealth was selected for impact evaluation on the basis that it appeared to provide a product that was proven to work in other geographies, could be easily scaled-up and had the potential for longer-term sustainability. On the basis that it already had 15,000 subscribers, it was also deemed to have the biggest potential reach of the first cohort BPE businesses, and a good ability to generate data. Additionally, Totohealth's digital component of SMS messaging was identified as a source of interesting lessons.

Although consumer health and well-being are generally difficult to attribute, Totohealth was at the start of this evaluation, collecting significant health data to inform its services and provide better services for its customers. Its impact on girls' health and well-being was anticipated to be evaluable and it was anticipated that individual customers would be relatively easy to identify and track.

2. Methodology

This chapter outlines the methods used for conducting the Impact Evaluation. For a detailed description of the methodology, please refer to Annex B.

2.1 Original approach to Totohealth's Impact Evaluation

The design of the impact evaluation has changed over the course of the implementation of the SPRING Totohealth prototype. The original design included a mixed methods approach of qualitative semi-structured interviews and quantitative telephone surveys that followed an intervention and control group of Totohealth adolescent girl subscribers at baseline, midline and endline. The research among both groups included quantitative telephone surveys with 431 adolescent girl subscribers and 12 follow-up semi-structured interviews. Unfortunately, over the course of implementing the Totohealth prototype, a number of issues arose that ultimately required us to abandon the original impact evaluation design:

- **Poor sampling data**: We had difficulty reaching girls to participate in the evaluation because; many were over 21 years old; incorrect and unreachable numbers were provided; and poor recruitment practices.
- **Loss of control group**: In February 2017, Totohealth informed us that there had been internal confusion and that the targeted SMS content had been introduced in December 2015 for all subscribers 20 years and under. This meant that all our research participants (both intervention and control) had been receiving the same SPRING funded content and we no longer had an accurate comparison group. As such, we were unable to use the data generated from the first endline study conducted in 2016/17 (Endline 1) and opted to replace this with the current endline study. According to the initial design, only the intervention group was intended to receive the SPRING funded content, as opposed to the control group, which was intended to receive pre-SPRING content, to allow for comparison.
- **Overall reduction in sample size/attrition rates**: Due to changes in the prototype, specifically the introduction of charges for the service and the changes in Helpdesk support, Totohealth reported a decrease in active Totohealth subscribers, resulting in our endline 1 sample size being reduced to 46 respondents.

Due to this, it was decided that it would not be possible to draw quantitative and attributable conclusions regarding the impact of Totohealth. Instead, a revised approach to the Totohealth impact evaluation analysis was formed, which would more accurately measure the overall contribution of Totohealth on the adolescent girl subscribers. For full details on the change in design, please see the Endline Concept Note in Annex E.

2.2 Revised Approach to Totohealth Impact Evaluation: Contribution Analysis

The overall revised design of this impact evaluation uses the principles of qualitative evaluation and contribution analysis to better understand the impact of Totohealth on adolescent girls. Contribution analysis is a theory-based approach used in complex and dynamic settings where the programme cannot be measured using an experimental or quasi-experimental design. Contribution analysis is designed to test an intervention's Theory of Change (ToC) by: analysing evidence collected on an intervention's primary outcomes and impacts; identifying if the evaluated programme is one of several influencers; and helping to reduce uncertainties around the observed impacts and influencing factors.[13]

Box 1: Contribution Analysis Terminology

These definitions (adapted from Lemire, 2012)[14] are commonly used terms for conducting contribution analysis. We will use these terms throughout the report, specifically in relation to data analysis tools and results.

Mechanisms:

- The underlying pathways, processes or structures that connect intervention activities and outcomes.

Primary mechanisms:

[13] See: Mayne, J (2008) "Contribution Analysis: An approach to exploring cause and effect" *ILAC Brief 16*
[14] See: Lemire, S. et al. (2012). "Making contribution analysis work: A practical framework for handling influencing factors and alternative explanations." *Evaluation.*

- The primary mechanisms are the most likely mechanisms to explain how and why the programme worked.

Influencing factors:

- Internal or external conditions that might enhance or inhibit and intervention from leading to its desired outcome.

Alternative explanations:

- A competing mechanism that connects intervention activities and outcomes, separate (external) to the intervention.

The overall design of the Totohealth's impact evaluation followed Mayne's step-by-step methodology[15] for contribution analysis includes:

1. Identifying and analysing the cause-effect relationship between Totohealth and its impact on adolescent girl subscribers.
2. Developing and gathering evidence on Totohealth's ToC and its associated risks.
3. Assembling and assessing the Totohealth contribution story and identifying challenges to it.
4. Seeking out additional evidence (endline qualitative data collection).
5. Revising and strengthening the contribution story (Results).

For a more detailed description of this methodology, please refer to Annex B.

2.3 Impact Evaluation Questions

The endline data collection is guided first, by the overall SPRING impact level evaluation questions (E1 and E2), and by a set of more specific and detailed evaluation questions applicable to this study. Due to the revisions in the design of the Totohealth impact evaluation (see the *Endline Concept Note* in Annex E), instead of asking "To what extent can the impacts to health and well-being be attributed to Totohealth?'" this evaluation explores the following questions:

- What are the ways in which adolescent girl subscribers have experienced impact to their health and well-being?
- Has Totohealth contributed to the impact to the health and well-being of adolescent girl subscribers? How, and in what ways, has Totohealth contributed to the impact on their health and well-being?
- How and in what ways has SPRING contributed to the impact of Totohealth?

For a detailed outline of the revised evaluation questions and their judgement criteria, please refer to Annex B.

2.4 Data Analysis Tools

The data analysis tools were designed during the first three stages of the contribution analysis. Totohealth validated the analysis tools during fieldwork in November 2018.

The tools were designed to:

- Operationalise the mechanisms from intervention to outcomes.
- Identify any programme assumptions about the Totohealth intervention and its desired outcomes.
- Develop indicators to measure outcomes, mechanisms and influencing factors.
- Inform the design of the data collection tools and guide analysis and reporting.

Theory of Change (ToC)

The purpose of the ToC was to establish the full picture of the Totohealth prototype and map out each of the mechanisms that would be responsible for the changes in health and well-being outcomes for adolescent girl

[15] See: Mayne, J (2008) "Contribution Analysis: An approach to exploring cause and effect" *ILAC Brief 16.*

subscribers. A detailed ToC was developed to support data collection, analysis and reporting (see Annex B for the full methods used to develop the ToC). It outlines the activities, mechanisms, outcomes and assumptions of Totohealth in detail and maps their relationships to each other (see Annex D for the full ToC).

Relevant Explanation Finder (REF)

The purpose of the REF was to provide a practical framework to support systematically examining influencing factors and alternative explanations in a contribution analysis. For the purpose of this evaluation, we adopted and expanded on Lemire's framework[16] to not only examine the most relevant influencing factors and alternative explanations, but also the primary mechanisms that most accurately explain the overall outcomes (see Annex B for the full methods used to develop the REF). The Totohealth REF outlines each primary mechanism, influencing factor and alternative explanation in detail including, including their connection to impact level (e.g. output and outcome), assumptions and identifiers (e.g. specific indicators used for measurement – see Annex D for the full REF).

2.5 Data Collection Tools

We designed a series of newly developed qualitative endline data collection tools which can be found in Annex C, to collect information to determine the observed changes in outcomes for adolescent girls, and to provide explanations of how and why the intended changes have, or have not, happened. For all data collection involving adolescent girl subscribers, tools were translated into Kiswahili and administered by a female enumerator in the language preference identified by the girl.

Qualitative Key Informant Interviews

The purpose of the Key Informant Interviews (KIIs) was to assess a girl subscriber's overall change in knowledge, attitudes and practices across different MCH and well-being outcomes. The KIIs also explored the different primary mechanisms set out in the REF, specifically looking at a girl's overall experiences using Totohealth. The KII was made up of two components – a knowledge assessment followed by a series of interview-style questions which explore; access and use of Totohealth; trust and awareness of Totohealth, awareness; practice of health-seeking behaviours; and overall confidence and well-being. For details on how the KIIs were developed and piloted, please see Annex B.

Focus Group Discussions

The purpose of the Focus Group Discussions (FGDs) was to better understand the challenges that adolescent girls face and how they might impact a girls' decision when accessing MCH information and services. The FGDs' primary focus was on assessing the influencing and alternative explanations outlined in the REF. The FGDs were designed to include a combination of techniques and was split into four parts: (1) introductory activity, (2) focus group question period, (3) risk assessment, and (4) experiences with Totohealth. For details on how the FGDs were developed and piloted, please see Annex B.

Interview with Executive Director of Totohealth

The interview with the Executive Director of Totohealth expands on the tools developed for the Business Performance Evaluation. The purpose of the interview was to:

- Explore how and in what ways SPRING has contributed to the impact of Totohealth.
- Clarify the Totohealth prototype and identify if there were any additional changes.
- Validate the contents of the ToC and REF.

For a breakdown of the interview and sample questions, refer to Annex B.

2.6 Sampling Methodology

We used a purposive sampling approach[17] for endline sampling. The following minimum sampling criteria was applied:

- **Age of mother**: participants are adolescent mothers (the age of 19 or under at the time of registration);

[16] See: Lemire, S. et al. (2012). "Making contribution analysis work: A practical framework for handling influencing factors and alternative explanations." *Evaluation.*
[17] See: Oliver, P (2013). "Purposive Sampling" in V. Jupp, *The SAGE Dictionary of Social Research Methods*.

- **Location:** based in and around Nairobi;
- **Subscription:** must have received messages for a minimum of six months during their subscription. If girls are no longer receiving messages, must not have stopped receiving messages more than two years ago;
- **Date of registration**: girls registered prior to May 2016 and those registered between May – December 2016 (after Totohealth received SPRING support);
- **Stage of pregnancy at time of registration**: girls who registered while pregnant and girls who registered after they had given birth. This was to ensure we captured the child's ages and pregnancy duration as targeted by the Totohealth service, as SMS content and messaging sequence was dependent on the stage of pregnancy and age of child; and
- **Dosage**: in addition to our six-month mandatory registration requirements, we also sampled girls who had been registered for Totohealth for more than 12 months.

A screening survey was created to outline the above criteria and used to sample for both the KIIs and FGDs; please see Annex C for the survey tool.

KII Sampling

Our main target was to interview 24 adolescent girls who fit within our sampling criteria which was based off an assessment of anticipated minimum population from baseline. Of these interviews, one was conducted with the subscriber and her mother, who chose to participate for some questions. Minimum quotas were also set against each of the sampling criteria. We used a list of subscribers provided by Totohealth and continued calling until we reached our total of 24 respondents and minimum quotas were met (see Annex B for more details on KII sampling design and quotas).

Table 3: KII Achieved Sample [18]

Sample Characteristics	Values
Age Category	
15-19 years	**1**
20 to 24 years	**22**
25 years +	**0**
Unknown	**1**
State of pregnancy at time of registration	
Pregnant at time of registration:	
0 to 4 months	**4**
5 months +	**5**
Not pregnant and child aged:	
0 to 5 months	**6**
6 to 12 months	**5**
over 12 months	**4**

[18] For a detailed discussion on sampling approach and respondent quotas for endline, please refer to Annex B. For a detailed discussion on fieldwork challenges during endline, please refer to section 2.7. For a detailed discussion on fieldwork and sampling challenges during baseline, please refer to the Totohealth Baseline report.

Length of registration	
Registered for 6 – 12 months	**10**
Registered for 12+ months	**13**
Unknown	**1**
Still receiving Totohealth messages	
Yes	**1**
No	**23**

FGD Sampling

Our original aim was to conduct a total of four FGDs with adolescent girl subscribers (6-8 participants per group), who fit our sampling criteria. However, due to some field challenges experienced by our local research partner such as girls not being reachable (outlined in section 2.7), we were unable to find enough girls to reach our FGD quota. As a result, we adjusted our original FGD sampling to include four FGDs with Totohealth subscribers (intervention) who fit our sampling criteria (see Text Box 2) and added in two additional control FGDs with non Totohealth subscribers. For more details on changes in FGD sampling, please see Annex B. A total of six FGDs were administered to 29 girls (14 Totohealth subscribers and 15 control).

Box 2: Update to Minimum Sampling Criteria: Location

We encountered an unexpected challenge of not being able to find enough girls in the Nairobi area that were willing to come in for a FGD. Therefore, we were not able to reach our minimum number quotas. Conversations with the Executive Director from Totohealth indicated that they had a large subscription base out in Homabay County, a rural county 7 hours east of Nairobi. We decided that we would expand the location criteria to sample and conduct in-person FGDs in Homabay County. This did not have any impact on our analysis as location in and around Nairobi was set as a sampling criterion as well as being able to interview the girls in person.

Table 4: FGD Achieved Sample

FGD Type	Location	No. Girls	Age Range
Intervention 1	Nairobi	3	22
Intervention 2	Nairobi	2	17 - 22
Intervention 3	Homabay	5	21 – 23
Intervention 4	Homabay	4	18 – 22
Control 1	Nairobi	9	15 – 20
Control 2	Nairobi	6	15 – 20

2.7 Data Collection Fieldwork

Local Research Partner

Coffey sub-contracted Research Plus Africa (RPA), a local research organisation that specialises in market and social research. The primary RPA team for this evaluation was a comprised of:

- One female project manager, who oversaw the evaluation and was also the FGD moderator.
- Three female enumerators, who conducted the KIIs and supported with FGD note taking and observation.

Other members of the RPA research team that supported the evaluation included: one translator, who translated all of the tools from English to Kiswahili and three transcribers. There was also a calls team, who was responsible for completing the screening calls and recruiting participants.

Enumerator Training and Piloting

- A four-day training for the primary RPA research team took place from November 19 to 23, 2018 at RPA's offices in Nairobi, Kenya. The first two days of training involved getting to know the RPA team and their research facilities, overview of the evaluation and field methodology and qualitative research techniques.
- The third day of training included an overview of the qualitative KII and FGD tools and supporting resources, a question-by-question review of each of the tools, as well as a mock KII and FGD. This allowed us to refine the language and validate the tools. The tools were then sent for translation in preparation for piloting.
- The fourth day of training was piloting the KIIs and FGDs with a selected sample of girls. Each of the enumerators had the opportunity to complete a KII. One pilot FGD was also conducted (see Annex B for more details on piloting the tools). The pilot sessions were followed up by a debrief and a discussion on girl safety protocols.

Data Collection

Endline data collection took place between November 2018 and January 2019. The majority of the KIIs were completed in the girl's home or a selected location within the girl's neighbourhood. All FGDs were completed in a central venue either at the RPA offices or at a venue easily accessed by the girls. As noted earlier, due to challenges with recruitment, a couple of the FGDs were completed in Homabay County. KIIs and FGDs were conducted in Kiswahili or English, depending on the participants' preferences, and recorded. Recordings were anonymised, transcribed and safely stored with RPA. The transcripts were translated, quality checked and validated by RPA and then sent to Coffey as they were completed. Audio recordings and transcripts are stored on the cloud as well as on a physical server and are password protected.

Box 3: Fieldwork challenges reported by RPA

- Sampling: subscription list provided by Totohealth was poor quality, which made it difficult to meet the original sampling criteria.
- Dropouts or no-shows: Many girls would agree to participate in an interview or FGD and then change their minds. The girls often cancelled last minute or would not be reachable when the team tried to contact them in the field.
- Most of the data collection was done in December when many of the girls would say they had travelled to their rural homes to spend the holidays.
- Travel to Homabay County was unexpected.

Ethics and Safeguarding

All of our research complied with our Girl Safety Protocols (GSP) and to Coffey's Ethical Research Guidelines. The GSP are based on the ethical guidelines set out in DFID's ethics principles for research and evaluation, ESOMAR's International Code on social research and data analytics, as well as ESOMAR's guidelines for working with Children and Young People. Context-specific variations were discussed developed in collaboration with RPA.

Research Permissions

As with previous data collection, the research permissions process was led by our local research partner, RPA. They ensured that they have the appropriate permits from the National Commission for Science, Technology and Innovation (NACOSTI) for data collection. In addition, permissions to conduct research with Totohealth beneficiaries was covered by the existing permissions granted to Totohealth to conduct research with adolescent girls by the Ministry of Health at the time of the rollout of the adolescent teen content (2016).

Consent

The process for obtaining research consent followed a two-stage process. The first was a customer opt-out process, where Totohealth removed anyone from their list of subscribers who had opted out of participating in

research. The second was consent at time of research, where participants confirmed their interest in participating during the screening survey and again at the time of completing the KII or FGD.

2.8 Data Coding and Analysis

A two-stage coding framework was created (see Annex D):

- Level 1: SPRING coding. This stage examined the qualitative data along indicators specified by the SPRING analysis framework.
- Level 2: Totohealth coding. This stage involved a deeper examination into the ways Totohealth contributed to changes in MCH outcomes for Totohealth subscribers, as well as possible influencing factors and alternative explanations.
- All interview transcripts were coded and analysed using ATLAS to identify primary themes mapped to the REF. The evidence collected was systematically analysed to determine the most accurate contribution story and to identify barriers and possible rival explanations for outcome knowledge, attitudes and practices. Each of the mechanisms in the REF were assessed based on certainty, robustness, range and prevalence (see Annex B for information on designing the coding framework).
- The contribution story was assembled by answering the following questions based on each of the results and indicators presented in the REF:
    - How credible was the story?
    - Did the pattern of observed results validate the results chain?
    - How similar or different were the outcome's across respondents?
    - What were the main weaknesses in the story?

2.9 Limitations and Mitigation Strategies

Design Limitations and Mitigation Strategies

As a result of the changes to the Totohealth prototype, large attrition rates and loss of comparison group, we no longer were able to quantitatively evaluate the extent of impact of Totohealth's message on subscribers. This triggered a re-design of the study from a phone-based quantitative study to a qualitative-based study using contribution analysis. Also, in the re-design was the addition of understanding and analysing the individualised influencing factors and alternative explanations to understand the ways in which involvement in Totohealth has contributed to certain MCH outcomes for the girls.

Contribution Analysis is mostly used in cases where conventional experimental methodologies are challenging, and its nature means that it does not rely on the rigour of experimental design for determining attribution. Any contribution claims as well as claims with regards to the extent to which influencing factors played a role in attribution, are ultimately based on the shared judgement of the evaluators. To limit this bias, we used a Relevant Explanation Finder, a methodological and systematic approach used to identify evidence of primary and alternative explanations and weigh and prioritise results.

As data around education levels and occupation were unavailable upfront, and the process of acquiring a sample was a challenging and lengthy process in which we worked with a list of mostly unusable names and contact details, we were unable to select a sample according to additional selection criteria, such education level and occupation, which could have accounted for influencing factors and alternative explanations. Given the limited number of respondents we were able to sample from, it was decided to conduct a screening survey to gather necessary information required to assess eligibility only. Including additional selection criteria would have further limited our sampling list.

Finally, given the nature of our qualitative approach and the scope of the study, we did not quantitively collect data on education and media consumption habits. Although we did dedicate an entire section of the KII guide (see Annex C) to exploring alternative sources of information, and comparing these against Totohealth, as well as assessing the level of trust in Totohealth, the data collected did not allow for further expanding on alternative explanations beyond the current findings. Although we initially experimented with including additional questions to capture more detailed information, it was decided to leave them out so as to keep the research tools to an acceptable length for data collection with adolescent girl respondents. However, this Contribution Analysis would

have benefitted from stronger data pertaining to those topics, and the lack thereof therefore presents a limitation to this design.

Data Limitations and Mitigation Strategies

Robustness of the data was limited by the low numbers of girls who participated in the impact evaluation KIIs and FGDs. Using the contact details provided to us by Totohealth, we sought to maximise the number of participants by making multiple attempts to contact each girl and where necessary, arranged convenient times to call the girls back to take part in the interview if she was unable to at the time of the original call. We also expanded our location selection criteria to include Homabay County to ensure that we were able to recruit our quota of girls for the evaluation.

Response Bias and Mitigation Strategies

The range of time that had elapsed as well as high attrition rates meant that the girl respondents likely experienced difficulties in recalling information from SMS messages. As such, we did not seek to measure the quantitative extent of knowledge acquisition or SMS recall, but instead designed a new knowledge assessment that determined if knowledge increased, and the ways it had contributed to further outcomes such as increases to awareness, health-seeking behaviours and overall well-being.

Additionally, evidence gathered from this evaluation was self-reported by the girls, therefore it was subject to recall and positive response bias. To help identify any bias in our results we systematically assessed the influencing factors and alternative explanations.

3. Results and Analysis

This chapter outlines findings from data collected as part of the Totohealth endline study.

Section 3.1 presents findings around the mechanisms of change (outputs), while Sections 3.2, 3.3, and 3.4 outline outcome findings around primary MCH mechanisms as well as Totohealth's contribution to the girl's overall health and well-being outcomes, including MCH knowledge, attitudes and practices. Section 3.5 presents adolescent girl's health and well-being outcomes in relation to possible influencing factors (barriers and enhancers) and alternative explanations for Totohealth contribution. Finally, Section 3.6 brings together the findings and presents the Contribution Story to explain the prototype's impact.

Blue text boxes at the end of each subsection are aimed at highlighting key takeaways for the Contribution Analysis.

3.1 Mechanisms of Change (outputs): Reaching Adolescent Girls

This section presents findings around the prototype, its implementation and its outputs (as described in the ToC). It specifically outlines how successful Totohealth was in reaching adolescent girls, specifically through: subscription rates, prototype design thereby developing initial levels of trust. This section also outlines some of the challenges associated with reaching girls as well as considerations and implications for Totohealth's contribution story.

Subscription Rates

The majority of Totohealth participants were not subscribed for the complete duration of Totohealth's SMS campaign. Roughly half of the girls received SMS messages for less than one year, while the other half received messages for one to two years. While no one girl received the entirety of Totohealth information — from antenatal through early childhood — girls registered at staggered stages in their pregnancies/motherhood so that between them, all Totohealth's curriculum was transmitted.

Prototype Design

In general, mobile phones, were an effective way to reach young mothers in Kenya. Nearly every respondent confirmed that the messages were easily accessible and relevant. Because these mothers often kept their phones with them at all times, they felt that Totohealth's advice was very proximate and, consequently, very trustworthy. Mobile phones offered a reliable, unmediated source of information to pregnant young women who faced barriers to accessing information elsewhere. One interview with two respondents, an adolescent mother and her own mother, explained this phenomenon:

> *"[At] that time she was very afraid that she was pregnant, so she was not free to ask me questions. So, I would give her the phone and she would ask the questions herself. What she felt uncomfortable asking me, I told her to ask them, so it guided her until she delivered."* KII19

Findings suggest that Totohealth is perceived to offer an objective, informed voice amongst the dissonance of confusing opinions, advice, and hearsay circulating around a young pregnant girl.

The design of Totohealth's SMS prototype, as a product oriented toward adolescent girls, was successful. First, girls' motivation for subscribing to the service matched the intended purpose of the service; to learn about MCH to improve their childrearing preparedness and abilities. Thus, expectations from users were met by the service.

While there were a few reported disruptions to the transfer of messages to the user, the majority of these were beyond Totohealth's control. For example, some girls lost their phones and changed numbers, or registered on a family members phone, disrupting their immediate access to Totohealth's messages. Besides these incidental interruptions the overwhelming majority of interviewed users did not experience any issue receiving Totohealth's SMS messages.

Next, 21 interviewees confirmed that the messages were received by the users, were comprehensible to them, and were relevant to their needs. For both English and Kiswahili subscribers, there was no issue with user comprehension reported across all 24 informant interviews. Totohealth effectively communicated complicated MCH topics in a language adolescent mothers could understand and practice. Lastly, Totohealth's automated schedule for publishing user-specific SMS messages was extremely accurate. Only two informants reported instances of texts arriving after their babies had passed the referenced milestones. Even then, this was not a chronic, repeated

error. The majority of interviewed mothers were completely satisfied with content and timeliness of Totohealth's SMS service, testifying that Totohealth's messages often arrived when most useful to the users.

Trust

Totohealth was an unanimously trusted source of information amongst interviewed subscribers. Girls lauded Totohealth's contribution to their own knowledge, attitudes and practices and gave several reasons for why they trusted the SMS messages so much.

One reason was 'performance legitimacy'. Once subscribers saw for themselves the relevance and usefulness of Totohealth's messages, they began to engage with the service more seriously. Some were so surprised with the accuracy of Totohealth's incremental child development messages that they thought Totohealth must have some way of observing their life. Furthermore, Totohealth was valued because of its clear and understandable language. These features of Totohealth's product were so effective that it even converted some sceptics. One mother said that, initially, she did not see the utility of the message system, however once she began receiving them, she changed her mind entirely.

Interviewed subscribers overwhelmingly valued Totohealth's services. Three separate interview questions provide three distinct dimensions for measuring subscribers' valuation of Totohealth. These are willingness to subscribe for advice on a subsequent pregnancy and child, willingness to pay, and saving/sharing received messages.

First, every single interviewed subscriber stated that they would be willing to subscribe to Totohealth's SMS messaging service for subsequent pregnancies, suggesting that Totohealth produced a material improvement to the health of the children monitored. If it had not been effective in this way, mothers would presumably not be interested in the service for future pregnancies.

Next, every respondent reported that she was willing to pay for the service. When asked to explicitly appraise the usefulness of Totohealth, all mothers said that they would be willing to pay for the service in the future. This is particularly telling because roughly 95% of interviewed mothers did not pay for their prior subscription as it was part of a pilot.

Third, the ways in which mothers used their subscriptions demonstrate a clear appreciation for the service. A great majority of interviewed mothers saved the messages for future reference or shared the messages with friends. This behaviour highlights how useful subscribers found the SMS messages, for if mothers had not found the information helpful, or at the very least novel, they would have had no reason to save or share the messages. Their efforts to preserve messages strongly suggest that the information contained within them were helpful to the mothers. The distribution of messages amongst friends presents a large, positive externality to Totohealth's services; that subscribed mothers shared the messages with family and friends suggests that Totohealth's information reached beyond its total subscription audience.

> *"Yes, I would recommend clinic and Totohealth (..) yes I have recommended Totohealth to my friends and they tell me their experience has been great".* KII 4

Challenges in Reaching Adolescent Girls

As mentioned above, various challenges in reaching girls were present. A few interviewees lost their mobile phones and were not able to reconnect with Totohealth to resume their subscription, while others did not have a mobile phone themselves and thus registered with a family member's phone. In these circumstances, they had only intermittent access to the Totohealth messages. This suggests that Totohealth was unable to make its services fully accessible or anonymous to these girls and therefore less successful than intended in reaching the most marginalised girls most affected by a lack of information, as it had set out to do.

None of the three interviewed subscribers that lost connection to Totohealth, were able to re-establish their subscription. These findings suggest that this is an area where Totohealth could improve its service and make it more accessible for those that are enrolled.

Box 4: Contribution Outputs and Influencing Factors

Contribution Outputs: Reaching adolescent girls

- Totohealth's prototype design using mobile technology seems to be an effective method for providing objective and stigma-free information to young mothers.

- Findings suggest that girls were receiving relevant adolescent-specific content at the right time. The content of the SMS was easy to understand.
- Overall, Totohealth was valued as a trusted source of information across all girls.
- It was unanimous among the girls that they valued and trusted the information so much that they would be willing to pay for the service, share the information with others, as well as sign up for the service for future pregnancies.

Influencing Factors

- As trust was one of the primary factors throughout all the mechanisms, Totohealth being a trusted source of credible information is a primary contributor to the outcomes experienced by the girls: knowledge, attitudes and practices.
- No girl received the full package of SMS content: including pregnancy and child health. There were significantly more girls registered after giving birth than during pregnancy. This may influence the observed outcomes as Totohealth's optimal impact would be with girls starting from the beginning of the programme.
- There were some challenges with reaching some of the subscribers due to intermittent access to the messages because of phone sharing or lost subscriptions. This may influence the degree of outcomes we are seeing as the girls might not have received all of the information during their subscription.

3.2 Contribution to Maternal and Child Health Outcomes

This section presents findings of Totohealth's contributions to the short-term, intermediate and long-term outcomes experienced by adolescent girl subscribers (as described in the ToC and REF). It specifically outlines Totohealth's contributions to the importance of prioritising health as well as its impact on the knowledge, attitudes and practices of specific MCH behaviours: antenatal care, safe delivery, pregnancy health, immunisation, breastfeeding and child nutrition, and child health.

Prioritising Health

Overall, Totohealth subscription seems to have motivated mothers to prioritise healthcare in their everyday lives. Of the 24 informant interviews with young mothers who received Totohealth messages, 15 stated explicitly that the messages made MCH a main priority in their concerns and duties. Of the 11 that did not adjust their priorities, nine reported that they were already prioritising their own and child's health prior to their Totohealth subscription. The findings strongly suggest that Totohealth made mothers apportion more of their energy and attention to MCH,

> *"[Before Totohealth I would have prioritised a] roof over my head, financial stability, then education. It [Totohealth] helped to see that your health and the child's health are the most important things. They emphasised taking care of your health and the baby's health."* KII11

Box 5: Outcome Contribution - Prioritising health

- Findings suggest that Totohealth affected girls' attitudes towards prioritising health.

Influencing Factors

- Other sources may have played an ongoing role in influencing MDH prioritisation, as is evident from the girls that were prioritising their own and child's health prior to their Totohealth subscription.

Antenatal Care

Knowledge and Attitudes

The first category of MCH covered by Totohealh's messages is antenatal care. Knowledge outcomes on this topic are high among mothers that subscribed with Totohealth early in their pregnancies, but lower for mothers who did not receive messages on this topic. An interview with a mother that began her subscription after childbirth exhibits this uncertainty:

> *"It [antenatal care] helps to know the conditions of the child. I also know my condition. I am not sure of that [how often to visit the clinic]. It depends when you started. Somebody goes monthly, and it depends when you started (..) Yeah [I only started receiving messages after giving birth]."* KII 22

Those with strong knowledge of antenatal care correctly identified the numerous ways antenatal care contributes to healthy pregnancies including: blood tests, monitoring mother's health, testing for abnormalities, testing for HIV prior to transmission to baby. These mothers also said that antenatal visits were important sources of information for all subsequent stages in their pregnancies. Girls that did not receive Totohealth messages about antenatal care also appreciated that it was important to attend all appointments but could not identify why, suggesting that Totohealth affected their attitudes but not necessarily their knowledge in this regard.

Roughly a third of the respondents with current poor knowledge of antenatal care, retrospectively, saw its importance. One mother, who was motivated to sign up for Totohealth in the future to help her change her behaviour, said:

> *"I will register, because I didn't get knowledge during my pregnancy so that I get to learn and so that I stop this bad habit of commencing ANC at 7 months".* KII5

The findings suggest that Totohealth raised girls' sensitivities as to MCH in general and the importance of antenatal visits, more specifically.

Practices

As mentioned above, girls who did not register for Totohealth early in their pregnancies did not have good antenatal knowledge and practice. From this population, some attended fewer than the minimum recommended number of antenatal appointments. Others did not begin antenatal clinics until late in their pregnancies and thus, did not practice proper antenatal care until just a few months prior to birth.

Mothers that received Totohealth messages from the beginning seem to be much more likely to exhibit health-seeking behaviour throughout their pregnancies, suggesting that adequate exposure to the content of the SMS messages is required to bring about a change in health seeking practices, but also that Totohealth might have had significant impact on health seeking behaviours.

Box 6: Outcome Contribution - Antenatal Care Knowledge, Attitudes, and Practices

- Findings suggest that Totohealth affected girls' knowledge around and attitudes towards ANC. Where it did not affect knowledge levels, it seems to still have affected attitudes.
- Findings indicate that Totohealth raised girls' sensitivities as to MCH in general and the importance of antenatal visits, more specifically.
- Findings also suggest that Totohealth might have had significant impact on ANC health seeking behaviours.

Pregnancy Health

Knowledge and attitudes

Knowledge on general Pregnancy Health — the third component of Totohealth's messaging — was strong. In certain cases, the findings strongly suggested that Totohealth generated this knowledge, but in others, it was hard to isolate Totohealth's impact from the knowledge derived from experiencing pregnancy. Presumably girls would have, at the very least, had a basic understanding of pregnancy health. However, findings do suggest that Totohealth helped reinforce knowledge and perhaps provided some new knowledge. Those with good knowledge on this topic knew how to identify symptoms of complications during pregnancy: bleeding, chronic nausea, pains, fatigue. They also knew the length of pregnancy, listed the signs of labour, and shared healthy behaviour while pregnant. The quarter of respondents that had minimal outcome knowledge about pregnancy health were unable to identify as many symptoms of possible complications. Five out six of these respondents did not begin their Totohealth subscriptions until after giving birth, suggesting that Totohealth messages did contribute to knowledge of pregnancy health.

The knowledge provided from Totohealth's messages raised girls' awareness to the importance of managing stress during pregnancy. Nine interviewees reported that stress is unhealthy for pregnancies, and that stress-mitigating methods should be employed.

> *"When pregnant, you need to avoid a lot of stress because it could cause pressure and possibly miscarriage, so you need to be stress free."* KII12

Mothers learned of the harmfulness of stress during pregnancy and recounted, in roughly 38% of interviews, that it should be avoided as best as possible. Findings suggest that these improvements in knowledge of psychological health were accompanied by behavioural benefits as well, the latter will be discussed below.

Practices

The pregnancy health SMS messages were particularly helpful in dispelling misinformation about behaviour during pregnancy. Often young mothers would, prior to receiving the messages, have certain attitudes regarding MCH that were not necessarily beneficial to their own and child's health. For example, four subscribers previously thought it was appropriate to eat whatever foods their pregnancy cravings demanded, which typically, was junk food.

The findings show that 75% of interviewed mothers had adequate or more than adequate dietary health during pregnancy. However, Totohealth not only taught girls that having a healthy diet while pregnant is essential to the development of the unborn child, it also made girls feel more comfortable in their pregnancies, allowing them to maintain the appropriate habits during pregnancy, like exercising, performing mild work and cooking.

Finally, women that might had taken to bed due to the normal fatigue of pregnancy summoned the energy to increase their overall activity by going for walks or moving around the house. Roughly one-third of respondents explicitly attributed these changes in their practices to Totohealth.

> *"Yes, I am [putting into practice what I have learned from Totohealth]. I remember they used to tell me that I should exercise my body even if you are pregnant, you don't just sit down and do nothing, you should exercise by walking and doing other works… I used to walk".* KII *8*

Box 7: Outcome Contribution - Pregnancy Health Knowledge, Attitudes, and Practices

- Findings suggest that outcome knowledge on pregnancy health was strong, but only approximately one-third of respondents directly attributed this to Totohealth.
- Totohealth's effect on knowledge levels is not always clear, particularly in areas where girls had prior knowledge.
- However, comparisons of knowledge levels in late subscribers suggest that Totohealth messages did contribute to knowledge.
- Findings also indicate that the Totohealth messaging was useful in dispelling misinformation.

Safe Delivery

Knowledge and attitudes

Every mother knew that it is safer for a baby to be born in a hospital in case complications arose during labour. As explained below, this did not always translate into practice. However, it is not clear, whether girls received information that babies should be delivered in hospitals from Totohealth, school education, or family member especially since this safe delivery knowledge is assumed to be elementary and widespread.

Findings from the KIIs suggest that Totohealth messages changed the attitudes of some women regarding delivery that subscribed. When it was most effective, Totohealth alleviated some of the nervousness mothers felt before giving birth by providing them with preparatory information.

> *"They helped me by preparing my psychologically. I was ready [to] look out for signs of delivery. They had also told me when the times comes I should go to hospital. They had also told me what to pack when going for delivery, so I was ready."* KII 4

For those cases where Totohealth was not responsible for the alleviation, the reason was because most women already knew hospitals facilitate safe delivery. However, for one mother the information was particularly revealing.

> *"Yes, it [Totohealth] taught me more (..) [I remember] to save your life and your baby's life, you need to deliver at the hospital (..) I didn't know [that before]."* KII11

For the girls who scored lowest on the knowledge assessment for Safe Delivery Practices, Totohealth delivered the fundamental knowledge of safe delivery. However, from the KII findings it cannot be determined that this knowledge was 'new' to some of the more informed subscribers. The findings do, however, suggest that Totohealth may have reinforced the messaging around safe delivery.

Practices

While a vast majority of mothers actually delivered in a hospital, at least two gave birth at home. These instances were not due to a lack of knowledge but rather a lack of access to medical facilities, (one respondent had been at a hospital but had been refused service or otherwise returned to her home to give birth) suggesting that increasing knowledge is not always a sufficient measure to bring about behavioural change on its own. Again, because this component of MCH is elementary and widespread, it is difficult to determine the extent of Totohealth contribution.

Box 8: Outcome Contribution - Safe Delivery Knowledge, Attitudes, and Practices

- Findings suggest that the knowledge did not always translate into changed practice.
- Findings indicate that interventions may need more comprehensive approaches to bring about behavioural change.
- It is not possible to conclusively state that Totohealth has improved knowledge and attitudes regarding safe delivery practices, however findings do suggest that Totohealth at the very least reinforced the messaging around safe delivery.

Immunisation

Knowledge and attitudes

Immunisation was the weakest area of outcome knowledge. Most mothers either did not know or were unable to recall the specific illnesses vaccines protect against. Some misidentified illness as being preventable by vaccines. Another area of weakness was in recounting the appropriate schedule for administering vaccines. Almost half of all interviewees missed one, or both, of these elements.

Subscribers with a high level of outcome knowledge— roughly a quarter— recalled that children receive vaccines immediately after birth or within two weeks, followed by additional vaccines at six, 10 and 14 weeks, then at nine and 18 months.

As the content in immunisation specific messages was much more specific than in the other SMS messages (it provided detail into vaccine schedules and disease), there are a few possible factors that may have confounded the knowledge results, including education levels of the respondents and recall bias.

The majority attitude towards immunisation was positive. Mothers considered vaccination important even if they were not entirely able to describe why and sought vaccinations for their children. Respondents often identified SMS messages about immunisation as the most helpful of all texts received.

> *"The one that was more important to me was the one reminding me about immunisation, giving me the importance of immunisation (..) Because we have other people who will just ignore some things like immunisation, they think it's like immunisation give children diseases and they just ignore but Totohealth gave me the importance of immunisation and I was pleased with that. (sic)"* KII 10

However, common prejudices against vaccines were present in a few interviews, owing to vaccine's 'invisible efficacy'.19 This scepticism suggests that there is an area of opportunity for Totohealth to place greater emphasis on dispelling immunisation myths and not only on prompting girls to seek immunisation for their children.

Practices

Despite these challenges intrinsic to immunisation, many women followed the proper vaccine regime and lauded Totohealth for helping them remember to do so. Because one complete course of childhood vaccinations occurs over a few years, mothers valued the reminders Totohealth would send them. Roughly a quarter of mothers with 'good' immunisation practice explicitly stated that Totohealth's calendar-keeping improved their compliance with the immunisation practice prescribed by doctors.

For this component of Totohealth's messaging, improvements to outcome practice exceeded outcome knowledge. This reveals some of the user-behaviour impacts of the SMS messages. In this case, perhaps mothers simply followed the instructions given to them by Totohealth but did not engage with the accompanying content.

[19] When a vaccine is working, there is no tangible proof that it has; the absence of a disease can either be due to immunisation or simply good luck.

Nevertheless, Totohealth was very effective in following-up with young mothers, prompting them to vaccinate their children.

Box 9: Outcome Contribution - Immunisation Knowledge, Attitudes, and Practices

- Findings show that despite a relative lack of knowledge, health-seeking behaviour may still have been affected through messaging. This may be because messaging focused more on prompting and less on dispelling myths.
- Totohealth's behavioural prompting messages (i.e., immunisation reminders) contributed to better immunisation practices.

Influencing Factors

- As the content in immunisation specific messages was much more specific and directional than in the other SMS messages, there are many possible factors (education levels, recall bias, etc.) that may have confounded the knowledge results.

Breastfeeding and Child Nutrition

Knowledge and attitudes

Totohealth significantly improved Breastfeeding and Child Nutrition outcome knowledge among subscribers. Interviewees demonstrated a clear understanding of proper breastfeeding techniques, schedules and purpose. They listed the frequency a baby should eat during a given day, how and when to wean baby off breastfeeding, and the nutritional importance of the soft foods they introduce into the baby's diet. All such topics were detailed in Totohealth's SMS messaging. Much of the knowledge regarding breastfeeding and nutrition was completely new to the subscribers and so they described the counter-factual: what they would have fed their baby if they had not received any messages. For example, had it not been for Totohealth's SMS messages, many young mothers would not have known that their own diet has ramifications on that of the baby through the nutrients transferred via breastmilk. Indeed, fifteen interviews explicitly attributed the knowledge they gained on child nutrition to Totohealth's messages. All fifteen respondents had adequate or above adequate knowledge on the topic. Contrarily, three interviewees with an equivalent level of outcome knowledge on breastfeeding and child nutrition identified alternate sources of information, such as doctors and school.

> *"[Totohealth helped improve my knowledge by send[ing] the messages reminding me how important it is to breastfeed the baby exclusively for six months then I can start feeding her now and also introducing one type of food a time. So, I got a lot knowledge and when she started eating I did not mix her foods because I knew. I would monitor how the food reacts on her before introducing a next."*
> KII 4

The degree of impact Totohealth had on this cohort of fifteen girls' knowledge can be measured free of any cofounding sources of information. It is evident from these interviews, that Totohealth is directly responsible for vastly improved knowledge and practice for breastfeeding and nutrition. This is discussed in greater detail in the practices section of this category below.

Subscribers' attitudes relating to breastfeeding and nutrition were improved by the SMS messages. Of all outcome areas, breastfeeding and nutrition had the second largest impact on mothers' overall confidence in themselves. Numerous interviewees explained that these messages were instrumental in raising their confidence as mothers, because they could relate Totohealth's messaging to their immediate life.

> *"Okay. For one you need to be sincere for once that time when my child wasn't eating when I go to messages from total health. I dint know there was more responsibility once the child starts to eat. I need to wake up very early to prepare porridge for him. That time, I used to breastfeed him when he cries. When you started sending me those messages, he was also starting to feed. So it dawns to me that so am a mother. I know to wake up early."*

As every meal presented an opportunity for mothers to literally provide for their children, many Totohealth subscribers were continuously 'rewarded' with the feeling that they were, indeed, taking care of their children, which in turn greatly improved confidence.

Because keeping a proper breastfeeding routine and maintaining proper nutrition is a continuous practice occurring every day, mothers were particularly attuned to lessons about it. As part of the interviews, subscribers were asked which information was most useful to them. Breastfeeding and child nutrition were the most common answer.

> ***"[The most useful information was on]*** *complementary feeding because compared to my first child I cared about the types of food that I gave my child, I used to give the child even ugali, so this was useful."* KII 5

Practices

Again, the continuous relevance of SMS messaging about breastfeeding and nutrition amplified the applicability of the information contained therein. This also meant that mother's breastfeeding and nutritional outcome practices changed most dramatically as well. Much of the information on this topic was new to the mothers, so they had previously been practicing non-Totohealth sanctioned childcare. After receiving the messages, and learning the significance of proper diet and nutrition, many mothers changed their behaviour accordingly.

> ***"****They [Totohealth] used to send the messages reminding me how important it is to breastfeed the baby exclusively for 6 months then I can start feeding her now and also introducing one type of food a time. So, I got a lot knowledge and when she started eating I did not mix her foods because I knew. I would monitor how the food reacts on her before introducing a next."* KII 4

The findings suggest that mothers implemented their newly acquired knowledge in 'real-time', or in other words, as they received the messages. Totohealth helped with what specific foods should be included in child's diet and in what sequence they should be introduced. This complex topic was effectively taught to the majority of interviewed subscribers, with material, emotional and physical benefits as a result.

Box 10: Outcome Contribution - Breastfeeding and Child Nutrition Knowledge, Attitudes, and Practices

- Findings strongly suggest that Totohealth messaging significantly affected knowledge levels around breastfeeding and nutrition.
- Findings also show that Totohealth is directly responsible for improved practice for breastfeeding and nutrition and correct incorrect behaviour.
- Immediately and regularly applicable information (breastfeeding and child nutrition are presumably more day-to-day functions compared to other factors like antenatal care and immunisation) may have amplified interest and contributed to the change in behaviour.
- The ease of applicability greatly improved confidence of mothers.

Influencing Factors

- It is evident from fifteen interviews, that Totohealth is directly responsible for improved knowledge and practice for breastfeeding and nutrition. For these interviews, the degree of impact Totohealth had on girls' knowledge on this topic can be measured free of any cofounding sources of information.
- Findings indicate that there was more of a knowledge gap in breastfeeding and child nutrition knowledge than other areas, such as antenatal care and pregnancy health, which may make Totohealth's contribution seem greater than on other topics.

Child Development

Knowledge and attitudes

Young mothers explicitly mentioned Totohealth's contribution to their own abilities as mothers to understand, identify and practice good child development. Information on this topic is inherently complicated, and early child health and development is multi-faceted and specific to each individual child, yet equally broad. This broad topic often made the qualitative data general, even after probing.

Totohealth helped its subscribers be more certain of what they must do as mothers of new-born children, however the details of how it did are difficult to determine. Regardless, Totohealth's messages explained these topics and communicated them in an intelligible way to its subscribers. Girls learned the value of keeping the environment around the child clean and clear of danger—a challenge in poorer areas without formal waste systems. They also learned that child activity exploration, and experimentation (supervised) is healthy for the child's mental development.

Subscriber's attitudes relating to child development changed significantly with the assistance of Totohealth. SMS messages about child development were identified as 'most useful' with the second highest frequency by interviewed subscribers.

> ***"[The most useful messages, to me, were] on child growth.*** *Being a young mother, I did not know anything about children. I would hear people saying you are supposed to do this and that, but I was not sure but with Totohealth they followed me up and they have really helped me in taking care of this baby."* KII6

Because of the all-encompassing nature of the child development SMS messages, they had a generalised impact on the mother's overall attitude and stress levels relating to childcare in beyond those directly related to child development. The assistance and assurance Totohealth's messages provided young mothers on child development did a lot to assuage the worry of having a young child.

Practices

In a practical sense, Totohealth SMS subscribers benefitted greatly from receiving information on child development. In most cases, women who had 'average' or 'good' scores on the knowledge assessment had high rates of compliance with proper childcare practices. Also, they typically put their newfound knowledge into practice immediately and corrected past behaviour. The most commonly identified changes in practices were as follows; how to properly support the baby while holding him/her; how to maintain a clean environment for the child; the significance of hygiene for the baby; and encouraging babies to explore and interact with their environment. Often, mothers did not know how essential it is for babies to play outside and be active. This can be observed in the quote in the previous section. Mothers, understandably, were over-cautious with their new-borns, but adopted freer behaviour after learning from Totohealth.

Furthermore, subscribers consulted Totohealth throughout their child's development as one would consult a standard medical professional.

> ***"****Yes, there was a time they really helped me. The baby had diarrhoea. It was about 10am and I just heard a message come through and it was talking about diarrhoea and vomiting, and they said I should buy him ORS and Zinc and I did that. I even sent them a message after that. (..) I told them that the baby was sick with diarrhoea. They replied and told me to give him a lot of water and the Zinc tablets."* KII 16

Because Totohealth was responsive and authoritative, subscribers complied with the SMS directives. In a few cases, Totohealth overrode the dispositions of the mothers, so that they went against their intuition and followed Totohealth's advice instead. For example, one subscriber was hesitant to let her daughter play with water because she believed that she would get sick. However, Totohealth encouraged her to let her daughter play in the sun and exercise her curiosity, to which the mother complied, but very cautiously. After seeing how this aided in her daughter's development, the mother concluded:

> *"I had challenges because I did things according to my knowledge, I did not like introducing new things but sometimes I would just try… [Totohealth] reduced my fears. I think I was too careful with my child, for example… I thought she would get sick from the cold air outside. But I started feeling free with the child, I would take her out to play with other children. This was because of Totohealth".* KII 1

The findings demonstrate just how influential Totohealth was amongst subscribers. Given accurate information, mothers were willing to completely alter their own behaviour to the benefit of the child's health.

Overall, many interviewees felt supported by Totohealth and reinforced in a way that was evocative of a real human relationship. Mother's turned to Totohealth when they needed help, when they were unsure or when they simply wanted to know more.

However, the topic is broad and yet, very specific to the individual child and respective family. For this reason, improvements in child development, while robust, were more ambiguous than those seen in breastfeeding and child nutrition. Thus, it is difficult to determine the precise parameters of Totohealth's influence in this area; alternative sources of information are prevalent. Lastly, this stage of childrearing happened most recently in relation to the interview, so the accessibility of such memories may cause child development messages to stand out in the minds of the interviewees.

Box 11: Outcome Contribution: Child Development Knowledge, Attitudes, and Practices

- Findings strongly suggest that Totohealth messaging contributed to their own abilities as mothers to understand, identify and practice good child development.
- Findings suggest a high level of relevance as child development messages were identified as most useful.
- Attitudes relating to child development matured significantly with the assistance of Totohealth.
- Findings show that a greater level of knowledge is associated with higher rates of compliance with proper childcare practices, suggesting Totohealth messaging contributed to improving practices.
- Mothers had great level of trust in Totohealth, with messages sometimes overriding the dispositions of mothers.

Influencing Factors

- The degree of impact Totohealth had on girls' knowledge can be measured free of any cofounding sources of information. It is evident from the interviews, that Totohealth is directly responsible for vastly improved knowledge and practice for child development.
- However, as the topic is broad, with alternative sources being prevalent, and at the same time specific to each mother and her child, it is difficult to attribute improvements in child development knowledge, attitudes and practices to Totohealth alone.
- Potential response bias pertaining to the proximity of the stage of childrearing, with greater accessibility of such memories.
- The topic of child development was the primary focus of Totohealth messaging, with 148 out of 257 messages containing child development content. This may have affected perceived contribution.

3.3 Contribution to Well-Being and Confidence Outcomes

This section presents findings of Totohealth's contributions to a girl's overall well-being and confidence (as described in the ToC and REF). It specifically outlines more generalised impacts to well-being in other areas the girl's lives. (e.g., self-care, earnings and savings). This section also outlines Totohealth's contribution to a girl's confidence in themselves as decision-makers for their and their children's health.

Findings from our research suggest that Totohealth's contribution to impact was largely discrete to MCH and the immediate practices. More generalised improvements to well-being in other areas of subscribers' lives—self-care, earnings and savings, keeping a home, and education—were minimal. More than two-thirds of all interviewees stated that Totohealth helped them with MCH only. There were, however, two respondents that stated that Totohealth helped them balance their life and find better employment as a result. From the interviews, it is evident that the circumstances of many of subscribers' lives are so adverse, that it is reasonable that Totohealth's SMS messages would be unlikely to yield major improvements. Many interviewees cited financial insecurity, absent fathers and community stigma as major problems in their lives, and in light of such multi-faceted hardship, the tangible improvements Totohealth made in MCH well-being is a substantial accomplishment.

With regards to girls' confidence in themselves as decision-makers for their and their children's healthcare, outcome confidence was unanimously high. Nearly every mother reported feeling more confident in her ability to be agent in MCH decisions in her and her child's life. Roughly a third of these directly attributed their improved confidence to Totohealth's SMS messages, while the other two-thirds were unable to identify the sources of their greater confidence. Presumably, a significant amount of confidence in MCH was gained through experiencing motherhood for the first time.

Where Totohealth improved confidence among its subscribers, subscribers' mothers said:

> *"It reduced the worries I had about the child because I would ask people about everything but then with Totohealth, I came to know a lot on how to raise my child just from the comfort of my home."* KII1

> *"The biggest help was to my husband because husband do not agree to take us to the clinics so that they can understand some of the challenges that we go through. So, when I get the message they also send it to your husband if you have one."* KII9

The findings suggest that Totohealth's messages achieved their aim of increasing confidence among its subscribers. This greater self-assurance also improved some girls social-standing within their communities. The quote above illustrates how Totohealth enabled that particular subscriber to have greater authority in decisions relating to the family. Armed with reliable information, Totohealth's subscribers could assert their agency in their lives and those of their children.

Box 12: Outcome Contribution – Wellbeing and Confidence

- Totohealth's contribution to a girl's overall well-being was low. Impacts were limited to MCH related outcomes with very few girl's mentioning impacts in other areas of well-being (e.g., self-care, earnings and savings, keeping a home, and education).
- Totohealth's contribution to a girl's confidence was significant for decision-making on MCH issues, as also seen in MCH outcomes, particularly around child development. However, the research yielded few results around confidence in other areas of a girl's life.

Influencing Factors

Well-being

- Limited contribution to well-being outcomes is likely because Totohealth's SMS curriculum was targeted on MCH content and did not provide information to specifically help develop other areas of general well-being.
- Findings suggest that without providing the right tools and support to help facilitate changes in other well-being outcomes, it would be difficult to see any major improvements in these other areas, especially with the majority of these girls reporting additional life challenges.

Confidence

- The evaluation could have taken more time to explore and better understand the potential residual impacts of Totohealth on other areas of a girl's life.
- It is possible that a significant amount of confidence in MCH was gained through experiencing motherhood for the first time.

3.4 Influencing Factors

This section presents findings on influencing factors and conditions that might enhance or inhibit Totohealth from achieving its short-term, intermediate and long-term outcomes (as described in the REF). It specifically outlines the different types of barriers a girl faces when accessing MCH information and services, including: knowledge, decision-making, health facility and cultural. This section also outlines possible enhancing factors or alternative explanations such as the design of the prototype and other sources of information.

Barriers

The young mothers and pregnant women that comprised Totohealth's subscribers faced formidable impediments and disadvantages in knowing about, forming attitudes regarding, and practicing proper MCH. Adverse circumstances presented numerous complications for them to overcome. This was the context in which Totohealth worked to provide young mothers with direct access to medical advice and consultation.

Of the many challenges this section addresses, the four most significant categories include: knowledge barriers, decision-making barriers, health facility barriers and cultural barriers. These categories affected different subscribers in different ways. To determine the extent to which these present influencing factors affecting Totohealth's contribution, the respective sections will explore their relative frequency and size of disruption.

Knowledge Barriers

The foremost issue preventing girls from accessing credible information regarding their pregnancies or motherhood is a simple lack of guidance. Due to the fragile position—social, emotional and educational—of young mothers, many lacked basic information on MCH and had no one to consult. Confusion resulting from conflicting advice, the lack of information or trustworthy advice was raised as a 'main challenge' to young mothers in four of six FGDs and determined to be 'somewhat likely' in five of these. Although there was no consensus on it being a 'very likely'

challenge, findings suggest it to be a widespread issue. The severity and likelihood of this issue varied between focus group discussions. Where reported in the Totohealth subscribers focus group discussions, it was explicitly noted that Totohealth helped address this very issue.

This situation has the familiar predicament where girls are doubly disadvantaged because they may be unaware of the knowledge they are missing. Mothers will often turn their back on their daughters after they find out they are pregnant because of the shame or burden it has precipitated. In this case, girls are especially vulnerable to misinformation.

Next, young girls lacking adequate exposure to proper MCH are unshielded from confusion when they are inevitably confronted with conflicting information regarding pregnancy and childcare. Qualitative data occasionally chronicled the bewilderment young mothers may face when inundated with conflicting information, advice, or guidance on MCH from their community. One interviewee explained one such time:

> *"Maybe outside you may go to someone and tell that my child has a problem they might direct you to the wrong place, you must be kin with those you talk to and who to ask information about your child. Like me this one was sick, and I was told ooh take the child home to be washed with herbs, others say she has plastic teeth, all that so there is a doctor here in Kariobangi who just rub some medicine and she was okay, so it depends on who you listen to".* KII7

In some cases, subscribers may find that members of their immediate community may lack the same information they do. An interview with an 18-year-old mother revealed an example when asked about sources of information other than Totohealth:

> **"***Friends can advise you, but you cannot trust them completely (..)* Because you can be misled by friends, it's not 100% sure or reliable". KII19

This uncertainty about sources of information is prohibitive to proper MCH practice. To reiterate, the findings show that many mothers similar to Totohealth's subscribers suffer a dearth of reliable, accessible sources of information. Even if they wish to improve their understanding of pregnancy and motherhood, they are unable to do so. These findings suggest that improving access to sources of information may significantly empower young mothers to be more agent in topics intimately related to their own and child's health.

Decision-Making Barriers

Numerous factors interrupted or otherwise restricted girls' agency or independence in making decisions regarding their or their child's health. The most apparent was financial difficulty. This was also a very common issue raised in the FGDs, however, it was not necessarily the most likely to occur. When focus group participants recounted common challenges mothers faced, they focused on more specific issues that came to mind. While financial difficulties likely compound many of the other challenges identified, it is evident that mothers were more concerned with more material challenges like the poor quality of medical services. In this way, the opportunities available to the average interviewee were largely determined by their wealth. For poorer subscribers, this restriction was more severe.

Further, the young age of the mothers themselves put them in a subordinate position in decision making to that of their own mothers. Subscribers' mothers sometimes made decisions about the baby's health unilaterally, without consulting the mother. It should be noted that while this was a barrier to some, others found it helpful. Two interviewees had experienced trauma relating to their pregnancy and thus, were relieved to relinquish some responsibility to their mothers.

The fathers responsible for the pregnancies also affected the options available to a young subscriber, usually negatively. It was evident from the qualitative data that it is common for men to abandon their 'girlfriends' once they become pregnant. This jeopardised the girls greatly, generating stigma as 'single mother' and limited what choices they had. Furthermore, this burdens the mother and her family with the whole financial responsibility of child rearing, which in turn, made girls more vulnerable to the whims of her family and the adversity in her life.

Health Facility Barriers

Accessing health facilities was a major barrier to proper MCH for most of all interviewed subscribers. Issues with health facilities/services were the first and second most significant challenges young mothers faced in both unanimity and frequency.

The foremost challenge was accessing quality medical facilities. Some iteration of this issue was present in every FGD. It was thus, the single greatest barrier to MCH that mothers faced, and consistently identified as 'very likely'. FGDs explored various components of this: the cost of accessing distant hospitals, accessing hospitals at night, lack of equipment/medicine at hospitals, long queues for service.

Health facilities were often located far away from the users, and thus required long and expensive travel. For others however, roughly a third of interviewees, this did not pose any barriers to accessing health facilities. Another component was the actual cost of medical treatment. Among the poorer subscribers, this greatly restricted MCH opportunities available to them. Those who could afford private treatment were often exempt from the issues with health facilities in general, but those that could not had to attend public health facilities which were usually further from their homes.

The poor quality of some hospitals and clinics moderately discouraged some interviewees from receiving formal medical care, particularly at government institutions. Totohealth subscribers complained of long queues to even been seen by a preliminary doctor, lazy or absent staff, and insufficient medical equipment and supplies.

The second largest issue identified was beratement or other verbal abuse by medical staff. Roughly half of the informant interviews, and the majority of FGDs identified mistreatment by the medical staff as a significant deterrent to using health facilities. This was a commonly identified challenge; five of six FGDs raised this issue. However, it was more polar in how likely it was perceived to be. While one FGD of seven participants unanimously voted for it as 'very likely', other FGDs found it to be 'somewhat likely'. Regardless, abuse from medical staff was a significant challenge to the average Totohealth user.

Subscribers recounted times when medical staff would shout at them for minor errors in childcare or for not knowing something. Instead of correcting behaviour and improving MCH practices among patients, it seemed that this chastisement only discouraged some mothers from frequenting medical facilities. A critical issue with this behaviour at the hands of medical staff is that it impeded consultation and advice-seeking through formal pathways. If young mothers were not comfortable with the medical staff and worried about possible verbal abuse, they were unlikely to ask questions to their doctors. For this reason, beratement was also a primary knowledge barrier.

In this respect, and arguably not surprisingly, no FGD reported that Totohealth directly helped them with their issues with access and quality of healthcare. They did, however, explain that Totohealth gave them knowledge on how to better take care of their children but did not explain how this interacted with the disutility of poor medical provision.

Cultural Barriers

The last category of impediments to proper MCH knowledge, attitudes and practice constitute cultural barriers. Challenges of this variety were raised in four of six FGDs with varied likelihood. On average, it was assessed to be slightly below 'somewhat likely'. It was explained that traditional believes govern the homestead and they must be obeyed. Even if the mother may be against such practices, because others—husbands or relatives— believe them, so must they.

While the presence of traditional beliefs practices—only some of which are contrary to Totohealth's messages—were present in qualitative data, it is hard to measure the degree to which they interrupted Totohealth-suggested MCH practices. FGDs spoke extensively about traditional beliefs and their role in healthcare, but while the qualitative data suggests that the public is certainly aware of traditional beliefs practices, they do not seem to determine primary MCH responses. Traditional medicine is typically reserved for cases of last resort. For all the participants in the FGDs, traditional medicines were used either when their mothers/grandmothers made unilateral decisions about the baby's health or, out of desperation when modern medicine did not have the desired results.

Box 13: Influencing factors - Barriers

- Only FGD comprised of non-subscribers ('control groups') raised 'access to information' as a major barrier young mothers face, suggesting that Totohealth subscribers are less likely to experience a lack of access to information.
- Other knowledge barriers, such as a lack of guidance and conflicting information are widespread and may significantly affect girls' ability to increase their knowledge, improve their attitudes and increase their health-seeking behaviours.

- Decision-making barriers pertaining to financial hardship, family involvement and stigmatisation negatively impact girls' ability to engage in MCH practices.
- Health facility barriers, such as limited access to youth-friendly and quality MCH services, present a major barrier to girls seeking health-practices and influencing factor to Totohealth's contribution to this.
- Financial concerns were responsible for the majority of decision-making barriers and health facility barriers.
- While cultural barriers to Totohealth-sanctioned MCH were present, their interaction with MCH behaviour or practice seems to be marginal.

Enhancing Factors/Alternative Explanations

As mentioned in Section 3.2, some of Totohealth's efficacy was because it worked in conjunction with other sources of information, namely doctors and clinic staff. Not only did Totohealth corroborate information the girl's received from health care staff, it also supplemented, professional medical care. One salient reason that subscribers with good outcome knowledge valued Totohealth was because the SMS messages helped explain complicated concepts that their doctors either passed over or gave a rushed, insufficient explanation about. Because medical facilities are commonly short-staffed, their staff may be unable to spend a long time explaining necessary MCH information to young mothers. Totohealth mitigated this issue by providing more detailed information. Furthermore, the SMS messages are physical, meaning that mothers could go back and reference a certain topic if they did not understand it the first time.

More importantly, the messages reiterated the same information doctors provided. All interviewees stated that there was 'no difference' between the information given doctors and from Totohealth. Presumably, receiving the same information from various sources increased compliance with proper medical advice as it increased overall exposure to correct information. For this reason, along with medical professionals, Totohealth was the most trusted source of information to those subscribed. In this sense, alternative sources of information may have enhanced trust in Totohealth and likelihood of it affecting MCH knowledge, attitudes and practices.

Furthermore, four respondents explained that their knowledge of pregnancy and MCH was learned in school. Mothers as well as radio/internet were major sources of information and advice for adolescent mothers. This suggests that the outcome knowledge, attitudes and practices measured in the qualitative data cannot be solely attributed to Totohealth's SMS messages.

Other potential confounding factors may be present too; the experience gained by having a first child is significant, and second pregnancies are usually much more informed.

Box 14: Influencing factors - enhancing factors and alternative explanations

- Design of the prototype, including content of Totohealth's messages allowed for a great level of trust in the service and compliance with advice. At the same time, alternative sources of information may have enhanced trust in Totohealth and likelihood of it affecting MCH knowledge, attitudes and practices.
- Access to alternative sources of information, such as school, prior experience and family, present a crucial alternative explanation, suggesting that knowledge outcomes should not be exclusively attributed to Totohealth messaging.

3.5 Conclusion: Totohealth's Contribution Story

This section presents the final, overall conclusions — Totohealth's actual contribution — to improvements in MCH outcomes for girl subscribers. It draws its conclusions after critically analysing the results presented above including: changes in MCH, well-being and confidence outcomes as well as the magnitude the influencing factors had on these outcomes.

Introduction

Totohealth's overall goal is to use mobile SMS technology to help reduce maternal and child mortality and detect developmental abnormalities in early stages of childhood. To reach this goal, Totohealth, with support from SPRING, aimed to reach the most vulnerable population — young pregnant girls — with targeted MCH information. The Totohealth SPRING prototype was developed to provide MCH information to young mothers during pregnancy

and for the first two years of their child's lives. It was expected that by providing young girls with information on antenatal care, safe delivery, pregnancy, immunisation, nutrition and breastfeeding, and child health, that young mothers would experience positive changes in their MCH knowledge that would improve their attitudes and ultimately their result in greater health-seeking behaviours.

Contribution Outputs

For these outcomes to occur, some underlying assumptions and outputs needed to be met, including:

- Girls received the messages as planned;
- The content of the messages relevant;
- The content of the message was easy to understand; and
- Totohealth was seen to be a trusted source of information.

Findings presented in the text box below summarise the main output findings of an assessment of these and Totohealth's contribution to them.

Box 15: Contribution outputs

- The majority of interviewed subscribers registered after giving birth. Thus, Totohealth was unable to reach pregnant adolescent girls, as it had set out to do.
- Overall, mobile phones were an effective and preferred method of communication as identified by 21 subscribers, taking the small number of subscriber-initiated challenges into account.
- Totohealth was unanimously trusted as a source of information and provided clear, highly relevant information.
- Totohealth's messages contained the same information as that provided by professional medical staff, which improved Totohealth's credibility among its subscribers.
- Interviewees unanimously valued relevance and accuracy of Totohealth's SMS service, measured by a willingness to subscribe for subsequent children, a willingness to pay, and a proclivity to save and share received messages.
- Despite this, Totohealth was unable to make its services fully accessible to its subscribers. Technical issues and issues pertaining to phone sharing resulted in Totohealth being unable to make its services fully accessible or anonymous to these girls and therefore less likely to reach marginalised and hard to reach girls most affected by a lack of information, as it had set out to do.

Contribution Outcomes

Next, the MCH outcomes that Totohealth was anticipated to achieve with the prototype were measured as well as Totohealth's contribution to those through carefully assessing subscribers' knowledge, attitudes and practices on MCH issues. The outcomes measured include:

- Girls have more awareness and knowledge on MCH issues;
- Girls have a positive attitude on MCH issues;
- Girls are more confident in making decisions about their child's health;
- Girls are practicing positive health seeking behaviours for them and their child; and
- Girls have improved well-being and confidence.

Box 16 summarises outcome findings around primary MCH mechanisms and wellbeing and confidence, as well as Totohealth's contribution to those outcomes.

Box 16: Contribution Outcomes

- Majority of girls began prioritising their own and child's health after receiving messages from Totohealth.
- Overall, Totohealth substantially improved maternal and child healthcare of subscribers across all three metrics of impact: knowledge, attitudes and practice. Principally, many girls felt empowered to be better

mothers after receiving SMS messages from Totohealth. Equipped with greater knowledge and awareness about their and their child's health, girls' self-perceptions and confidence as young parents improved. However, these outcomes varied by specific indicators.

- Girls' knowledge was greatly expanded through their subscription to Totohealth. Those that registered with Totohealth early in their pregnancies had much better knowledge of early-stage MCH than mothers that registered after completing such stages, such as after having given birth. Put simply, knowledge was observably better on topics covered by Totohealth SMS messages.
- Furthermore, girls' attitudes relating to MCH were also positively influenced by Totohealth subscription, however less robustly than knowledge. Almost all girls said that they are 'better mothers' because of what they learned from Totohealth. The findings also suggest that girls now pay more attention to healthcare and well-being in general.
- Findings suggest that Totohealth's impact on MCH practices was significant, however more fragmented than the improvements to knowledge. Changes in MCH practice mostly focused on later stage topics, such as breastfeeding and nutrition, and child development. In both cases Totohealth had great impact in teaching mothers the appropriate methods of childcare, many of which were completely new to them.
- A main assumption of the Totohealth prototype was that providing knowledge to girls will result in pregnancy AND early childhood behaviour change. However, there is greater evidence of some changed behaviours (e.g. childcare) than others (e.g. pregnancy).
- Equipped with reliable information, Totohealth subscribers felt more self-confident in their daily lives and asserted their influence in decision-making relating to MCH more actively.
- It was assumed that through the results chain if a girl improved her MCH outcomes, then other areas of her life, such as wellbeing and confidence would also be positively impacted. However, Totohealth's impact on girls' well-being and confidence was fairly limited to areas related to MCH.

Influencing Factors

Additionally, to critically examine Totohealth's contribution to MCH outcomes among young mothers, it was necessary to understand if any potential influencing factors such as barriers to accessing MCH information and services or enhancing factors such as other programs providing the same information existed and influenced the Totohealth subscribers. We also tested the following anticipated mechanisms to measure Totohealth's contribution:

- Girl's confidence in making decisions on MCH issues is influenced by other sources of information.
- Girls do not access MCH services because they are not comfortable and have negative attitudes
- Girls do not access MCH services because of their status within the household and society.
- Girls are practicing positive health seeking behaviours for them and their child as a result of MCH offered by alternative sources of health care.
- Girls have improved well-being and confidence as a result of other knowledge and skill-building programmes.

We found significant barriers, but only a few enhancing factors and alternative explanations that may have influenced Totohealth's contribution to MCH outcomes. We also determine the extent to which these present influencing factors affecting Totohealth's contribution. The findings are summarised below.

Box 17: Influencing factors - barriers

- Findings suggest that Totohealth subscribers were less likely to experience a lack of access to information. Other knowledge barriers, such as a lack of guidance and conflicting information were widespread and may have significantly affected girls' ability to increase their knowledge, improve their attitudes and increase their health-seeking behaviours.
- Decision-making barriers pertaining to financial hardship, family involvement and stigmatisation negatively impact girls' ability to engage in MCH practices.

- Common health facility barriers, such as a limited access to youth-friendly and quality MCH services, present a major barrier to girls seeking health-practices and influencing factor to Totohealth's impact.

Influencing factors: enhancing factors and alternative explanations

- Design of the prototype, including content of the Totohealth's messages allowed for a great level of trust in the service and compliance with advice. At the same time, alternative sources of information may have enhanced trust in Totohealth and likelihood of it affecting MCH knowledge, attitudes and practices.
- Access to alternative sources of information, such as school, prior experience and family, present a crucial alternative explanation, suggesting that knowledge outcomes should not be exclusively attributed to Totohealth messaging.
- It is possible that a significant amount of confidence in MCH was gained through experiencing motherhood for the first time.

Overall contribution of Totohealth

Findings show varying degrees of impact on a girl's attitudes and proactive health-seeking behaviour, well-being and confidence, as illustrated in Table 5. For the most part Totohealth had a positive impact on a girl's health seeking behaviour; however, the extent of the outcomes may have been confounded by a number of internal and external factors. We found several barriers to girls' improving knowledge, attitudes and health-seeking practicing behaviours. The young mothers and pregnant women that comprised Totohealth's subscribers faced formidable impediments and disadvantages in knowing about, forming attitudes regarding, and practicing proper MCH. Adverse circumstances presented numerous complications for them to overcome. This was the context in which Totohealth worked to provide young mothers with direct access to medical advice and consultation.

Although most knowledge outcomes have been found to be directly attributable to Totohealth messaging, access to alternative sources of information presents a crucial alternative explanation, so that knowledge outcomes for certain topics, such as safe delivery, should not be exclusively attributed to Totohealth messaging.

Despite these barriers and possible alternative explanations, this endline study shows that Totohealth contributed significantly to girls' MCH knowledge, mostly through providing them with relevant, comprehensible and trustworthy information and, consequently, improving their knowledge on MCH. Through design of the prototype, including content of the Totohealth's curriculum, the prototype was able to build a great level of trust in the messaging service and consequently achieve a great level of compliance with MCH advice provided, which in turn affected Totohealth's level of contribution.

However, Totohealth's impact was more fragmented in attitudes and behaviours towards MCH than in MCH knowledge. Changes in MCH attitudes and behaviour were mostly identified in later stage topics, such as breastfeeding, nutrition and child development, and less so on early stage topics. A main assumption of the Totohealth prototype was that providing knowledge to girls would result in behaviour change. However, Totohealth contributed most significantly to knowledge outcomes because the primary feature of Totohealth was providing information.

With regards to well-being outcomes, it was assumed that through the results chain if a girl improved her MCH outcomes, then other areas of her life, such as personal wellbeing and confidence would also be positively impacted. However, Totohealth's impact on girls' own well-being and confidence was limited to areas related to MCH.

Nevertheless, for Totohealth to have its optimal impact on desired outcomes, it should aim to address many of the challenges identified by the girls as well as harness some of the opportunities, such as early exposure to its service, discussed in this report. The fragmented impact on changing attitudes and behaviours suggests that increasing knowledge is not always a sufficient measure to bring about behavioural change on its own, and consequently that Totohealth's SPRING prototype may not be sufficient or the right intervention to elicit behaviour change on its own. This is consistent with behaviour change theories[20] and literature[21]. Paired with other

[20] See: USAID. (2015). The Behaviour Change Framework: A template for accelerating the impact of behavior change in USAID-supported MCH programs in 24 priority countries.
[21] See: Kelly, M & Barker, M. (2016). Why is changing health-related behavior so difficult. *Public Health*.

interventions like training health facilities in youth-friendly services, parent and peer education, mobile health services, and so forth. Totohealth might have contributed to better MCH outcomes for adolescent girls.

Table 5: Assessment of overall impact across SPRING impact pathways

	Health	Health	Health	Wellbeing
Areas	Direct benefit from Totohealth through increased knowledge and awareness of MCH	Direct benefit from Totohealth through a change in attitudes on MCH issues	Direct benefit from Totohealth through a change in health seeking behaviour	Direct benefit from Totohealth through increased well-being and confidence
Expected Impact	High	High	High	Medium
Actual Impact	High	Medium	Medium	Low

Contribution of SPRING

Totohealth has received a wide array of support from donors in different areas (including financial assistance, technical assistance in the areas of investor readiness and HCD), which have broadly supported both the business and the development of the prototype. As part of SPRING, Totohealth started to focus particularly on teen pregnant girls and young moms by adapting SMS content and introducing specific teen content.

Although it has gone onto working with other donors and broader target groups, it has continued to use the specific teen content developed with SPRING support for its adolescent girl subscribers. Further, the SPRING experience has equipped Totohealth with the right tools to apply HCD to all its content design, which it continues to do.

The business also reported that feedback from subscribers indicates that SMS messages are more relevant to their needs since Totohealth's SPRING journey, with a 96% renewal rate (subscribers who renew their subscription).

Considering the findings outlined in this report, Totohealth's contribution to MCH outcomes can be seen as directly attributable to its participation in the SPRING programme. The design of the prototype, including content of the Totohealth messages allowed for a great level of trust in the service and compliance with advice, which was found to be a significant enhancing factor to Totohealth's impact on MCH amongst adolescent girls.

4. Learning

This chapter outlines the overall learning experienced from implementing the SPRING Totohealth prototype. Section 4.1 presents potential program implications including prototype design, implementation and service area, while Section 4.2 outlines unintended consequences of the prototype.

Blue boxes throughout the chapter are aimed at highlighting key lessons learned.

4.1 Programme limitations and opportunities

The findings outlined in this section present important considerations for future programming, particularly with regards to similar business prototypes.

Totohealth prototype – Content

Research tools for this endline report were designed in such a way that they allowed for collecting data on potential gaps and pitfalls of the intervention. Findings suggest that several gaps exist in the content of Totohealth messaging and a potential for better addressing the MCH needs of adolescent girls through more comprehensive messaging, including more interaction and personalisation. While keeping in mind that addressing individual needs is challenging in such interventions, as these will inherently be general without personalisation, the following suggestions were identified to fill gaps in the content of the messaging:

- Increase frequency of receiving messages.
- Extend length of service[22] - e.g. extending subscription to 5 years after birth, from the current 2 years.
- Diversify content of messaged to include family planning.
- Revisit some of the content, particularly the immunisation content. As outlined in Section 3.2, the messaging for immunisation may have been too focused on prompting girls to seek immunisation and too little on increasing knowledge and dispelling myths.

> *"I would love every two weeks they ask a question about the child as like women we might be busy till at times you forget other things, so I would like they put something like a reminder they send SMS all through they know how you are doing".*

Totohealth prototype – Service

We also found several unaddressed needs with regards to the service Totohealth provides, on a broader level. Subscribers identified several elements to better address their MCH needs through the messaging service, including:

- Expand service to provide home visits for check-ups.
- Expand service to include information campaign on TTH services, particularly how to use it.
- Expand service to provide to physical locations that can be visited.

The identified suggestions did not only include ways to expand the service through making it more interactive and personalised, but also ways to expand the service beyond its current scope. Such diversification may not be feasible for a messaging service like Totohealth, but the expressed needs do reveal potential opportunities to better address needs of adolescent mothers and some of the barriers discussed in Section 3.4, increase relevance and improve effectiveness and impact of similar interventions through more comprehensive approaches that include additional forms of MCH provision.

[22] Used to be 5, limited to 2

Box 18: Key takeaways

- A greater level of personalisation, more interaction as well as real life interaction may be needed to effectively address MCH needs of adolescent mothers.
- More comprehensive approaches may offer potential to better address MCH needs of adolescent mothers – for instance provision of additional forms of MCH through working more closely with local health care providers.

Totohealth prototype features that worked for reaching girls:

- As expanded upon in Section 3.1, due to widespread use, mobile phones presented an efficient and centralised way to reach young mothers in Kenya. The design of Totohealth's SMS prototype, as a product oriented toward adolescent girls, was highly successful.
- Girls' motivation for subscribing to the service matched the intended purpose of the service; to learn about MCH to improve their childrearing preparedness and abilities. Thus, expectations from potential users were met by the service itself.
- The prototype design ensured that messages were received by the users, were intelligible to them, and were largely relevant to their needs.
- Additionally, because most of the girls did not pay for their subscription, but were willing to pay for future subscriptions, it is possible that exposure to Totohealth's content before purchasing is necessary for the girls to gain confidence and trust in Totohealth's services. This is important for sustainability of Totohealth as a business.
- Other features that worked for reaching girls and are crucial findings with regards to sustainability, are referrals from satisfied customers, with girls sharing the information and its usefulness with friends and family; representatives at hospitals, where girls were introduced to Totohealth.
- Mothers that received Totohealth messages from the beginning seem to be much more likely to exhibit health-seeking behaviour throughout their pregnancies, suggesting that adequate exposure to the content of the SMS messages is required to bring about a change in health seeing practice.

Totohealth prototype features that did not work for reaching girls:

- While the main assumption of the prototype was that providing knowledge to girls will result in behaviour change, Totohealth's limited impact on MCH practices was more fragmented than the improvements to knowledge, suggesting a flaw in the theory behind the prototype.
- Although mobile phones were an efficient way to reach adolescent girls, the use of mobile phones as a platform inherently comes with technical issues as well as access issues. New or lost phone numbers and a lack of access to individual mobile phones limited potential reach of the prototype.
- Visibility of Totohealth's service was low, with women also reporting that people simply did not know of Totohealth and suggested that they raise their visibility through ads and radio.
- Findings suggest that adequate exposure to the content of the SMS messages is required to bring about a change in health seeing practice. More efforts should have been put towards recruiting girls while they were pregnant. There was no targeted promotion or marketing of Totohealth to adolescent girls.[23]

Box 19: Key takeaways

- The assumption that an increase in knowledge will necessarily lead to a change in behaviour is flawed and should be revisited. Achieving behavioural change in this regard may be beyond the reach of a business like Totohealth, but more comprehensive approaches may offer potential to do so – for instance provision of additional forms of MCH through working more closely with local health care providers.

[23] With SPRING funding, Totohealth sought to increase the number of adolescent girl subscribers and actively targeted them, first through hospital referrals and then through community health volunteers. Prior SPRING funding, Totohealth did not actively target adolescent girls to subscribe to the service. For a more detailed discussion, please refer to the Totohealth Baseline report.

- Using mobile phones as a platform presents an efficient way to reach young mothers but does come with several pitfalls that may limited potential reach.
- Although some improvements could be made to make the messaging content more relevant to girls' needs, the current content is relevant enough to reach adolescent girls and meet their expectations.
- Significant improvements can be made with regards to marketing or promotion of the service.
- Totohealth may benefit from exploring the introduction of fee rates only after exposure to the content.
- More efforts in recruiting girls in early stages of their pregnancy to ensure adequate exposure and greater impact on health-seeking behaviours.

4.2 Unintended Consequences

This section presents some potential unintended consequences of Totohealth. It specifically looks at outcomes experienced by the girl subscribers outside of the prototype's intended impact.

Our findings suggest the intervention resulted in two main unintended consequences which were both positive. One unintended consequence is related to well-being, however not related to maternity and child healthcare. Although this does fall into SPRING's definition of well-being, it is important to highlight the in which ways Totohealth improved girls' lives completely beyond the purview of their service. A number of girls reported that they found it easier to balance employment and their responsibilities at home due to Totohealth's suggestions, or that it improved their credibility in the eyes of their husbands.

Another identified unintended consequence is the widespread distribution sharing Totohealth messages with others. Frequently, girls saved Totohealth's messages with the purpose of sharing them with friends and family, which would presumably not be desirable for Totohealth's business model. A majority of interviewed mothers saved the messages for future reference or shared the messages with friends. That subscribed mothers shared the messages with family and friends suggests that Totohealth's information reached beyond its total subscription audience.

This additional, unintended impact is unmeasured by the business metrics. Improved healthcare has a substantial multiplier effect. This means that when one-person practices better MCH, this decreases the overall risk to the population. For example, when a child is vaccinated, it not only helps that specific child but reduces the risk of transmission to unvaccinated babies in the community. If Totohealth was able to generate this positive chain-reaction, the total reach and impact of Totohealth's services on MCH extends beyond the subscribers themselves.

Annex A: SPRING Impact Evaluation Methodology

Overview of the Impact Evaluation

The Impact Evaluations are the core contribution to assessing SPRING's impact on the lives of adolescent girls and the wider market for products, services and business models benefitting adolescent girls. They also play an important role in assessing SPRING's additionality and value for money. Over the lifetime of SPRING, we will conduct a total eight grantee impact evaluations. Each impact evaluation will be comprised of three phases: baseline, mid-term and endline.

Business selection process

The selection of the right businesses to include in the Impact Evaluation is crucial to ensuring that we can measure impacts of the programme. To help ensure that we selected the most appropriate business for inclusion in the Impact Evaluation, we asked key members of the IP team to provide their opinions of the six Business Performance Evaluation (BPE) businesses against a number of criteria. The IP team members who provided their opinions included the SPRING CEO, the Programme Director, Technical Director, Fuse Project and the SPRING Investment Advisor. The criteria we asked the IP team to consider included: chances of **business survival** (so there is a good chance that the business will be operational at the endline stage); **depth of impact** (the impact upon girls that is measurable); **breadth of impact** (to ensure we can collect a good sample of beneficiary girls) and **potential for learning** (to help inform future programming).

After reviewing the feedback of the IP team and our own assessment of the **evaluability** of the businesses, we decided, in agreement with the IP and with donor approval, to select **Shekina** and **Totohealth** for the Impact Evaluations. In this report we present the findings from the midline research for Shekina. The baseline findings for Shekina (and Totohealth) are held under separate cover.

Approach to SPRING Impact Evaluation methodology

The SPRING impact evaluations are designed and tailored to the individual circumstances and business models of the selected grantee. However, all impact evaluation methodologies share several common features:

- **Focus on adolescent girls:** Whereas the BPE focuses on SPRING businesses as the unit of evaluation, the focus on the Impact Evaluation is adolescent girls, who, depending on the business approach, benefit as users of the product or service, by providing services, or working in the supply chain.
- **Use of local female interviewers:** Adolescent girls may be hesitant to open-up to male interviewers or people they do not know. We use local female interviewers to build trust between interviewer and respondent and thereby improve the quality of response.
- **Mixed methods:** We use both qualitative and quantitative methods to triangulate the impact of the SPRING business on adolescent girls.
- **Common impact indicators:** We have developed a suite of common indicators for the impact areas of **learning, earning, saving, safety,** and **well-being** that will be asked of respondents in all cohorts so that we can compare results both within and between cohorts. We also use a suite of common impact indicators for **women's empowerment** to measure impact across all enterprises. After each cohort, we will review these common indicators to ensure they are still relevant.
- **Design in consultation with grantee, IP and local partners:** We will design research instruments to answer the evaluation questions concerning the effectiveness and impact of the businesses. The instruments will be designed in consultation with the grantee, the IP and, where relevant, our local research partners and both instruments will be approved by the grantee before fieldwork. This ensures the instruments elicit information that is useful to the business as well as informing the evaluation and that the questions are culturally appropriate.

Annex B: Detailed Impact Evaluation Methodology

About contribution analysis

This impact evaluation used contribution analysis to assess whether and how Totohealth has contributed to the impact on health and well-being for adolescent girls subscribed to Totohealth's SMS system, as well as to what extent has SPRING contributed to this impact. Contribution analysis is a theory-based approach used in complex and dynamic settings where the programme cannot be measured using an experimental design (and the absence of good quality baseline data). It is a step-by-step approach that helps determine the contribution of a program to its intended outcomes. Contribution analysis is designed to test an intervention's Theory of Change (ToC) by: analysing evidence collected on an intervention's primary outcomes and impacts; identifying if the evaluated programmer is one of several influencers; and helping to reduce uncertainties around the observed impacts and influencing factors.[24]

Using contribution analysis, we are able to assess whether Totohealth has made an observable contribution to the outcomes for adolescent girls if:

- The intervention's ToC is reasoned and well-developed;
- Intervention activities were implemented as established in the ToC;
- The ToC is supported by evidence on observed results and underlying assumptions; and
- Other influencing factors have been analysed and were either shown to not have made a significant contribution or recognised as having contributed to the outcome.

Contribution Analysis: Methodology design

The overall design of the impact evaluation followed Mayne's step-by-step methodology[25] for contribution analysis:

1. **Identifying and analysing the cause-effect relation.**

   The first step included understanding and interpreting the proposed mechanisms by which Totohealth's interventions (activities) aimed to result in their intended outcomes. Essentially, by receiving adolescent-specific maternal and child health SMS content, girls subscribed to Totohealth would have improved health and well-being outcomes.

   The proposed mechanisms for how the activities lead to outcomes were identified and analysed using varying of sources of information, including: monitoring data collected by SPRING, a desk-based review on similar interventions, a case study completed with Totohealth and analysis of baseline data. The identified mechanisms were then used to help revise the specific evaluation questions as well as helped to develop a detailed ToC (step 2).

2. **Developing and gathering evidence on the ToC and its associated risks**

   Based on the evidence accumulated in step 1, a detailed ToC was developed which outlined all of the primary mechanisms that would ultimately lead Totohealth's intervention to producing its desired outcomes and impacts. Assumptions, barriers and influencing factors were also identified and mapped across the ToC mechanisms where they were most likely to happen.

   The detailed ToC was one the of the data analysis tools we used to assess the logical robustness and helped to gather evidence (existing and new) on outcomes, assumptions, barriers and other influencing factors.

[24] See: Mayne, J (2008) "Contribution Analysis: An approach to exploring cause and effect" *ILAC Brief 16*
[25] See: Mayne, J (2008) "Contribution Analysis: An approach to exploring cause and effect" *ILAC Brief 16.*

3. Assembling and assessing the contribution story and identifying challenges to it

We then developed a contribution story that links the empirical evidence with theoretical assumptions regarding Totohealth's impact. This included identifying the linkages between inputs, outputs, and outcomes and identifying potential alternative explanations.

During this step, we translated the embedded ToC into an operationalised framework that was used for collecting, analysing and reporting data. The framework that was selected and adapted for the purposes of our evaluation was Lemire's Relevant Explanation Finder (REF).[26] This tool was used to assemble the contribution story as a set of operational hypotheses (prioritised from the work done in the previous step) that was then tested in the next data collection and analysis phases.

4. Seeking out additional evidence

During this phase, we determined what kind of evidence was needed to help enhance the credibility of the contribution story, refine the ToC and REF (if required) and determined what new evidence was required. Our data analysis tools were used to inform the design of our data collection tools, which included: (see Section 2.5 on Data Collection Tools for more information):

- Qualitative key informant interviews (KIIs): with adolescent girl subscribers to Totohealth's Health SMS Service. This builds on the baseline quantitative survey and focuses on assessing changes in outcomes for the subscribers.
- Qualitative focus group discussions (FGDs): The FGD's primary focus was on examining outcomes in relation to possible influencing factors (barriers and enhancers) and alternative explanations. The FGDs were completed both with adolescent girl subscribers to Totohealth's Health SMS Service and with adolescent girls who did not subscribe to Totohealth.
- Interview with the Executive Director of Totohealth.
- Data collection fieldwork took place from November 2018 to January 2019 in Nairobi, Kenya. A local Kenyan research partner, Research Plus Africa, was trained and completed the data collection.

5. Revising and strengthening the contribution story (results)

The new data was collected from November 2018 to January 2019 and analysed in February 2019. Based on the findings, we were able to:

- Strengthen the contribution story and formalised conclusions based on the evaluation questions.
- Accurately assess whether programme interventions can be assumed to have contributed to observed outcomes.
- Make informed decisions about the extent of the influence of influencing factors and alternative explanations.

Designing the impact evaluation questions

The endline data collection was guided first, by the overall SPRING impact level evaluation questions (E1 and E2), and by a set of more specific and detailed evaluation questions applicable to this study. Due to the revisions in the design of the Totohealth impact evaluation (see the *Endline Concept Note* in Annex E), instead of asking "to what extent can the impacts to health and well-being be attributed to Totohealth'", the evaluation explored the following questions:

Table 1: Totohealth Revised Evaluation Questions and Judgement Criteria

Evaluation sub-question	Judgement criteria
E1 - To what extent has access to products, services, and business opportunities provided by SPRING businesses resulted in improved outcomes linked to economic empowerment for adolescent girls?	

[26] See: Lemire, S. et al. (2012). "Making contribution analysis work: A practical framework for handling influencing factors and alternative explanations." *Evaluation.*

E1.4 - To what extent have adolescent girls improved their health as a result of accessing products, services or business opportunities provided by SPRING businesses?	**What are the ways in which adolescent girl subscribers have improved their knowledge, attitudes, and practices in health from baseline to endline?** Have they increased their knowledge of MCH issues? Have they increased their awareness of MCH issues? Have they had a positive change in health-seeking behaviours (across identified behaviour outcomes)? **Has Totohealth contributed to the impact on the health of adolescent girl subscribers?** What mechanisms and factors are necessary or sufficient for Totohealth to contribute to impact on them? Was the intervention needed to produce the effect? Would these impacts have happened anyhow? What is, if any, the added value of Totohealth's intervention? **How and in what ways has Totohealth contributed to the impact on the health of adolescent girl subscribers?** In what ways did Totohealth intend to help them increase their knowledge of, attitudes on, and practices in MCH issues? How and why have the impacts come about? For whom has Totohealth made a difference?
E1.6 To what extent have adolescent girls improved their well-being as a result of accessing products, services or business opportunities provided by SPRING businesses?	**What are the ways in which adolescent girl subscribers have improved perceptions of their well-being from baseline to endline?** Has their confidence increased in making health decisions for themselves? Has their confidence increased in making decisions for their child? Have they increased their overall feeling of well-being (beyond health and child development)? **Has Totohealth contributed to impact on the well-being of adolescent girl subscribers?** What mechanisms and factors are necessary or sufficient for Totohealth to contribute to impact on them? Was the intervention needed to produce the effect? Would these impacts have happened anyhow? What is, if any, the added impact of Totohealth's intervention? **How and in what ways has Totohealth contributed to impact on the well-being of adolescent girl subscribers?** In what ways did Totohealth intend to help them increase their perceptions of their well-being? How and why have the impacts come about? What causal factors have resulted in the observed impacts? For whom has Totohealth made a difference?
E1.7 How did SPRING contribute to this change, as opposed to other factors?	**What are the ways that SPRING has contributed to impact on adolescent girl subscribers with regard to staying safe and healthy?** Have there been any other initiatives (e.g. government and NGO initiatives) or sources (e.g. other apps/family/friends) that may have contributed to the set outcomes?
E2 What have we learned about adolescent girls as end-users or beneficiaries in the value chain?	
E2.1 What factors helped or hindered adolescent girls from using SPRING products, services, or engaging with business models?	**What generalisable lessons can we learn about Totohealth's impact**? Can this intervention be scaled up or transferred elsewhere? Is the intervention or impact sustainable? **What are the factors that helped or hindered adolescent girl' use of Totohealth's prototype?**
E2.2 What have been the unintended consequences of adolescent girls accessing products, services, or engaging with business models provided by SPRING businesses?	**What are the positive and negative unintended consequences for adolescent girls in using Totohealth's prototype?**

Designing the data analysis tools

Theory of Change

The ToC was developed using a systematic backwards mapping approach[27] that included:

1. Identifying Totohealth's long-term impacts;
2. Mapping the impacts backwards to identify the short-term, intermediate and long-term outcomes;
3. Connecting the impacts and outcomes to the primary mechanisms necessary achieve them;
4. Outlining the specific details of the Totohealth activities (prototype) that would lead to the desired outcomes; and
5. Identifying the assumptions, barriers and influencing factors and mapped them to the relevant parts of the ToC where they were most likely to happen.

Relevant Explanation Finder

We adopted Lemire's REF[28], a practical framework developed to support systematically examining influencing factors and alternative explanations in a contribution analysis. For the purpose of this evaluation, we expanded on Lemire's framework and adapted the REF to not only examine the most relevant influencing factors and alternative explanations, but also the primary mechanisms that most accurately explained the overall outcome of Totohealth on adolescent girl's health and well-being.

The REF was developed using the following steps:

1. Categorisation of each mechanism identified in the ToC by type and level.
2. Complete a prioritisation process that identified the primary mechanisms, influencing factors and alternative explanations. These were determined by analysing information from previous rounds of Totohealth data collection, review of the Totohealth case study as well as evidence from other similar programmes and literature.
3. Critically examined of the assumptions made about Totohealth and its implementation context (identified in the ToC). Assumptions were also prioritised by analysing information from previous rounds of Totohealth data collection, review of the Totohealth case study as well as evidence from other similar programmes and literature.
4. Operationalise primary mechanisms, influencing factors and alternative explanations by identifying specific indicators. These indicators were used to inform the design of the data collection tools and for analysis and reporting.

For the full REF, please see Annex E.

Table 2: Summary of REF primary mechanisms, influencing factors and alternative explanations

REF Element	Explanation
Primary Mechanisms	• Adolescent girl subscribers have more awareness and knowledge on MCH issues as a result of targeted SMS content because they are receiving more adolescent-specific content and they understand the information. • Adolescent girl subscribers have a positive attitude on MCH issues as a result of receiving targeted SMS content because they trust the information and place an importance on the information. • Adolescent girl subscribers are more confident in making decisions about their health and their child's health as a result of receiving SMS content because they have an increased knowledge and awareness of MCH issues and have a positive change in attitude on MCH issues

[27] See: UNICEF (2014). "Theory of Change." Methodological Briefs
[28] See: Lemire, S. et al. (2012). "Making contribution analysis work: A practical framework for handling influencing factors and alternative explanations." *Evaluation.*

	• Adolescent girl subscribers are practicing positive health seeking behaviours for them and their child as a result of receiving SMS because they are confident in making decisions on their and their child's health. • Adolescent girl subscribers have improved well-being and confidence as a result of receiving SMS content because they are confident in making decisions on their and their child's health.
Influencing Factors	• Adolescent girl subscribers' confidence in making decisions on MCH issues is influenced by other sources of information if they have an increased knowledge and awareness of MCH issues from other sources of information and they place a different level of trust on different sources of information. • Adolescent girl subscribers do not access MCH services because they are not comfortable and have negative attitudes if they are not confident in accessing MCH services because of stigma and embedded cultural beliefs. • Adolescent girl subscribers do not access MCH services because of their status within household and society if they are not confident in accessing MCH services because of a lack of decision-making and negotiating power.
Alternative Explanations	• Adolescent girl subscribers are practicing positive health seeking behaviours for them and their child as a result MCH offered by alternative sources of health care because they are confident in making decisions on their and their child's health by receiving health services from other sources (traditional, information, businesses, non-profit). • Adolescent girl subscribers have improved well-being and confidence from other knowledge and skill-building programs because they are confident in making decisions on their and their child's health by participating in programs offered by other organisations (non-profits, schools, business) in their local communities.

Designing and piloting the data collection tools

The design of the qualitative data collection tools was informed by the development of the data analysis tools: the ToC and REF, which explicitly articulate the extent of how Totohealth lead to intended outcomes (primary mechanisms), as well as influencing factors and alternative explanations. Each tool was carefully designed with a specific purpose:

- KIIs with adolescent girl subscribers: To examine the primary mechanisms as well as Totohealth's impact on the girl's overall health and well-being outcomes.
- FGDs: To examine adolescent girl's health and well-being outcomes in relation to possible influencing factors (barriers and enhancers) and alternative explanations. The FGDs were completed both with adolescent girl subscribers to Totohealth's Health SMS Service as well as with adolescent girls who did not subscribe to Totohealth.
- Interview with the Executive Director of Totohealth: To understand SPRING's contribution to Totohealth as well as explore sustainability and the future of Totohealth.

Qualitative KIIs

Designing the KIIs

The KIIs were designed through a combination of: expanding on the quantitative telephone surveys and qualitative interviews at baseline and critical analysis of the REF to determine any gaps in information. An outline of the KII questions was drafted and mapped to the indicators outlined in the REF to ensure we had questions that covered all the identified primary mechanisms and assumptions.

A review of the knowledge questions at baseline determined that a new approach to evaluating knowledge was necessary. The baseline knowledge assessment primarily focused on recall of SMS messages. However, it was identified that to more accurately measure knowledge, a new version of the knowledge assessment was needed to better determine actual knowledge levels as well as Totohealth's contribution to knowledge levels and/or change in knowledge. The new knowledge assessment was developed by:

- **Selecting outcome category criteria to be assessed**: A full review of Totohealth's SMS content was completed to identify the pregnancy and child health outcomes to be measured with the knowledge assessment. We went through the complete list of all SMS messages as part of the Totohealth prototype and assigned a category to each. Each category was then assessed by quantity, frequency and distribution. We also completed a comparison between the SPRING-specific content and the general Totohealth content. A total of six outcomes were identified based on the assessment (three pregnancy and three child health as outlined in Table 3 below).
- **Creating a rubric for scoring knowledge levels**: Each SMS was reviewed to determine what specific information the girls should know from receiving the SMS messages, across the six outcomes. A rubric was created for each outcome that outlined knowledge levels (scores from 0-2; no knowledge, some knowledge, full knowledge) as well as definitions and guidance for each outcome. A cheat sheet was also created to assist enumerators score the knowledge assessments. The cheat sheets included the specific content provided through the SMS.

Table 3. Number of messages delivered per MCH category

MCH Outcome areas	Frequency
Antenatal care	7
Safe delivery	14
Pregnancy health	43
Immunisation	15
Breastfeeding and child nutrition	30
Child health	148

Tool outline

The KII was made up of two components: a knowledge assessment followed by a series of interview-style questions.

Table 4: Overview of the qualitative KII

Component	Description

Knowledge Assessment	• Assessed girls' general knowledge levels on maternal and child health outcomes:
	  ○ Pregnancy: antenatal care, safe delivery, and pregnancy health.
	  ○ Child health: childhood immunisation, breastfeeding and child nutrition, and child development – early detection.
	• Determined Totohealth's contribution to the girl's knowledge or change in knowledge levels.
	• The knowledge assessment did not test general recall levels of SMS messages, but actual knowledge levels across the different outcomes.

Interview Questions: **Access and use of Totohealth**	• Examined girls' experiences with subscribing to and using the Totohealth SMS service, including: frequency, timing as well as relevance and comprehensibility of SMS content.
Interview Questions: **Trust and awareness of MCH issues**	• Examined the ways in which girls trust in and value the information provided by Totohealth. • Explored other sources of MCH information and how they compare to Totohealth.

Interview Questions: **Awareness and practice of health-seeking behaviour**	• Examined how girls' attitudes and health practices have changed by Totohealth, including: priority setting, decision-making, and service use.
Interview Questions: **Overall confidence and well-being**	• Examined girls' experiences in having confidence in making health-related decisions for themselves and their children, as well as their overall well-being.

Piloting the KIIs

As part of enumerator training, we went through each question of the KII with RPA to ensure that the drafted questions would likely elicit the intended responses. We also discussed whether the language in the questions was appropriate. Based on feedback from the RPA enumerators, adjustments were made on the spot and finalisation of the tools. The KII was then translated into Kiswahili in preparation for piloting.

Each of the three enumerators responsible for administering the KIIs completed a complete pilot interview with a pre-identified Totohealth subscriber. The facilities at RPA allowed for Coffey staff to sit behind a one-way window to observe the pilot interviews. Piloting of the KIIs highlighted a couple of questions that required further clarification as well as the need for a visual support tool for one of the questions (prioritising health amongst other priorities). Language in the questions was updated and the support tool created and translated accordingly.

Focus Group Discussions

Designing the FGDs

The content of the FGDs was a new addition to the evaluation design due to the change in design to contribution analysis. A big component of contribution analysis is to examine the influencing factors and alternative explanations that would influence the intervention's outcomes and impacts, in an enhancing or inhibiting way.

The questions in the FGDs were determined through combination of:

- Assessing evidence from evaluations of other similar programmes in Africa as well as published literature; and
- Reviewing the baseline data analysis.

Although the baseline tools did not explicitly assess influencing factors or alternative explanations, an analysis of the data derived from baseline did. The FGDs questions were drafted and mapped to the indicators outlined in the REF to ensure we had questions that covered all the identified influencing factors and alternative explanations. A note-taking template was created to complement the recording of the FGD and to highlight any stand out and key responses.

We decided to conduct FGDs with non-Totohealth subscribers when we encountered issues with sampling. Because the main purpose of the FGDs was to assess influencing factors and alternate explanations that are largely external to the intervention, introducing control groups was a good alternative to gathering this information. It provided unique opportunity for comparison as well. The format of the FGD questions lent themselves to being administered to non-Totohealth subscribers. The only difference was the last section on 'Totohealth: Overcoming challenges and general well-being' was not administered to the control groups.

Tool Outline

The FGDs including interactive activities, traditional focus-group-style questions as well as a risk assessment.

Table 5: Overview of the Qualitative FGDs

Technique	Description
Introductory activity	• The main purpose of the introductory activity, *The Story Bag*, was to get the girls comfortable with each other and to start thinking about maternal and child health issues.

	• The activity consisted of the girls telling a story about a specific pregnancy or parenting-related issue using specific items provided to them • **Unexpected outcome**: Although the main purpose of the activity was to get the girls comfortable talking about issues; the activity provided a lot of real and personal information that was used to support the analysis.
Focus group question period	• A series traditional focus group-style questions that aimed to identify some of the challenges that girls face when accessing information and services during pregnancy, childbirth and as a parent. • The questions were broken down into sub-topics to explore different types of challenges/barriers including: knowledge, decision-making, cultural and health facility.
Risk assessment	• Explored in-depth, the top challenges/barriers girls face as identified during the focus group question period. • The top challenges were prioritised and assessed for likelihood of occurrence.
Totohealth: Overcoming challenges and general well-being	• Assessed how Totohealth had specifically helped the girls deal with any challenges accessing maternal and child health information as well as any impacts on other aspects of their lives. • This was only administered to the FGD groups of Totohealth subscribers.

Piloting the FGDs

For consistency purposes, the RPA project manager and one enumerator were assigned to complete all the FGDs. A total of one pilot FGD was completed, with a total of eight girls who were non-Totohealth subscribers. We piloted the FGD with non-Totohealth subscribers due to the difficulties we were experience with sampling. The pilot FGD went through all of the different techniques including introductory activity, focus group-style questions and the risk assessment. Like the KIIs, the facility for the pilot allowed for the Coffey staff to observe the pilot FGD. The pilot of the FGD was successful, with very limited issues or changes to the activities or questions. As a result, it was decided that the pilot FGD would become one of our final control FGDs.

Interview with Executive Director of Totohealth

The interview with the Executive Director of Totohealth expands on the tools developed for the Business Performance Evaluation.

Table 6: Overview of Totohealth interview questions

Purpose/Category	Sample Questions
SPRING Impact	• What have been the benefits for your business from participating in SPRING? • Were there any unintended negative impacts to your business from participating in SPRING? • What are some factors that have helped or hindered you from reaching/targeting adolescent girls? • What is the future for Totohealth in targeting adolescent girls?
Totohealth Prototype	• Is the adolescent-specific content still being implemented? I.e., the girls currently receiving messages (the list we were sent) are receiving the SPRING-supported content. • What was different about the adolescent-specific content? • Since the development of the adolescent-specific content, other than implementing a fee for the service, have there been any changes to the prototype?

Validation of ToC and REF	• How did you envision that providing maternal and child health information to young girls would lead to improved health outcomes for the girls? (and the ultimate goal of Totohealth – reducing maternal and child mortality). • Prompt on the pathways from providing information leading to behaviour change (e.g., change in attitude, confidence)

Designing the sampling methodology

KII sampling

Based on the anticipated sample size at midline of the programme, we originally anticipated being able to obtain a minimum population of 46 adolescent girl subscribers who completed the baseline survey and to whom we would be able to follow-up with. From that sample, our original aim was to achieve a sample size of 24 respondents who completed the baseline survey. Quotas based on the sampling criteria were applied.

Due to challenges with receiving poor quality subscription lists from Totohealth as well as a high volume of girls not being reachable (i.e., phones turned off), we were unable to identify 24 respondents that previously participated in baseline. Instead, we worked from the list of subscribers provided by Totohealth and continued calling until we reached our total of 24 respondents as well as all minimum quotas met.

Designing the data coding and analysis framework

All interviews and FGDs were conducted in Kiswahili and fully transcribed and translated into English. All transcripts were uploaded into ATLAS.ti, the qualitative data analysis and research software used for this analysis.

A two-stage coding framework (see Appendix D was created using the following frameworks:

- Level 1: SPRING coding. This phase examined the qualitative data along indicators specified by the SPRING analysis framework. It centred on the contribution of Totohealth to the well-being of its subscribers.
- Level 2: Totohealth coding. This involved a deeper examination into the ways Totohealth contributed to not only girls' well-being but to the many facets of their healthcare behaviour for themselves and their children. Furthermore, it explored the context in which young mothers practiced MCH, the environmental barriers and facilitators to proper MCH in Kenya, and the general atmosphere to young motherhood.

The coding framework was developed using relevant evaluation questions and judgment criteria. It was iteratively developed, based on the following:

- Reviewing the research questions outlined in the research tools;
- Creating thematic codes as guided by the research questions;
- Incorporating cross-cutting themes into the coding framework;
- Conducting a pilot round of coding to identify potential gaps;
- Consultation process: revising and reviewing the framework with other members of the qualitative team, including discussions on the applicability and relevance of the framework; and
- Iteratively adding relevant codes throughout the coding process based on consultation with the wider team.

The transcripts were coded and analysed to identify primary themes mapped to the REF. The REF formed the basis of the analysis framework. The evidence collected was systematically analysed to determine the most accurate contribution story and to identify barriers and possible rival explanations for outcome knowledge, attitude and practice. Each of the mechanisms in the REF were assessed based on the following criteria:

- Certainty: the degree to which the observed outcome pattern matches the one predicted in the mechanism;
- Robustness: the degree to which the mechanism is identified as a significant contributed across a broad range of data sources and methods;
- Range: the degree to which the mechanism contributes to a broad range of outcomes of interest; and

- Prevalence: the degree to which the mechanism contributes to outcomes is externally valid.

The contribution story was assembled by answering the following questions based on each of the results and indicators presented in the REF:

- How credible was the story?
- Did the pattern of observed results validate the results chain?
- How similar or different were the outcome's across respondents?
- What were the main weaknesses in the story?

Annex C: Endline Data Collection Tools

This Annex outlines the following data collection tools:

- Key Informant Interview Cover Sheet and Knowledge Assessment Recording Sheet
- Key Informant Interview Guide
- Key Informant Interview – Knowledge Assessment
- KII-Knowledge Assessment Rubrics and Cheat Sheets
- Focus Group Discussion Guide
- Focus Group Discussion Guide – Note Taking Template
- Phone Screening Survey

Key Informant Interview Cover Sheet

Purpose

This cover sheet is used to record the responses for sections 1 (Respondent Profile) and 2 (Knowledge Assessment) of the KIIs. The below sheets were filled per interview.

Table 1: Interview Sheet

Date:	
Name of facilitator:	
Name of note taker:	
Start time:	
End time:	
Was the interview recorded?	

Respondent Profile

Table 2: Respondent Code

Questions	Response
1.1 How old are you?	_____ years
1.2 What is your year of birth?	_ _ _ _
1.3 When did you first register for Totohealth?	_ _ _ _ year _____ month
1.4 At the time of registration, were you pregnant?	Y / N
(If yes): how many months pregnant?	_____ months
(If no): how hold was your child when you signed up?	_____ months _____ years
1.5 Are you still receiving messages from Totohealth?	Y / N
(If no and pregnant at registration): Did you give birth before you cancelled your subscription?	Y / N
(Record how many years/months approx. they have been signed up)	_____ months _____ years

Knowledge Assessment – Recording Sheet

Table 3: Pregnancy Knowledge Test

	Score (0-2)	Additional Notes
Antenatal Care		
Safe Delivery		
Pregnancy Health		

Table 4: Child Health Knowledge Test

	Score (0-2)	Additional Notes
Childhood immunisation		
Breastfeeding and Child Nutrition		
Child Development – Early Detection		

Key Informant Interview Guide

Purpose

This topic guide serves as a guide for Key Informant Interviews with adolescent girls who have been subscribed to Totohealth's Health SMS services, as part of endline data collection for the Totohealth Impact Evaluation.

The aim of the Key Informant Interview is to explore the changes to knowledge, awareness and practice around healthcare of adolescent girls subscribed to the Totohealth Health SMS service. We are also seeking to better

understand how Totohealth has contributed to each of those areas (knowledge, awareness, practice) and ultimately how it has affected their health and well-being.

Enumerator Notes

Time and duration

This interview should last 1 hour. These are the recommended timings for each section of the guide, in order to stay within this time frame:

- Section 1: Opening, consent, and Introductions (5 minutes)
- Section 2: Knowledge questions (13 minutes)
- Section 3: Access to and usage of Totohealth (10 minutes)
- Section 4: Trust in and awareness of MCH issues (10 minutes)
- Section 5: Awareness and practice of health-seeking behaviours (10 minutes)
- Section 6: Confidence and well-being (10 minutes)
- Section 7: Wrap up and close (2 minutes)

Resources to have on hand

In order to administer the key informant interviews, enumerators should have the following on hand:

- KII Cover Sheet
- KII-Knowledge Assessment Rubrics and Cheat Sheets
- Audio recording equipment
- Means to take notes (pen, extra paper)

Instructions / Key steps

1. Please first read out loud Opening and consent. If the participant consents, proceed. If the participant does not consent, end the interview.
2. Complete Section 1 (Introduction and Respondent Profile) and use the KII Cover Sheet to record answers.
    - First, fill out the respondent code. This should match the sample frame.
    - Confirm and fill out the details of the respondent profile. These should match the details from the initial phone screening survey. If the details do not match, clarify with the respondent and record the accurate details here.
    - At the end of the Respondent Profile, record how many years/months (approximately) for they have been subscribed to confirm their eligibility (must have been registered for at least 6 months).
3. Complete Section 2 (Knowledge Assessment) of the guide alongside the Knowledge Assessment Cover Sheet. **Please refer to Knowledge Assessment Additional Notes for more detailed instructions on scoring**.
    - Ask the questions in the order they are presented.
    - After each question, use the KII-Knowledge Assessment Rubrics and Cheat Sheet to score either a 0,1 or 2 based on the rubric provided for each section. Fill in the KII Cover Sheet with the participant's knowledge score and record any additional notes or observations.
4. Continue to ask all the questions in Sections 3 – 6, using the added probes to explore any areas not already mentioned by the participants. Questions from Sections 3 – 6 apply to all respondents.
    - In all cases, please utilise the probes. They should help guide the respondent but may already be included as part of the respondent's response.
5. Upon reaching Section 7 (wrap up and close), please read the closing statement. Do be sure to provide encouragement to the participant by telling her that her viewpoints are important and valued. Finally, thank her for her time and input.

Knowledge Assessment Additional Notes

Preparation

- Before conducting the knowledge assessments, be sure to familiarise yourself with the scoring rubrics and cheat sheets (if applicable) for each test section.
- Each section has a scoring rubric that outlines specific knowledge the participants should know from participating in Totohealth. Additionally, there are three sections that have accompanying cheat sheets to help with scoring.

Asking questions

- Each section is set up with the same questioning format. All questions are open ended to let the participants respond freely. Probes and prompts are provided only for you to help guide the questioning.
- First question of each section:
    - Ask the first question and let the participant respond with no interruptions.
    - When she is finished responding, probe a bit further using the probes provided.
    - Be sure not to lead their answers in any way by for example suggesting answers. You will know some of the answers based on your review of the rubrics and cheat sheets, so be careful not to hint at the answers.
- Second question of each section – do not ask if participants scored a 0 on the previous question.

Scoring

- After answering question 1, you will score the participant a 0, 1 or 2 based on your assessment of her knowledge level. Record the score on the KII-Cover Sheet.
    - Score of 0: no knowledge: participant cannot answer the question or provides incorrect information
    - Score of 1: some knowledge: participant can answer the question and provide some details
    - Score of 2: full knowledge: participant can answer the questions and provides specific details
- Each section has a scoring rubric that includes a description of the score and answers for each score to help you. The answers provided in the rubric represent the messages the participants would have received through Totohealth.
- Three sections have cheat sheets that provide more specific details into the answers: Pregnancy Health, Breastfeeding and Child Nutrition, Child Development – Early Detection
- Participants do not have to answer word for word but should be able to demonstrate the same concepts in their answers.

Recording Observations

- Record any interesting responses or observations in the KII-Cover Sheet for each section.
- Examples of observations to record:
    - Interesting comments about her experience with Totohealth
    - If the participant has knowledge in the subject, but it does not align with the answers provided
    - Reasons why she might not know the answers
    - Identify other sources of information
    - Mentions any barriers to accessing information

Opening and consent/ Ufunguzi na ruhusa (5 minutes)

Enumerator to read the following to the respondent:

Thank you very much for giving us your time to speak today. I'm <name> from the research company Research Plus Africa. I am working in partnership with Totohealth to learn more about some of the challenges young mothers face when accessing maternal and child health information and services. However, this is an independent study and all results will be anonymous.

We would like to find out more about you and your experiences with Totohealth and with healthcare services overall. For example, how you found out about Totohealth, what you know about other sources of maternal and childcare health information and how often you visit healthcare facilities or use healthcare services for your own and your child's health.

We will talk for about 1 hour. First, I'm going to ask you a few questions about yourself, and the services you receive from Totohealth. Then we will move on to discuss your specific experience of using the services in detail, and finally finish up with questions around health services and well-being. To thank you for your time, we will provide you with a token of appreciation.

If it is okay with you, I would like to record our discussion as well as take notes. Only myself and my close colleagues at Research Plus Africa will hear the recordings. No one else will hear the recordings, and no one outside of this room will know what you have said. If at any time you are uncomfortable, we can stop and you can leave. If at any time anything is unclear or if you have any question, please let me know.

Are you okay if we record this and continue? (Yes/No). /

Asante sana kwa kutupa muda wako ili tuweze kuongea nawe. Jina langu ni (Jina) kutoka kampuni ya Research Plus Africa. Ninafanya kazi kwa ushirikiano na mradi wa Totohealth ili kujifunza zaidi kuhusu baadhi ya changamoto ambazo kinamama wachanga hupitia wakati wanapotafuta maelezo na huduma za kinamama wajawazito na afya ya mtoto.

Tungependa kufahamu zaidi kukuhusu na uzoefu wako wa kutumia Totohealth pamoja na huduma za afya kwa jumla. Kwa mfano, jinsi ulivyopata kujua kuhusu Totohealth, kile unachojua kuhusu njia za kupata maelezo au habari za huduma za kinamama wajawazito na afya ya watoto pamoja na ni mara ngapi unazuru vituo vya afya, au kutumia huduma za afya kwa manufaa yako au kwa afya ya mtoto.

Tutazungumza kwa karibu muda was aa moja. Nitakuuliza maswali machache kukuhusu wewe mwenyewe, pamoja na kuhusu huduma unazopokea kutoka Totohealth. Kisha tutaendelea kujadili uzoefu wako wa kutumia huduma hizo kwa mapana, na hatimaye kumalizia kwa maswali kuhusu huduma za afya na uzima. Tutakupa zawadi ndogo kama njia ya kukushukuru kwa muda wako.

Kama waona hiyo ni sawa, ningependa kurekodi mazungumzo yetu pamoja na kuyaandika/kuyanakili chini. Ni mimi tu pamoja na wenzangu wa karibu katika shirika la Research Plus Africa watakaosikiza yale tutakayorekodi. Iwapo utajihisi vibaya, waweza kutueleza ili tumalizie mazungumzo yetu hapo, nawe uweze kuondoka. Iwapo utafika wakati wowote ule utahitaji ufafanuzi au uwe na swali lolote lile, tafadhali nijulishe.

Je utaruhusu turekodi haya na tuendelee? (Ndiyo/La)

Section 1: Introductions and Respondent Profile/ Sehemu ya 1: Utangulizi na Maelezo kuhusu Mhojiwa

Reminder! Use the KII Cover Sheet to fill in responses

1.1 **How old are you? /** Je una umri wa miaka mingapi?

(Respondent should be 19 or younger at the time of signing up for Totohealth)

1.2 **What is your year of birth? /** Ulizaliwa mwaka gani?

(Ask for year of birth to confirm age. Their year of birth should not be before 1997)

1.3 **When did you first register for Totohealth?** / Ulijiandikisha lini katika Totohealth?

(Record year and month)

1.4 **At the time of registration, were you pregnant?** / Je ulikuwa mjamzito wakati wa kujiandikisha?

(Record yes or no)

- (If yes): how many months pregnant? / Ulikuwa na imba ya miezi mingapi?

  (Record number of months)

- (If no): how old was your child when you signed up? / Ulipojiandikisha mtoto wako alikuwa na umri gani?

  (This assumes that if they were not pregnant when they signed up, they signed up for a child they recently had.)

1.5 **Are you still receiving messages from Totohealth?** / Je bado unaendelea na huduma za Totohealth?

(Record yes or no)

- (If no): Did you cancel your subscription or did you stop receiving messages? / Ni lini ulipojiondoa kwenye huduma hiyo?
    - (If yes): When did you cancel your subscription or stop receiving messages?

    (*Record year and month)*
- (If no and pregnant at registration, but unsubscribed): Did you give birth before you cancelled your subscription? / Je ulijifungua kabla ya kujiondoa kwenye huduma hiyo?

    (*Ask if they were still pregnant when they stopped receiving messages from Totohealth*)

Section 2: Knowledge Assessment (13 minutes)/ Sehemu ya 2: Tathmini ya Ufahamu (Dakika 13)

Reminder! Refer to the KII-Knowledge Assessment Rubrics and Cheat Sheets for scoring. Record score and observations in the KII Cover Sheet.

The aim of this section is to assess participants' general knowledge levels on maternal and child health issues. It does not test general recall levels (considering the amount of time that may have passed since participants received information from Totohealth) and instead seeks to determine if the participants have learned the information

Pregnancy Knowledge Assessment/ Tathmini ya Ufahamu wa Ujauzito

2.1 Antenatal Care/ Huduma za wajawazito

2.1.1 What do you know about antenatal care/visiting the clinic for pregnancy? /

PROBE:/

- Why is antenatal care important?
- What are the benefits of antenatal care?
- How often should you go for antenatal care?

Ni mambo yepi unayojua kuhusu huduma za kinamama wajawazito/ kinamama wajawazito kutembelea kliniki?

DADISI:

- Why is antenatal care important? / *Je, ni kwa nini huduma za afya kwa wajawazito ni muhimu?*
- What are the benefits of antenatal care? / *Ni yapi ndiyo manufaa ya huduma hizo za wajawazito?*
- How often should you go for antenatal care? / *Unafaa uende mara ngapi kwa huduma za kinamama wajawazito?*

Do not ask question 2.1.2 if the participant scored a 0 on question 2.1.1 or did not receive Totohealth messages during pregnancy.

2.1.2 Thinking of your knowledge in antenatal care/ visiting the clinic for pregnancy, how much has receiving Totohealth messages helped improve this?

PROBE:/

- Unapowazia kuhusu ufahamu wako wa huduma za kinamama wajawazito/wajawazito kutembelea kliniki, jumbe za Totohealth ulizopokea zimekusaidia kwa kiwango gani?
- Do you know the same or more about antenatal care since receiving Totohealth messages? / *Je, unajua mambo yaleyale uliyokuwa unayajua, au mengi kuliko uliyokuwa unayajua tangu uanze kupokea jumbe za Totohealth?*
- In what ways has Totohealth improved your knowledge? / *Je, Totohealth imeongezea ufahamu wako kwa kiasi gani?*
- How has it differed from other sources of information? /*Je imetofautianaje na njia nyingine za kujipa maelezo/habari?*

2.2 Safe Delivery/ *Kujifungua salama*

2.2.1 What do you know about labour and safe delivery?

PROBE:/

- Ni nini unachojua kuhusu kuumwa unapokaribia kujifungua na kujifungua kwa njia salama?
- Where should you deliver your baby? / *Je, ni wapi unapofaa kujifungulia mtoto?*
- How do you know when labour starts? / *Je, unajuaje kama uchungu wa kuumwa umeanza?*
- What is the length of a normal pregnancy? / *Je, mimba/ujauzito kwa kawaida huchukua muda gani?*

Do not ask question 2.2.2 if the participant scored a 0 on question 2.2.1 or did not receive Totohealth messages during pregnancy.

2.2.2 Thinking of your knowledge in safe delivery and labour, how much has receiving Totohealth messages helped improve your knowledge on this?

PROBE:/

Unapofikiria ufahamu wako kuhusiana na kujifungua salama pamoja na uchungu unaompata anayekaribia kujifungua, je jumbe za Totohealth unazopokea zimekusaidia kwa kiasi gani kujiongezea ufahamu wako kuhusu suala hili?

- Do you know the same or more about labour and safe delivery since receiving Totohealth messages? /*Je unafahamu yaleyale uliyokuwa unafahamu au kwa sasa unajua mengi zaidi kuhusu uchungu wa kujifungua tangu uanze kupokea jumbe za Totohealth?*
- In what ways has Totohealth improved your knowledge? / Ni kwa njia gani ambazo Totohealth imeimarisha ufahamu wako?
- How has it differed from other sources of information? /Je inatofautianaje na njia nyingine za kupata habari/maelezo?

2.3 Pregnancy Health / *Afya ya ujauzito*

2.3.1 What do you know about being healthy during pregnancy?

PROBE:/

Ni jambo lipi unalojua kuhusu kuishi kwa afya nzuri wakati wa ujauzito?

- What do you know about nutrition during pregnancy? /*Ni jambo gani unalojua kuhusu lishe wakati wa ujauzito?*
- What are normal symptoms of pregnancy? What are danger signs of pregnancy? /*Ni zipi ndizo dalili za kawaida za ujauzito? Ni zipi ndizo dalili hatari za ujauzito?*
- What other lifestyle choices can you make to ensure you have a healthy pregnancy? /*Ni mitindo gani mingine ya maisha unayoweza kuchagua ili kuhakikisha kuwa una ujauzito wenye afya?*

Do not ask question 2.3.2 if the participant scored a 0 on question 2.3.1 or did not receive Totohealth messages during pregnancy.

2.3.2 Thinking of your knowledge in being healthy during pregnancy, how much has receiving Totohealth messages helped improve what you know about this?

PROBE:/

Unapofikiria kuhusu ufahamu wako kuhusiana na kutunza ujauzito wenye afya, je jumbe za Totohealth unazopokea zimekusaidia kwa kiasi gani kuimarisha mambo unayojua kuhusu suala hili?

- Do you know the same or more about being healthy during pregnancy since receiving Totohealth messages? / *Je, wajua yaleyale au zaidi kuhusu kuishi kwa afya wakati wa ujauzito tangu uanze kupokea jumbe za Totohealth?*
- In what ways has Totohealth improved your knowledge? / *Je Totohealth imeimarisha ufahamu wako kwa njia zipi?*

- How has it differed from other sources of information? /*Je imetofautiana vipi na njia nyingine za kujipa habari/maelezo?*

Child Health Knowledge Assessment/ Tathmini ya Ufahamu wa Afya ya Mtoto

2.4 Childhood Immunisation/ Chanjo ya Utotoni

2.4.1 What you know about immunising your child?

PROBE:/

Je, ni mambo gani unayojua kuhusu kumpa chanjo mtoto wako?

- When should you go get your baby immunised? /*Je ni wakati gani unaofaa kwenda kumpa chanjo mtoto wako?*
- What diseases do immunisations prevent? How many do you need to get your child? /*Je chanjo huzuia magonjwa gani? Unafaa umpe mtoto wako chanjo mara ngapi?*
- During last vaccination at 18 months, what else should your child get? / Wakati wa mwisho wa chanjo mtoto anapofika umri wa miaka 18, ni kitu gani kingine ambacho mtoto wako huyo anafaa apate?

Do not ask question 2.4.2 if the participant scored a 0 on question 2.4.1

2.4.2 Thinking of your knowledge in immunising your child, how much has receiving Totohealth messages helped improve your knowledge on this?

PROBE:/

Unapowazia ufahamu wako kuhusu kumpa mtoto wako chanjo, je kupokea jumbe za Totohealth kumekusaidia kwa kiasi gani kuimarisha ufahamu wako kuhusu suala hili?

DADISI:

- Do you know the same or more about immunisation since receiving Totohealth messages? /*Je tangu uanze kupokea jumbe za Totohealth, unajua mambo yaleyale au zaidi kuhusu chanjo*
- In what ways has Totohealth improved your knowledge? /*Ni kwa njia zipi ambapo Totohealth imeimarisha ufahamu wako?*
- How has it differed from other sources of information? /*Je inatofautiana vipi na njia nyinginezo za kupata habari/maelezo?*

2.5 Breastfeeding and Child Nutrition/ Unyonyeshaji na Lishe ya Mtoto

2.5.1 What do you know about breastfeeding and child nutrition?

PROBE:/

Je unajua mambo gani kuhusu unyonyeshaji pamoja na lishe ya mtoto?

DADISI:

- When should you breastfeed your child? /*Je ni wakati gani unaofaa kumnyonyesha mtoto wako?*

  How many times a day should you breastfeed? /*Unafaa umnyonyeshe mtoto wako mara ngapi kwa siku?*
- How long should you breastfeed for? /Unafaa unyonyeshe mtoto kwa muda gani?
- When can you start giving your baby food? What kinds of foods should you give them? /*Ni baada ya muda gani unapofaa kuanza kumpa mtoto wako chakula? Ni aina gani ya vyakula unavyofaa kumpa?*

Do not ask question 2.5.2 if the participant scored a 0 on question 2.5.1

2.5.2 Thinking of your knowledge in breastfeeding and child nutrition, how much has receiving Totohealth messages helped improve your knowledge on this?

PROBE:/

Unapofikiria kuhusu ufahamu wako kuhusiana na unyonyeshaji na lishe ya mtoto, kupokea kwa jumbe za Totohealth kumekusaidia kuimarisha ufahamu wako kuhusu jambo hilo kwa kiasi gani?

DADISI:

- Do you know the same or more about breastfeeding and child nutrition since receiving Totohealth messages? / *Je tangu uanze kupokea jumbe za Totohealth, je unajua mambo yaleyale au mambo zaidi kuhusu unyonyeshaji na lishe ya mtoto?*
- In what ways has Totohealth improved your knowledge? /*Totohealth imeimarisha ufahamu wako kwa njia gani?*
- How has it differed from other sources of information? /*Je inatofautianaje na njia nyingine za kujipa habari/maelezo?*

2.6 Child Development – Early Detection/ Ukuaji wa mtoto – Utambuaji wa mapema

2.6.1 Recognizing that something is seriously wrong with your child's physical and mental development is important for detecting issues early on. What do you know about the signs of dangerous child development?

PROBE:/

Kutambua kuwa kuna kitu kisichokuwa kizuri kwa ukuaji wa mtoto wako kimwili au kiakili ni muhimu kwa kugundua tatizo mapema. Je, ni mambo gani unayojua kuhusu ugunduaji wa kitu kibaya kinachoendelea kwa mtoto wako?

DADISI:

- What are some serious signs that your baby or child is not developing normally? /*Ni zipi ndizo baadhi ya dalili zinazoonyesha kuwa mtoto wako hakui/haendelei vizuri?*
- What are some potential issues or diseases to look for? / Ni yepi ndiyo baadhi ya mambo au magonjwa unayofaa kuchunguza?

Do not ask question 2.6.2 if the participant scored a 0 on question 2.6.1

2.6.2 Thinking about your knowledge in your baby's physical and mental development, how much has receiving Totohealth messages helped improve your knowledge on identifying if something is wrong with this?

PROBE:/

Unapowazia ufahamu wako kuhusu ukuaji wa mtoto wako kimwili na kiakili, je kupokea kwa jumbe za Totohealth kumekusaidia kuimarisha ufahamu wako wa kugundua iwapo kuna kibaya kinachoendelea kwa mtoto?

DADISI:

- Do you know the same or more about identifying if something is wrong with your baby's physical and mental development since receiving Totohealth messages? /*Tangu uanze kupokea jumbe za Totohealth, je unajua mambo yaleyale au zaidi kuhusu kutambua iwapo kuna kibaya kinachoendelea na ukuaji wa mtoto wako kimwili au kiakili?*
- In what ways has Totohealth improved your knowledge? /*Totohealth imekusaidia kwa njia gani kuimarisha ufahamu wako*
- How has it differed from other sources of information? /
- *Je inatofautiana vipi na njia nyingine za kujipa habari/maelezo?*

Section 3: Access to and Usage of Totohealth (10 minutes)/Sehemu ya 3: Upatikanaji na Matumizi ya Totohealth (dakika 10)

The aim of this section is to explore experiences with subscribing to and using the Totohealth SMS service and, more specifically, with frequency, timing as well as relevance and comprehensibility of SMS content. /

Lengo la sehemu hii ni kuchunguza uzoefu wa kujiandikisha/kujisajili kwa na kutumia huduma ya SMS ya Totohealth na, hasa, mara ngapi, uzingatiaji wakati pamoja na kufaa na ukamilifu wa ujumbe uliomo katika SMS.

3.1 Experience of Totohealth Services/ Uzoefu wa kutumia Huduma za Totohealth

3.1.1 Can you tell me a little bit about how and where you first heard about Totohealth?

PROBE:/

Je waweza kunieleza kwa urefu kidogo kuhusu ni lini na wapi uliposikia kwa mara ya kwanza kuhusu Totohealth?

DADISI:

- Who first spoke to you about Totohealth? / Ni nani aliyezungumza nawe kuhusu Totohealth?
- What were you first told about Totohealth? / Ni kitu gani ulichoambiwa kwa mara ya kwanza kuhusu Totohealth
- Where and how did you first register for Totohealth? / Ni wapi na lini ulipojiandikisha kwa mara ya kwanza kwa huduma ya Totohealth?

3.1.2 Why did you decide to subscribe to Totohealth's SMS service?

PROBE:/

Ni kwa sababu uliamua kujiandikisha kwenye huduma ya SMS ya Totohealth?

DADISI:

- Why did you subscribe at this particular point in time? /*Ni sasabu gani ukajiandikisha wakati huo hasa?*
- How did you expect Totohealth would help you? /*Ulitarajia Totohealth ikusaidie kwa njia gani?*
- Would you sign up again if you would become pregnant again? If yes/no – why? /*Je waweza kujiandikisha tena iwapo utashika mimba tena? Iwapo ni ndiyo/la –kwa sababu gani?*

IF only subscribed after childbirth [Refer to RESPONDENT PROFILE]

PROBE:/

Iwapo alijisajili tu baada ya kujifungua (Rejelea MAELEZO KUHUSU MHOJIWA)

DADISI:

- Why did you not sign up while you were pregnant? /*Kwa sababu gani hukujiandikisha ukiwa mjamzito?*
- In hindsight, do you wish you signed up sooner? /*Je wazo liliwahi kukujua baadaye kuwa heri ungejiandikisha mapema?*
- Going forward, would you sign up before the birth of your next child? / *Baada ya hapa, je waweza kujiandikisha kabla ya kumzaa mtoto wako anayefuata?*

3.1.3 How would you briefly describe your OVERALL experience of using the Totohealth service?

PROBE:/

Kwa jumla waweza kuelezaje, kwa ufupi tu, kuhusu uzoefu wako wa kutumia huduma ya Totohealth?

- Are you currently receiving two messages per week? If not, why? / Je kwa sasa huwa unapokea jumbe mbili kila wiki?
- How satisfied are you with the number of messages you receive? Do you receive the right amount / too few / too many? / *Unaridhikaje na idadi ya jumbe unazopokea? Je huwa unapokea idadi ya kutosha ya jumbe hizo/au chache zaidi/ au nyingi zaidi?*
- What could Totohealth have done differently to improve your experience? /*Ni kitu gani tofauti ambacho Totohealth inaweza kufanya ili kuimarisha huduma hiyo kwako?*

IF currently unsubscribed [Refer to RESPONDENT PROFILE]/

PROBE:/

Iwapo kwa sasa amejiondoa (REJELEA MAELEZO KUHUSU MHOJIWA)

DADISI:

- Why did you unsubscribe? / Kwa nini ulijiondoa?
- What could Totohealth have done differently to keep you subscribed? /

Totohealth inaweza fanya nini kwa njia tofauti ili kufanya uendelee kujiandikisha kwa huduma hii?

3.2 Comprehension and Relevance of Totohealth Messages/ Ujumla na Ufaafy wa Jumbe za Totohealth

3.2.1 When you receive Totohealth's messages, do they tell you what you want or need to know at that time? E.g., Did the messages come too early, too late or at the time you needed it?

PROBE:/

Unapopokea jumbe za Totohealth, je huwa wanakuambia kile unachotaka au unachohitaji kujua wakati huo? Kwa mfano, je jumbe hizo zilikuja mapema Zaidi kuliko ilivyofaa, je zilichelewa zaidi au ulikuwa unazihitaji wakati huo.

DADISI:

- Tell me about a time when you received a message about something you wanted to know, at the right time. / Niambie kuhusu wakati wowote ambapo ulipokea ujumbe kuhusu jambo ulilohitaji kujua, yaani ujumbe huo ulikuja wakati unaofaa.
- Have there been any times in which you didn't receive information at the right time? / Je umetokea wakati ambapo ulikosa kupokea habari/maelezo waka unaofaa?
- Is there any information that you didn't receive that you needed? / Je kuna ujumbe wopwote ambao hukupokea ingawa uliuhitaji Zaidi?

3.2.2 How satisfied are you with accessing information about your and your child's health through your phone? Why?

PROBE:/

Unatosheka kiasi gani na upokeaji habari kuhusu afya yako na afya ya motto wako kupitia kwa simu? Sababu gani unasema hivyo?

DADISI:

- In general, do you like to use your phone to access information? Why? (Probe: shared ownership of phone, lack of electricity or service, etc.)/

  Kwa jumla je, unapenda kutumia simu yako kupata habari/maelezo? Sababu gani? (Dadisi: simu kumilikiwa na zaidi ya mtu mmoja, ukosefu wa stima au huduma, n.k)
- What other ways/devices would you like to access the information through? What would you prefer? / Ungependa kutumia njia/vifaa gani vingine kupata habari/maelezo? Ungependelea gani hasa?

3.2.3 How understandable to do you find the SMS messages?

PROBE: /

Je jumbe hizo za SMS zinaeleweka kwa kiasi gani?

DADISI:

- In what ways do you think Totohealth makes the messages understandable?

  IF hard to understand: **Ni kwa njia gani unadhani Totohealth hufanya jumbe hizo zieleweke?**

- Why or in what ways do you find the messages hard to understand (e.g. language used, technical terms used)? /Kwa sababu gani au ni kwa namna gani unaona jumbe hizo zinakuwa ngumu kueleweka (k.m lugha inayotumiwa, maneno magumu)?
- Is there anything Totohealth could have done differently to make the messages easier to understand? /Je kuna kitu chochote ambacho Totohealth ilifaa kufanya kwa njia tofauti ili kufanya jumbe hizo ziwe rahisi kueleweka?

3.2.4 Overall, how useful would you say the messages from Totohealth have been?

PROBE:/

Kwa jumla waweza kusema jumbe kutoka Totohealth zimekuwa na umuhimu gani?

- What types of messages have been the most useful for you? / Ni aina zipi za jumbe hizo ambazo zimekuwa muhimu zaidi?
- Why are some more useful than others? / Wadhani kwa nini baadhi ya jumbe ni muhimu kuliko nyingine?
- What subjects have they been about (e.g. about personal health, child health, providing technical information, providing encouragement)?/ Jumbe hizo zimekuwa zikizungumzia masuala/mada gani (kwa mfano, kuhusu afya, afya ya mtoto, kutoa habari muhimu, zimekuwa za kuhimiza)?

Section 4: Trust in and Awareness of MCH Issues (10 minutes)/ Sehemu ya 4: Kuamini na Ufahamu wa Masuala ya MCH (dakika 10)

The aim of this section is to explore the ways in which participants trust in and value the information provided by Totohealth. /Lengo la sehemu hii ni kutalii namna mbalimbali ambapo wahojiwa wanaamini na kuthamini habari zinazotolewa na Totohealth

4.1 Comparing Totohealth to Other Sources of Information/ Kulinganisha Totohealth na Njia Nyingine za kupata Habari

4.1.1 If you are aware of any, what other sources are available for information on child and maternal health?

PROBE:/

Kama kuna nyingine yoyote, je njia gani nyingine zilizopo za kupata habari kuhusu afya mtoto na mama mjamzito?

DADISI:

- Which sources do you use? (e.g. family / friends versus information from NGOs / healthcare professionals / institutions, etc)?/ Ni njia zipi unazotumia? (Kwa mfano watu wa familia/ marafiki dhidi ya habari kutoka kwa mashirika ya NGO/ wataalamu wa afya / taasisi mbalimbali, n.k)?
- Where / how do you receive information from those sources? Phone or other medium/device?/ Huwa unapokea habari kupitia kwa mbinu hizo ukiwa wapi/ au kwa namna gani? Kwa sim au mbinu zipi/ vifaa vingine?

4.1.2 How trustworthy do you think these sources of information are? Why?

PROBE:/

Unadhani mbinu hizo za kupata habari zinaaminika kwa kiasi gani? Sababu gani?

DADISI:

- Do you trust one more than the others? Why? What makes you have trust in these sources?/ Je unaamini mbinu moja Zaidi ya nyinginezo? Sababu gani? Ni kitu gani kinachofanya uamini mbinus hii kuliko mbinu nyinginezo?
- Are there any sources of information that you don't trust or believe, or think is incorrect? Which ones?/ Je zipo njia nyingine za kupata habari ambazo huziamini, au unadhani huwa si sahihi? Ni zipi hizo?

- Are there any types / media of sources that you don't trust, ex. phone versus in person?/ Je kunazo aina/ mbinu nyinginezo ambazo huziamini, kwa mfano simu ukilinganisha na ujumbe kutoka kwa mtu moja kwa moja?
- Do sources of information contradict other sources? / Je njia za kupata habari huhitilafiana na njia nyinginezo?

4.1.3 Would you recommend any of these sources to others? Why?

PROBE:/

Je waweza kuwapendekezea wenzako yoyote kati ya njia hizi za kujipa habari? Kwa sababu gani?

DADISI:

- In the past, have you recommended any of these sources to others? Why? / Why not?/ Je, katika siku zilizopita, umewahi kumpendekeza mtu yeyote njia yoyote kati ya hizi? Sababu gani?/ Mbona bado?

4.1.4 How would you compare the information you receive from Totohealth with other sources of maternal child health information?

PROBE:/

Je waweza kulinganishaje habari unazopokea kutoka kwa Totohealth na mbinu nyinginezo za kujipa habari za huduma ya afya ya wajawazito?

DADISI:

- Do you find Totohealth's information easier or harder to understand? Why?/ Je habari za Totohealth huwa rahisi au ngumu kuelewa? Sababu gani?
- Do you find that Totohealth contradicts or validates the information from other sources? Is the content different or similar?/ Je habari za Totohealth huwa zinapinga au zinafanana na habari kutoka kwingineko? Je ujumbe ambao huwa ndani ya habari hizo unazopata kwa njia mbalimbali huwa tofauti au hufanana?
- What information do you trust the most? Why?/ Ni habari gani ambazo huwa unaziamini Zaidi? Kwa sababu gani?
- (If the answer to above is not Totohealth) How does Totohealth compare to how much you trust other sources? (Iwapo jibu la hapo juu si Totohealth) Unaweza kulinganishaje unavyoamini Totohealth na zile njia nyingine za habari?
- And what could Totohealth specifically do to improve the level of trust in service and SMS messages?/ Je wadhani Totohealth inaweza kufanya nini hasa ili kuimarisha kiwango cha uaminifu katika huduma na SMS zake?

4.2 Trust and Valuing Totohealth Messages/ Uaminifu na Kuthamini Jumbe za Totohealth

4.2.1 How useful do think it is to save messages you have received from Totohealth?

PROBE:/

Wadhani kuna umuhimu gani katika kuhifadhi/kuweka jumbe ambazo umekuwa ukipokea kutoka kwa Totohealth?

DADISI:

- How often would you save or delete the messages after reading? Would you like to return / refer to old messages that you have saved? Why?/ Unaweza kuwa ukizihifadhi au kuzifuta jumbe ambazo umezisoma tayari baada ya muda gani? Je waweza kupenda kurudia/ kurejelea jumbe za zamani ulizohifadhi? Kwa sababu gani?
- What type(s) of messages do you tend to save? Why?/ Ni aina ipi (zipi) za jumbe ambazo unapenda kuhifadhi? Kwa sababu gani?

4.2.2 Do you find it useful to share what you have learned about this through Totohealth with others? Why / why not?

PROBE:/

Je huwa unaona umuhimu wa kushiriki kile ulichojifunza kupitia Totohealth na wenzako?

DADISI:

- Who do you share this knowledge with?/ Huwa unashiriki na nani mambo uliyojifunza?
- Why do you share the messages with them?/ Sababu gani huwa unashiriki jumbe hizo nao?

4.2.3 Would you be willing to pay for the Totohealth Health SMS service?

PROBE:/

Je waweza kupenda kulipia huduma za SMS za Totohealth?

DADISI:

- Do you pay / have you paid for the Totohealth service?/Je huwa unalipia/ umelipia huduma ya Totohealth?
- How much would you be willing to pay? Why?/ Unaweza kupenda kulipa pesa ngapi? Sababu gani?

IF unsubscribed:

- Did payment of a fee affect your decision to unsubscribe in any way? How and why?/
- IWAPO ALIJIONDOA:

  Je ulipaji wa ada uliwahi kuchangia katika uamuzi wako wa kujiondoa katika huduma hii kwa njia yoyote ile? Namna gani na kwa sababu gani?

4.2.4 Will you apply what you have learned from Totohealth in future pregnancies?

PROBE:/

Je utatumia kile ulichojifunza kutoka kwa Totohealth wakati ukipata mimba siku zijazo?

DADISI:

- Have you had another baby / pregnancy since? / Tangu hapo umewahi pata mtoto mwingine/ mimba nyingine?

  If yes): did you use the Totohealth service or what you have learned through Totohealth for this baby/pregnancy? Was this information you learned from Totohealth still relevant for your next baby? / (Iwapo ni ndiyo): Ulitumia huduma za Totohealth au kile ambacho umejifunza kupitia kwa Totohealth kwa mtoto huyu mwingine/ mimba hiyo nyingine? Je habari hizo ulizokuwa umejifunza kutoka kwa Totohealth bado zilikuwa muhimu kwa mtoto huyo mwingine?

- Would you register for Totohealth again in the future?/Je ungependa kujiandikisha tena kwa huduma ya Totohealth katika siku zijazo?

Section 5: Awareness and Practice of Health-Seeking Behaviours (10 minutes)/Sehemu ya 5: Ufahamu na Utekelezaji wa Mienendo ya Kutafuta Habari za Kiafya (Dakika 10)

The aim of this section is to explore the ways in which participants' awareness and attitudes have been changed by Totohealth, information on the health services and facilities that participants' use, and the ways in which they have changed their health behaviours and practices. /

Lengo la sehemu hii ni kutalii jinsi ufahamu wa wahojiwa pamoja na mitazamo yao ilivyobadilishwa na Totohealth, habari kuhusu huduma za afya na vifaa ambavyo wahojiwa hutumia, pamoja na namna ambavyo wamebadilisha mienendo na tabia zao ya kiafya.

5.1 Awareness and Attitudes/ Ufahamu na Mitazamo

5.1.1 Thinking about the various priorities in your life, what are your top 3?:/

Unapowazia kuhusu vitu mbalimbali maishani mwako, unaweza kuviweka vifuatavyo katika viwango vipi?

- Financial stability/ Kujiweza kifedha
- Roof above head/ Kuwa na makazi/nyumba
- Your child's health/ Afya ya mtoto wako
- Food security/ Kujitosheleza kwa chakula
- Your health/ Afya yako
- Your work/ Kazi yako
- Education/ Elimu
- Family/ Familia

PROBE:/ DADISI

- And how would you rank these priorities if you think about the amount of time and money you spend on them? /Na je waweza kuviweka vifaa hivyo katika mfuatano upi unapofikiria kuhusu kiasi cha muda au pesa ulizotumia kwa vitu hivyo?
- Has this changed since you subscribed to Totohealth? To what extent has Totohealth contributed to this?/ Je hili limebadilisha tangu ujiandikishe kwa Totohealth? Je Totohealth imechangia kwa hili kwa kiasi gani?
- In what ways did Totohealth educate you on this/achieve this?/ Totohealth ilikufunza kuhusu hili kwa njia gani/ Vipi ilivyokusaidia kufanikisha hili?

5.1.2 How comfortable are you with making decisions on prioritizing your and child's health? How has Totohealth influenced you making decisions?

PROBE:/

Unahisi wepesi gani unapofanya maamuzi kuhusu kuipa umuhimu afya ya mtoto wako? Je Totohealth imeathiri vipi jinsi unavyofanya maamuzi?

DADISI:

Have you been able to put into practice what you have learned through Totohealth? Can you provide examples?/ Je umefanikiwa kuyatekeleza yale uliyojifunza kupitia kwa Totohealth? Je waweza kutoa mifano?

5.2 Health Behaviours and Practices/ Mienendo na Tabia kuhusu Afya

5.2.1 What types of health care services or facilities do you feel you and your child have access to?

PROBE:/

Ni aina zipi za huduma au vifaa vya afya unavyohisi wewe na mtoto wako mnafikia?

DADISI:

- What types of facilities and services do you visit? Why those in particular? How many do you have access to?/ *Ni aina zipi za vifaa au huduma unazotembelea? Sababu gani hizo hasa? Ni ngapi unazofikia?*
- How accessible is it for you? (e.g. transport, mobile health services*)/ Je kuna wepesi gani kwako kuzifikia? (Kwa mfano, usafiri uko vipi, je ni huduma za afya zinazohamishwahamishwa mahali tofauti tofauti)*

- What are some of the barriers for you to access the facilities? (e.g. cost; time; distance; availability of transportation)/ Vipi ndivyo baadhi ya vizuizi vya wewe kufikia vifaa hivyo? (k.m. gharama/bei, muda, umbali, uwepo wa njia za usafiri)
- How did you come to know about these services / facilities? Where, and when, did you learn about these facilities or services?/ Ulikuja kujuaje kuhusu huduma hizi/ vifaa hivi? Wapi, na lini, ulipojifunza kuhusu kuwepo kwa vifaa hivi au huduma hizi?

5.2.2 Can you tell me about an experience of when you accessed these facilities or services?

PROBE:/

Je waweza kuniambi kuhusu uzoefu wako ulipotumia vifaa au huduma hizi?

DADISI:

- How did you feel when you accessed the facilities or services? Did you feel safe when accessing them? Did you want to go? Did you feel welcome to use the services?/ *Ulihisi vipi ulipotumia vifaa au huduma hizo? Je ulihisi salama ulipokuwa unazitumia? Je ulikuwa na hamu ya kuenda? Je ulihisi kukaribishwa kutumia huduma hizi?*
- Have you ever had a bad experience accessing health services? In what sense?/ *Je umewahi kukumbana na jambo la kuudhi wakati ukipokea huduma za afya?*
- Do you feel that it is easy or difficult to access these facilities / services?/ *Je ulihisi kuwa rahisi au vigumu kupata vifaa/ huduma hizi?*
- How did other people in your life (e.g. community, friends, family) feel about you accessing these services? Do you agree / disagree with them, and why?/ *Je vipi watu wengine maishani mwako (kama vile jamii, marafiki, familia) walivyohisi kuhusu wewe kutumia huduma hizi? Je huwa mnakubaliana au mnatofautiana nao kuhusu huduma hizo, kwa sababu gani?*

5.2.3 Do these facilities or services meet the needs of you and your child?

PROBE:/

Je vifaa hivi au huduma hizi zinatosheleza mahitaji yako na ya mtoto wako?

- How do you feel about the quality of services and facilities available to you? / Unahisije kuhusu ubora wa huduma na vifaa vilivyopo kwa matumizi yako?
  - Prompt if necessary: physical services and equipment, level of training of healthcare professionals, willingness and capacity of healthcare professionals to offer services, etc)/ Dadisi ikihitajika: Je huduma na vifaa vya vya kimwili, kiwango cha utaalamu wa wanaotoa huduma za afya, utayarifu na uwezo wa wataalamu hao wa afya kutoa huduma, n.k)
- Why?/ Kwa sababu gani?
- What would you like to be improved for better quality?/ Je ungependa waimrishe ipi ili huduma ziwe bora?

5.2.4 How has Totohealth changed your views on using and accessing facilities and services? In what way?

PROBE:/

Je, kufikia kwako huduma hizi/vifaa hivi kumebadilika/hakujabadilisha tangu ujiandikishe kwa Totohealth? Kwa njia gani?

- Are you more likely to go now?/ Je kwa sasa unaweza kupenda kwenda kuzipokea?
- Do you have a better understanding of when / why / how often you should go?/ Je una uelewa mzuri kuzihudu/ ni kwa sababu gani/ na mara ngapi unaweza kwenda?

5.2.5 *(If answered earlier, you can skip this question)***: Have you been able to put into practice what you have learned through Totohealth? Can you provide examples?/ Je, umeweza kutumia kimatendo kile ambacho ulijifunza kupitia Totohealth? Je waweza kutoa mifano?**

Section 6: Confidence and Well-being (10 minutes)/ Sehemu ya 6: Kujiamini na Kuwa Mzima (Dakika 10)

The aim of this section is to explore the experiences of participants in having confidence in making health-related decisions for themselves and their children, and their overall well-being.

6.1 Confidence in Making Health-related Decisions/ Kujiamini wakati wa kufanya maamuzi yanayohusiana na Afya

6.1.1 How confident do you feel about your ability to make decisions for your own and your child's health?

PROBE:/

Unahisi kujiamini kiasi gani kuhusu uwezo wako wa kufanya maamuzi kuhusiana na afya yako mwenyewe au ya mtoto wako?

DADISI:

- How confident do you feel in being a parent?/ Unajiamini kiasi gani katika hali yako ya kuwa mzazi?
- How comfortable are you making decisions about your health? Why? / Unahisi wepesi kiasi gani unapofanya maamuzi kuhusu afya yako? Kwa sababu gani?
- How comfortable are you making decisions about your child's health? Why?/ Unahisi wepesi gani unapofanya maamuzi kuhusu afya ya mtoto wako? Kwa sababu gani?
- How do you feel about your ability to eat healthier/more nutritious?/ Unahisi vipi kuhusu uwezo wako wa kula vyakula vye afya/ vyenye lishe bora?
- How do you feel about your ability to take rest when needed?/ Unahisi vipi kuhusu uwezo wako wa kupumzika pale unapohitajika kufanya hivyo?

6.1.2 Has Totohealth changed how you feel about making decisions about your own and your child's health?

PROBE:/

Je Totohealth imebadilisha jinsi unavyohisi kuhusu kufanya maamuzi yanayohusiana na afya yako mwenyewe au mtoto wako?

DADISI:

- If so, how has Totohealth changed the way you feel about being a parent and why?/ Iwapo ni hivyo, Totohealth imebadilishaje jinsi unavyohisi kuhusu kuwa mzazi na ni kwa sababu gani?
- How has Totohealth changed how comfortable you feel in making decisions about your health? Why?/ Totohealth imebadilisha vipi wepesi unaohisi katika kufanya maamuzi kuhusiana na afya yako? Kwa sababu gani?
- How has Totohealth changed how comfortable you feel in making decisions about your child's health? Why?/ Totohealth imebadilisha vipi kiwango cha wepesi unachohisi wakati unapofanya maamuzi kuhusiana na afya ya mtoto wako? Sababu gani?
- Have you been able to put into practice what you have learned through Totohealth? Can you provide examples?/Je umeweza kutumia yale uliyojifunza kutokana na Totohealth? Je waweza kutoa mifano?
- How does this compare to before you started receiving Totohealth messages? Better/worse/same? Why?/ Je unaweza kulinganishaje hali hiyo na jinsi ulivyokuwa kabla ya kuanza kupokea jumbe za Totohealth? Je hali imeimarika/ imeharibika/ ni ilele? Sababu gani?
- Are there any other factors that affect your decisions on your own and your child's health?/*Je kunazo sababu nyingine zinazoathiri maamuzi yako kuhusu afya yako mwenyewe au afya ya mtoto?*

6.2 Well-being/ Kuwa mzima

6.2.1 Have there been any changes to your life in any other areas since subscribing to Totohealth (apart from the health and development of your child)?

PROBE:/

Je pamekuwapo mabadiliko yoyote katika maisha yako kwa namna tofauti na ilivyo hapo juu tangu ujiandikishe na Totohealth (yaani mbali na afya na ustawi wa mtoto wako)?

DADISI:

- How has Totohealth contributed to this? **If yes,** In what ways?/Je Totohealth imechangiaje katika hili? Iwapo ni ndiyo, ni kwa njia gani?
- Is there any change in your ability to make decisions about other aspects of your life? **If yes,** In what ways?/ Je kunayo mabadiliko yoyote katika uwezo wako wa kufanya maamuzi kuhusu mambo mengine maishani mwako? Iwapo ni ndiyo, ni kwa njia gani?
- Is there any change in your ability to care for yourself and / or your household? **If yes,** In what ways?/ Je kunayo mabadiliko mengine yoyote katika uwezo wako wa kujitunza na/ au kutunza familia yako? Iwapo ni nidyo, kwa njia gani?
- Is there any change in your ability to manage new situations? **If yes,** In what ways?/ Iwapo kuna mabadiliko yoyote katika uwezo wako wa kukabili hali mpya maishani? Iwapo ni ndiyo, kwa njia gani?
- Have there been any changes to the ways in which you have been able to work (earn) or save money? Learn or study?/ E pamekuwapo mabadiliko yoyote kuhusu jinsi ambavyo umeweza kufanya kazi (kujipa mapato) au kuweka pesa? Kusoma au kujipa elimu?
- To what extent is this a result of the confidence you've gained?/ Ni kwa kiwango unahisi hii ni kutokana na kujiamini ulikojipatia?

Section 7: Wrap-up and Close (2 minutes)/ Sehemu ya 7: Kuhitimisha na Kufunga (Dakika 2)

7.1 What do you think could be done to help strengthen access to maternal and child health information and services for young mothers?/

Unadhani ni kitu gani kinachoweza kufanywa ili kusaidia kuimarisha upatikanaji wa habari na huduma za afya ya kinamama wajawazito na afya ya mtoto kwa kinamama wachanga?

7.2 We are almost at the end of our interview. Thank you for being so energetic and participating in our conversations. Is there anything else you would like to talk about that we haven't discussed in this interview?/

Karibu tunakamilisha mahojiano. Asante kwa kuwa na nguvu na kushiriki katika mazungumzo yetu. Je kunalo jambo lolote ambalo ungependa kuzungumzia ambalo hatukuzungumzia katika mahojiano haya?

THANK AND CLOSE/ SHUKURU NA KUFUNGA

Thank you very much for taking the time to speak to us today and for your participation. You provided a lot of great information and insight.

The information you provided to us will be used to better understand issues around the well-being and health of young mothers and their children. This will help strengthen services like Totohealth and help inform future programmes that support young mothers such as yourselves. /

Asante sana kwa kuchukua muda wako kuzungumza nasi leo pamoja na kushiriki kwako katika mahojiano haya. Ulitupa habari/maelezo muhimu zaidi.

Habari ulizotupa zitatumika kusaidia kuelewa mambo yanayohusu uzima na afya ya kinamama wachanga na watoto wao. Habari hizi zitatusaidia kuimarisha huduma kama vile za Totohealth pamoja na kusaidia kupanga mipango ya kuwasaidia kinamama wachanga kama vile wewe katika siku zijazo.

KII-Knowledge Assessment Rubrics and Cheat Sheets

Purpose

- These rubrics and cheat sheets will help you to complete Section 2: Knowledge Assessment of the Key Informant Interviews. For specific instructions on administering the knowledge assessment, please refer to the KII Guide.
- This assessment seeks to test adolescent girl subscribers' general knowledge levels on maternal and child health issues. It does not test general recall levels and instead seeks to determine if the adolescent girl subscribers have learned the information.

Note: Participants do not have to answer word for word but should be able to demonstrate the same concepts in their answers.

Table 5: Summary of Rubrics and Cheat Sheets

Test Type	Section	Rubric and Cheat Sheet Available
Pregnancy	Antenatal Care	Rubric only
	Safe Delivery	Rubric only
	Pregnancy Health	Rubric and cheat sheet
Child Health	Childhood immunisation	Rubric only
	Breastfeeding and Child Nutrition	Rubric and cheat sheet
	Child Development – Early Detection	Rubric and cheat sheet

Pregnancy Knowledge Assessment

Table 6: Antenatal Care Scoring Rubric (2.1)

Score:	0 - no knowledge	1 – some knowledge	2 – full knowledge
Scoring/level of awareness description	Girls do not answer the questions, do not know what antenatal care is, or provide incorrect information.	Girls can correctly explain what antenatal care is and can provide some details about its purpose, benefits or when they should go.	Girls can correctly explain what antenatal care is and accurately explain **at least 2 specific details** of its purpose, benefits and when they should go.
Knowledge validation based on text messages received	• Does not know anything about antenatal care. Example of incorrect information: • Antenatal care is the support received from family and friends while pregnant	• Antenatal care is going to the clinic before giving birth to make sure that mom and baby are healthy. • Can identify some details about purpose, benefits or when they should go, but does not answer specific details on them: • Examples: ○ At antenatal visits, you get vaccinations, health tests, checks on baby.	Describes the same as some knowledge **plus at least 2** of: • Visit the clinic at least 4 times during pregnancy. • Get vaccinated at least 1 time for tetanus during pregnancy. • It is best to get 2 vaccinations for tetanus. • Going to the clinic helps to monitor the baby's development. • Important to detect complications as soon as possible.

			• Can find out about blood type and HIV status.

Table 6: Safe Delivery Scoring Rubric (2.2)

Score:	0 - no knowledge	1 – some knowledge	2 – full knowledge
Scoring/level of awareness description	Girls do not answer the questions, do not know what labour and safe delivery is, or provide incorrect information.	Girls can correctly explain what labour and safe delivery is and can provide some details about the timing of pregnancy and labour, what the signs of labour are and when they should go to the clinic to deliver.	Girls can correctly explain what labour and safe delivery is and accurately explain **at least 2 details** about when they should go into labour, what the signs of labour are and when they should go to the clinic to deliver.

Knowledge validation based on text messages received	• Does not know anything about safe delivery.
	Example of incorrect information:
	• Delivering at home with my family is safe.
		• Safe delivery is going to the clinic to give birth.
		• Can identify some details about the timing of pregnancy and labour, what the signs of labour are and when they should go to the clinic to deliver but does not answer specific details on them.
		• Examples:
		  ○ Need to go to the clinic when start to feel pain (labour)
		  ○ If the baby hasn't come on time, go to the clinic.
			Describes the same as some knowledge **plus at least 2** of:
			• It is important to know where you are delivering and make a plan
			• 40 weeks is normal length on pregnancy. But labour can happen early or late.
			• Safe to go up to 42 weeks without going into labour. Go to clinic if pregnancy lasts more than 42 weeks.
			• It is important to have someone you know with you during labour.
			• Signs of labour:
			  ○ Blood in vaginal discharge
			  ○ Contractions every 10 minutes or less

Table 7: Pregnancy Health Scoring Rubric (2.3)

Score:	0 - no knowledge	2 – some knowledge	3 – full knowledge
Scoring/level of awareness description	Girls do not answer the questions, do not know what pregnancy health is, or provide incorrect information.	Girls can correctly explain what pregnancy health is and can provide some details on factors that influence a healthy pregnancy (nutrition, lifestyle and symptoms)	Girls can correctly explain what pregnancy health is and accurately explain **at least 4 details** about factors that influence a healthy pregnancy (nutrition, lifestyle and symptoms)
Knowledge validation based on text messages received	• Does not know anything about pregnancy health. Example of incorrect information: • Pregnancy health is about doing whatever makes me feel better.	• Pregnancy health is making sure that the mother and child are healthy during pregnancy. • Can some details on factors that influence a healthy pregnancy (nutrition, lifestyle and symptoms), but does not answer specific details on them. • Example: Things that influence a healthy pregnancy: ○ Eating healthy ○ Exercise ○ Going to the clinic if there are issues	Describes the same as some knowledge **plus at least 4** of: ***Refer to Pregnancy Health Cheat Sheet for specific details.***

Table 8: Pregnancy Health Cheat Sheet

Category	Information Received
Nutrition	• Eat a balanced meal • Eat fruits and vegetables, eggs, cheese, tea, milk, avocado, beans • Eat foods with high nutrients like: calcium, protein, vitamin D, iodine • Iodine is important. Eat bananas, eggs, yogurt • Need extra iron. Take iron folic acid pills and eat green leafy vegetables, meat, beans, and whole grains. • Eating health helps prevent miscarriages and stimulates brain development • Need to eat 150 calories/day extra • Do not diet • Food cravings or aversions are normal. • Cravings for non-food items (like stones or soil) can happen. Do not eat, they are dangerous. • Caffeine is not good for the baby. Do not have more than 3 cups of coffee/coke/tea per day.
Symptoms of pregnancy	**Normal signs:** • Nausea and morning sickness • Sore breasts • Constipation

Category	Information Received

	• Headaches: Do not take medicine without talking to a doctor
	• Light spotting is normal
	• Heartburn is normal. Avoid greasy and spicy foods.
	• Sharp pain in lower belly is normal.
	• Frequent urination
	Normal weight gain:
	• First 3 months: 1.3 to 3 kilos
	• Month 5: less than 4.5 kilos
	• Entire pregnancy: 11 to 16 kilos
	Danger signs (go to doctor)
	• Significant bleeding, cramping or sharp pains, go to doctor
	• Rapid weight gain (more than 3 kilos per month) or too little weight gain
	• Reduced baby movement
	• Heavy abdominal pain
	• Vaginal bleeding
	• Signs of eclampsia:
	  ○ Sudden swollen hands/face
	  ○ Headache
	  ○ Excessive vomiting, nausea and stomach pain

Lifestyle	• Avoid smoking and alcohol
	• Exercise regularly (2x/week);
	  ○ It can improve posture and prevent high blood pressure
	  ○ Walk often
	• Avoid stress
	  ○ Surround yourself with people who care about you and support you
	• It is ok to have sex.

Insurance	• Important to have insurance to help cover medical costs

Child Health Knowledge Assessment

Table 9: Childhood Immunisation Scoring Rubric (2.1)

Score:	0 - no knowledge	2 – some knowledge	3 – full knowledge
Scoring/level of awareness description	Girls do not answer the questions, do not know what immunisation is, or provide incorrect information.	Girls can correctly explain what immunisation is and can provide some details about why immunisation is important, what diseases it protects and when to immunise their child.	Girls can correctly explain what immunisation is and accurately explain **at least 2 details** about why immunisation is important and when to immunise their child.

Knowledge validation based on text messages received	• Does not know anything about immunising their child. Example of incorrect information: • Immunisation is giving pills to my child when they are sick.	• Immunisation protects my child from getting diseases (or sick). • Can identify some details about why immunisation is important, what diseases it protects and when to immunise their child but does not answer specific details on them. • Examples: ○ Baby needs immunisations after they are born. ○ Immunisations can protect my baby from diseases like polio and hepatitis.	Describes the same as some knowledge **plus at least 2** of: • Vaccination saves lives, but only when all vaccines are taken and in the right time. • First 4 months child should receive full series of vaccines for everything except measles. • First 4 months child will receive these vaccines: DTP (diphtheria), HeB (Hepatitis B), Hib, Polio and pneumococcal. • Full series of these vaccines is 4 doses. • Measles vaccine needs 2 vaccines, at 9 months and at 18 months • At age 1, child should start receiving vitamin A and deworming. • Vitamin and deworming should be every 2 times every 6 months • Take Vitamin A and deworming until 5 years.

Table 10: Breastfeeding and Child Nutrition Scoring Rubric (2.2)

Score:	0 - no knowledge	2 – some knowledge	3 – full knowledge
Scoring/level of awareness description	Girls do not answer the questions, do not know what breastfeeding and child nutrition are, or provide incorrect information.	Girls can accurately explain what breastfeeding and child nutrition are and can provide some details about when they should breastfeed, how long to breastfeed for, when to introduce foods and what kinds of food to introduce.	Girls can describe breastfeeding and child nutrition and accurately explain **at least 4 details** about when they should breastfeed, how long to breastfeed for, when to introduce foods and what kinds of food to introduce.
Knowledge validation based on text messages received	• Does not know anything breastfeeding and child nutrition. Example of incorrect information: • I feed my baby the same as me as soon as a bring them home from the clinic.	• Baby should drink milk from the breast when they are young and healthy food when they are older to • Can identify some details about when they should breastfeed, how long to breastfeed for, when to introduce foods and what kinds of food to introduce, but does not answer specific details on them. • Examples: ○ Need to only breastfeed when the baby is still young. ○ It is ok to start giving baby food after breastfeeding for many months.	Describes the same as some knowledge **plus at least 4** of: ***Refer to the Breastfeeding and Child Nutrition Cheat Sheet for specific details.***

Table 11: Breastfeeding and Child Nutrition Cheat Sheet

Category	Information Received
Breastfeeding	• Do not take drugs, alcohol or cigarettes. They can go through breast milk and into your baby • Breastfeed on demand at least 8 to 10 times per day • Should wait 3 hours between feedings • Finish one breast before moving to the next • Baby gets enough milk if they have 6 to 8 wet napkins a day • Green stool is normal • If your baby is sick, they may not want to breastfeed. Take extra time to feed them. • Do not give your baby water before 6 months • Breastfeed exclusively until 6 months • Keep breastfeeding for 2 years. Start to wean the baby at 2 years.

Nutrition	**Introducing foods**
	• 6 months: Start introducing food
	  ○ Feed 3 times a day
	  ○ Introduce one by one foods like: porridge, banana, avocado, pumpkin, carrot
	  ○ Keep breastfeeding at least 2 times a day
	  ○ Don't mix flour for porridge
	• 1 year: can eat the same foods as you
	  ○ make sure food is cut small to avoid choking
	  ○ avoid distractions when feeding
	Food sources
	• Needs food with protein
	  ○ Foods like: beans, peas, greens, eggs
	• Vitamins (like A and C) are important
	  ○ Eat foods like: egg, mango, orange, greens, veggies
	• Never pressure your child to eat
	• Wash fruits and vegetables and cook well
	• Iron prevents anaemia
	  ○ Eat foods like: liver, chicken, fish, beans, peas.

Table 12: Child Development – Early Detection Scoring Rubric (2.3)

Score:	0 - no knowledge	2 – some knowledge	3 – full knowledge
Scoring/level of awareness description	Girls do not answer the questions, do not know how to identify physical or mental developmental delays, or provide incorrect information.	Girls can accurately identify physical or mental developmental delays and can provide some details about warning signs of child development or diseases to look for.	Girls can identify physical or mental developmental delays and accurately explain **at least 2 details** about warning signs of child development or diseases to look for.

Knowledge validation based on text messages received	• Does not know anything about immunising their child. Example of incorrect information: • Anytime my child is not well, it is a sign that something could be wrong with their development.	• There are signs of issues in a child's development (physical or mental) that are important to look out for to prevent any issues. • Can identify some details about warning signs of child development or diseases to look for but does not answer specific details on them. • Examples: o If my baby or child is not developing properly, I should bring them to the clinic to find out what is wrong. o There are some things that you can look for to see if your child is developing properly.	Describes the same as 'some knowledge' **plus at least 2** of: ***Refer to Child Development – Early Detection cheat sheet for specific details.***

Table 13: Child Development – Early Detection Cheat Sheet

Category	Information Received

Childhood abnormalities	• Clubfoot:
	  ○ Deformity of the foot: foot is pointing down and end twisted in
	  ○ Easily treatable
	• Sickle Cell Anaemia
	  ○ Serious condition
	  ○ Symptoms: cold hands/feet, pale skin, yellowish eyes

Warning signs First 6 months	• Does not reach with both arms and kick with both legs • Cannot support with elbows when on belly • When holding under armpit: is not able to stand with good support on feet
Warning signs After 6 months	• Not able to sit without support or falling over • Not able to roll or grasp feet • Not able to hold and shift objects between hands • Does not respond when you make a sound or talk to them • Not able to creep or crawl • Does not weigh between 7 and 11.5kgs • Not able to stand with support • Not able to pick up something small (like a grain of rice) • If there is a curve in the spine ○ Cannot sit up straight
Warning signs After 1 year	• Does not understand their name • Does not understand yes or no • Has not started taking steps/walking • Has not started saying a few words • Does not weigh between 9.5 and 15 kilos • Cannot pick up things off the floor • Cannot balance when taking steps

Focus Group Discussion Guide

Purpose/ Dhamira

This topic guide serves as the guide for the Focus Group Discussions with adolescent girls who have been subscribed to Totohealth's SMS services, as part of endline data collection for the Totohealth Impact Evaluation.

The aim of the Focus Group Discussion is to better understand the challenges that adolescent girls face when accessing maternal and child health information and services. It will also help assess these challenges and how they might impact an adolescent girls' decision to accessing maternal and child health information and services or facilities.

Mada hii inatumika kama mwongozo wa Majadiliano ya Kundi yanayohusisha wasichana waliobalehe (waliovunja ungo) ambao wamejiandikisha kwa huduma ya SMS za Totohealth, kama sehemu ya ukusanyaji data wa tamati kwa ajili ya Tathmini ya Athari ya Totohealth.

Lengo la Majadiliano haya ya Kundi ni kusaidia kuelewa vyema changamoto ambazo wasichana waliobalehe hupitia wanapotafuta huduma na habari za afya kwa wajawazito na watoto. Pia yatasaidia katika kutathmini changamoto hizi na jinsi zinavyoweza kuathiri maamuzi ya wasichana kuhusu kufikia/kupata habari na huduma au vifaa vya afya ya kinamama wajawazito na watoto.

Enumerator Notes

Time and duration

The Focus Group Discussion should last 1.5 hours, and no more than 2 hours. These are the recommended timings for each section of guide, in order to stay within this time frame.

- Section 1: Opening, consent, and introductions (5 minutes)
- Section 2: Activity - The Story Bag (15 minutes)
- Section 3: Understanding Barriers - Focus Group Question Period (30 minutes)
- Section 4: Risk Assessment (20 minutes)
- Section 5: Totohealth - Overcoming Challenges and General Well-Being (10 minutes)
- Section 6: Wrap up and close (10 minutes)

Resources to have on hand

In order to administer the focus group discussion, enumerators should have the following on hand:

- FGD Note Taking Template
- Activity: set of pictures x 3
- Paper and markers
- Tape or sticky tack
- Coloured sticky notes (green, yellow, red)
- Audio recording equipment

Instructions / Key steps

The FGD will be facilitated by two enumerators: one to facilitate and one to record notes. This FGD is split into 6 sections. Each section contains further instructions. Sections should be conducted in order of appearance in the guide. Use the FGD Note Taking Template to record all notes and observations.

Additional Enumerator Notes:

- Enumerator script is indicated in **bold,** while notes for the Enumerator are indicated in *italics*.
- Where required, helpful tips are provided for the Enumerator and Recorder.
- This guide includes probes for the questions. Probes should be used to explore issues further. It is likely that in the course of the response from the respondent, they will have covered some of the aspects indicated in the

probe. Therefore, the probe should be used when relevant, and to cover any remaining gaps not provided by the respondent.

Focus Group Discussion Guide/ Mwongozo wa Majadiliano ya Makundi

Section 1: Opening, consent, and introductions (5 minutes)/ Sehemu ya 1: Ufunguzi, ruhusa, na utangulizi (dakika 5)

Opening and consent/ Ufunguzi na ruhusa

Enumerator to read to the respondents:

Thank you very much for giving us your time to speak today. I'm <name> from the research company Research Plus Africa. I am doing research to learn more about some of the challenges young mothers face when accessing maternal and child health information and services.

We would like to find out more about you and your experiences with healthcare information and services.

We will talk for about 1.5 hours. First, we will do a little activity and then we're going to ask you a few questions about some of the challenges young mothers face. To thank you for your time, we will provide you with a token of appreciation.

If it is okay with you, I would like to record our discussion as well as take notes. Only myself and my close colleagues at Research Plus Africa will hear the recordings. No one else will hear the recordings, and no one outside of this room will know what you have said. If at any time you are uncomfortable, we can stop and you can leave. If at any time anything is unclear or if you have any question, please let me know.

Are you okay if we record this and continue? (Yes/No).

Asante sana kwa kutupa muda wako ili tuweze kuongea nawe leo. Jina langu ni (Jina) kutoka kampuni ya Research Plus Africa. Ninafanya utafiti ili nipate kujifunza zaidi kuhusu baadhi ya changamoto ambazo kinamama wachanga hupitia wanapotafuta habari na huduma za afya kinamama wajawazito na watoto.

Tungependa kujua Zaidi kukuhusu wewe na uzoefu wako katika kutumia habari na huduma za afya.

Tutachukua karibu saa moja na nusu. Kwanza tutafanya zoezi dogo halafu tutakuuliza maswali machache kuhusu baadhi ya changamoto ambazo kinamama wachanga wanakabiliana nazo. Kama njia ya kukushukuru, tutakupa zawadi ndogo.

Kama waona hiyo ni sawa, ningependa kurekodi mazungumzo yetu pamoja na kuyaandika/kuyanakili chini. Ni mimi tu pamoja na wenzangu wa karibu katika shirika la Research Plus Africa watakaosikiza yale tutakayorekodi. Iwapo utajihisi vibaya, waweza kutueleza ili tumalizie mazungumzo yetu hapo, nawe uweze kuondoka. Iwapo utafika wakati wowote ule utahitaji ufafanuzi au uwe na swali lolote lile, tafadhali nijulishe.

Je utaruhusu turekodi haya na tuendelee? (Ndiyo/La)

Introductions/ Utangulizi

First, to start, we would like to get to know each other. I would first like us to go around the room and if you can tell us your name, age, and a bit about your child. What is their name, how old are they, and what are some of the things they like to do?/

Mwanzo kabla ya kuanza, tungependa tujuane. Kwanza ningependa tuzunguke kwenye chumba hiki na waweza kutuambia jina lako, umri, na kidogo kuhusu mtoto wako. Jina la mtoto huyo ni gani, ana umri upi, na mambo gani anayopenda kufanya?

Enumerator who is facilitating should start first.

Section 2: Activity: The Story Bag (15 minutes)/ Sehemu ya 2: Shughuli/Zoezi: ‘Mfuko wa Hadithi’ (dakika 15)

The purpose of this activity to get participants comfortable talking with each other and to start thinking about maternal and child health issues. It should be a light and fun activity that will help to generate some energy and discussions that will lead into Section 3: Understanding Barriers - Focus Group Question Period.

Now that we know each other a bit better, I would like to do a fun activity with you. The activity is called The Story Bag. This activity is going to involve a bit of creativity and maybe even some of your acting skills.

I will split you into groups 2 groups. Each group is going to be given a set of images of different unrelated objects and a scenario. Your job is to come up with a brief story that incorporates all of your objects and your scenario. You can make up any other details you need to tell your story. The only requirements are that you must include each of the objects in some way.

You will have 5 minutes to put your story together, so work together. After 5 minutes you will each present your story. You can tell it to us or act part of it out, whatever you feel comfortable doing. Any questions?/

Sasa kwa kuwa tumeshajuana vizuri, ningependa kufanya zoezi la kufurahisha pamoja nanyi. Zoezi hilo linaitwa The Story Bag (Mfuko wa Hadithi). Zoezi hili linajumuisha ubunifu kidogo na labda baadhi ya vipaji vyenu vya kuigiza vitahitajika.

Nitawagawa katika makundi 2. Kila kundi litapewa picha kadhaa za vitu visivyohusiana kwa namna yoyote pamoja na kidokezo cha hali fulani. Kazi yako itakuwa kubuni hadithi fupi inayojumuisha vitu hivyo ulivyopewa na hali inayokuhusu kama mtu binafsi. Unaweza kubuni maelezo mengine zaidi ambayo yatasaidia kukamilisha stori yako. Hitaji pekee ni kuwa kwa namna fulani sharti ujumuishe kila moja ya vitu hivyo katika stori yako.

Utapewa dakika 5 za kubuni stori yako, kwa hivyo shirikianeni kwa pamoja. Baada ya dakika 5 kila mmoja wenu atawasilisha stori yake. Utasimulia stori yako au waweza pia kuigiza sehemu ya stori hiyo; yaani utafanya jinsi inavykupendeza. Je kuna maswali yoyote?

Implementing the Activity:

- *Split the participants into two groups.*
- *Assign each group a scenario and hand out their image. Give each group 5 minutes to come up with a story.*
    - Group 1
        - *Scenario: An adolescent girl just found out she was pregnant.*
        - *Images: 200 KSh, leaf, notebook*
    - Group 2:
        - *Scenario: An adolescent girl is bringing her new baby home from the clinic for the first time.*
        - *Images: Mango, condom, pen*
- *After 5 minutes, ask each group to present their story. They can either just tell it or act it out.*
- *Have both groups present and then ask them a couple of follow up questions.*

Wow – I hope that you had fun! Those stories were very creative. Now, I have a couple follow up questions for you:/

Woow – Ninatumai ulifurahia! Stori zenu zilikuwa na ubunifu sana. Sasa, nina maswali kadhaa zaidi yanayohusiana na mlichofanya

2.1 Do you think these stories are realistic? What makes them real?/

- Je wadhani stori hizi ni halisia/kweli? Ni kitu gani kinachozifanya ziwe na uhalisia/ziwe za kweli?

2.2 Have you ever experienced any of these scenarios yourself? Would you like to share?/

- Je umewahi kushuhudia/kupitia hali hizi wewe kibinafsi? Je, waweza kupenda kushiriki na wenzako hali hizo?

Section 3: Understanding Barriers - Focus Group Question Period (30 minutes)/ Sehemu 3: Kuelewa Vizingiti – Kipindi cha Maswali ya Kikao cha Makundi (Dakika 30)

The purpose of this section is to help identify some of the challenges young mothers face accessing information and services during pregnancy, childbirth and as a parent. The questions are broken down into sub-topics to help direct the questioning about common types of challenges young mothers face.

Now we are going to talk about some of the challenges young mothers face when accessing information and services related to pregnancy, childbirth and parenting. I want you to think about your own experiences. I am going to ask you a series of questions. It is OK to have different views from each other. There are no right or wrong answers.

Sasa tunaenda kuzungumza kuhusu baadhi ya changamoto ambazo kinamama wachanga hupitia wanapotafuta habari na huduma zinazohusiana na ujauzito, kujifungua na malezi. Ningependa uwazie kuhusu hali iliyowahi kukupata kama mtu binafsi. Nitakuuliza msururu wa maswali. Ni sawa kuwa na maoni tofauti na ya mwenzako. Wala hakuna majibu yasiyokuwa sahihi au yaliyo sahihi.

Knowledge Barriers/ Vizingiti vya Kupata Ufahamu

3.1 Who do you turn to for advice on pregnancy and raising your children? Why do you turn to these sources for advice?/

Huwa unamwendea nani kwa ushauri kuhusu ujauzito na kuwalea watoto? Ni kwa sababu gani huwa unawaendea hao kwa ushauri huo?

3.2 Do you, as a young mother, have any challenges accessing information about maternal and child health?

PROBE:

Do you feel comfortable accessing information about maternal and child health (e.g. antenatal care, breastfeeding, family planning, immunisation)?

- Note for enumerator: think of safety, relevancy, privacy, stigma when asking about comfortability.

Je wewe kama mama mchanga, huwa unakuwa na changamoto zozote za kujipa habari kuhusu afya ya wajawazito au afya ya mtoto?

DADISI:

Je huwa unahisi sawa unapozitumia habari zinazohusu afya ya wajawazito au afya ya mtoto (kwa mfano, unapoenda kutafuta huduma za wajawazito katika kituo cha afya, habari kuhusu unyonyeshaji, kuhusu upangaji uzazi, na chanjo)?

- Fahamu mratibu: Wazia kuhusu usalama, ufaafu, usiri, unyanyapaa unapouliza maswali kuhusu kuhisi sawa.

Decision-Making Barriers/ Vizuizi vya ufanyaji maamuzi

3.3 What are the key roles and responsibilities of a young mother in the family?/

Ni yapi ndiyo majukumu makuu na kazi muhimu kwa mama mchanga katika familia?

3.4 Who makes the decisions about health in the family?/

Ni nani ndiye hufanya maamuzi kuhusu afya katika familia?

3.5 Are you able to make final decisions about the health of you and your child?/

Je una uwezo wa kufanya maamuzi ya mwisho kuhusu afya yako na ya mtoto wako?

PROBE: If you need to go to the clinic for you or your child, do you have to make sure it is ok from someone else before you go?

DADISI: Iwapo unataka kwenda kliniki kutafuta huduma yako mwenyewe au ya mtoto wako, je huwa unahitajika kuhakikisha kuwa umepata ruhusa kutoka kwa mtu yeyote yule kabla ya kuondoka?

- What do your friends/family/community/neigbours/others think of you making these decisions?/ *Wenzako kama vile marafiki/ familia/ jamii/ majirani/ na wengineo hufikiria nini kuhusu wewe kufanya maamuzi haya?*

Cultural Barriers/ Vizuizi vya Kitamaduni

3.6 What are some common or traditional beliefs and practices that people in your community have about the health of young mothers and their children?

PROBE: /

Ni zipi ndizo baadhi ya imani au tamaduni maarufu pamoja na desturi walizonazo watu katika jamii yako kuhusu afya kinamama wachanga pamoja na watoto wao?

DADISI:

- Pregnancy and childbirth? / Ujauzito na kujifungua mtoto
- Breastfeeding?/ Kunyonyesha
- Immunisation?/ Chanjo
- Family planning?/ Upangaji uzazi

3.7 Do these beliefs and practices differ from other information you have heard about these issues?/

Je imani na tamaduni hizi hutofautiana na habari/maelezo mengineyo ambayo umesikia kuhusu masuala haya?

3.8 How much do these cultural beliefs and practices impact your decisions about you and your child's health?/

Imani na tamaduni hizi huathiri kwa kiasi gani maamuzi yako kuhusu afya yako na ya mtoto wako?

Health-Facility Barriers/ Vizuizi kuhusu Vituo vya Afya

3.9 Do you have access to health services for you and your child?

PROBE: /

Je huwa unaweza kufikia huduma za afya kwa ajili yako binafsi au mtoto wako?

DADISI:

- Are there clinics close by? What about other health care services?/ *Je kuna kliniki hapo karibu? Na vipi kuhusu huduma nyinginezo za afya?*
- Can you get to there easily?/ *Je unaweza kuvikia vituo hivyo kwa urahisi?*

3.10 What are some challenges to accessing and using these services as a young mother?

PROBE: /

Ni zipi ndizo baadhi ya changamoto zinazokukabili wewe kama mama mchanga unapotaka kutumia huduma hizi?

DADISI

- Are the services youth-friendly?/ *Je huduma hizo ni nzuri kwa watu wachanga/vijana*
- Are the services private and confidential?/ *Je huduma hizo zinatoa fursa nzuri ya kuweka siri na faragha?*
- Do you feel safe accessing services?/*Je huwa unahisi salama unapozifikia huduma hizi?*
- What do your friends/family/community think of you accessing these services?*Je marafiki/familia/jamii hufikiria nini kukuhusu kuhusiana na kufikia huduma hizi?*

3.11 Have you ever had any negative experiences accessing health services as a young mother?

PROBE:/

Je umewahi kukutana na hali isiyofurahisha ulipokuwa unapata huduma za afya ya kinamama wachanga?

DADISI:

- Have you ever experienced any negative attitudes from others when accessing services?/*Je umewahi kuonyeshwa mitazamo/hisia isiyofurahisha kutoka kwa watu wengine ulipokuwa unapata huduma hizo?*
- Have you ever felt unsafe accessing services?/*Je umewahi kupata hisia ya kutokuwa salama ulipokuwa unapata huduma hizo?*

Get the participants to stand up and do a quick 2 minute energiser with them. Consult the ideas for energiser activities./ Waambie wahojiwa wasimame na kufanya zoezi fupi la dakika mbili la kunyoosha viungo. Tafuta ushauri kuhusu zoezi la kunyoosha viungo

Section 4: Risk Assessment (20 minutes)/Sehemu ya 4: Tathmini ya Hatari (dakika 20)

The purpose of this section is to prioritise some of the information from Section 3 by identifying and assessing the top 5 challenges young mothers face when accessing maternal and child health information and services./

Lengo la sehemu hii ni kuziratibisha kulingana na umuhimu baadhi ya habari/maelezo kutoka Sehemu ya 3 kwa kutambua na kutathmini changamoto 5 kuu ambazo kinamama wachanga hupitia wanapotafuta/kutumia habari na huduma za afya ya wajawazito na watoto.

Ok, now we are going to take some time to look a bit deeper into some of the challenges we just discussed./

Ndiyo, sasa tutatumia muda zaidi kidogo kuangalia kwa undani zaidi kidogo kuhusu baadhi ya changamoto ambazo tumeshajadili.

Identifying the Main Challenges/ Kubaini changamoto kuu

Tips for Enumerator/ Vidokezi kwa Mwelekezi

- Let the participants offer their ideas without any initial guidance/ *Waruhusu washiriki/wahojiwa kutoa maoni yao bila kuwaelekeza mwanzoni*

  For the barriers you hear from more than one participant or see other participants agreeing with, write them down on a piece of sticky paper and place them on the wall. It is ok to have more than 5 at this point./ Kuhusu vizuizi ambavyo umesikia kutoka kwa zaidi ya mshiriki mmoja au unavyoona washiriki wengine wakikubaliana navyo, vyandike chini kwenye karatasi ya kunata na kisha uviangike ukutani. Inakubalika kuwa na zaidi ya hoja 5.

  Look through the list on the wall and work with the participants to remove the less important ones until only 5 are left./Tazama kwenye orodha iliyo ukutani na kwa pamoja na washiriki mwondoe hoja zisizokuwa na umuhimu mkuu hadi mbaki na hoja 5 pekee.

Tips for Recorder/ Vidokezo kwa Anayerekodi

- Make key notes and observations on the activity and questions./

  Nakili hoja na matukio makuu kuhusu zoezi hilo na maswali

- Record interesting discussions around their decision-making process./

  Nakili majadiliano yanayovutia kuhusu harakati yao ya kufanya maamuzi.

- Record any interesting conversations on differences in opinions./

  Nakili mazungumzo yoyote yanayovutia kuhusu tofauti kati ya maoni.

- Write down the challenges that made it onto the wall list, but not the top 5 list./

  Andika chini changamoto zilizofanya kujumuishwa kwenye orodha ya ukutani, lakini zisizo katika 5-bora

4.1 Thinking about everything we just talked about, can we agree on the top 5 challenges young mothers face? We all have different experiences and it is ok to have different answers. Try to think about this for all young mothers. We don't all have to fully agree, but let's try to get a general consensus/majority on 5./ Unapofikiria kuhusu mambo yote tuliyozungumza sasa, je twaweza kukubaliana kuhusu changamoto 5 kuu ambazo kinamama wachanga hukabiliana nazo? Sote tumepitia changamoto tofauti kwa hivyo ni sawa kuwa na majibu tofauti. Jaribu kufikiria hili kuhusu kinamama wote wachanga. Si lazima sote tukubalieni kikamilifu, lakini hebu tujaribu kupata maelewano ya jumla/ yenye wengi kati yetu 5 wanakubaliana nayo.

If required, provide a quick refresh to the types of challenges just talked about (e.g., knowledge decision-making, cultural, health-facility).

Arrange the 5 challenges in a line along the wall from left to right. Number them from 1 to 5 (this is to help with note taking)./

Iwapo itahitajika, pitia kwa haraka aina ya changamoto ambazo tumezungumzia (k.m. ufahamu, ufanyaji maamuzi, utamaduni, vituo vya afya).

Zipange changamoto hizo 5 katika mstari ukutani kuanzia kushoto hadi kulia. Zipe nambari kuanzia 1 hadi 5 (Hii itakusaidia wakati wa kunakili mazungumzo)

4.1.1 Looking at these 5 challenges, why do you think these are the top 5 challenges that young mothers experience? / Unapoangalia changamoto hizi 5, kwa nini unadhani hizi ndizo changamoto 5 kuu ambazo kinamama hupitia.

Assessing the likelihood of the main challenges/ Kutathmini uwezekano wa changamoto kuu

4.2 Now, we are going to take some time to assess how likely a young mother is to experience these challenges/Sasa, tutachukua muda kiasi kuchunguza uwezekano wa mama mchanga kupitia changamoto hizi.

Tips for Enumerator:

- Assign a sticky note colour to each rating (very likely, somewhat likely, not very likely)
- Have the participants write their name on the sticky notes so that you know who rated the challenges and can ask them to explain their rating, if needed
- Adjustment for literacy levels: If you anticipate literacy as an issue, instead of having the participants go up on their own, go through the challenges one by one. Read the first challenge out loud and have the participants go and put their sticky note; then read the second out loud and have the participants go and put their sticky notes, etc.
- When asking specific questions on why the participants rated the challenges in a different way, ask questions for all challenges, but pay special attention to the challenges where participants' answer varied significantly.
    - Not all of the participants have to answer the questions on each of the challenges. Let a couple answer and move on to the next challenge.
- Have the participants all rate one and the same challenge at a time, to ensure they've rated each one

Tips for Recorder:

- Make notes on the key reasons for why the participants rated things a certain way.
- Record how many of each colour are placed under each challenge and why they rated them that way.

4.4 Using the sticky notes that I gave you, I want you to go up to each challenge and put one sticky note under each. Before you place your sticky notes, use the markers on the table to write your name so you know which one yours is:

Kwa kutumia karatasi ndogo za kunata zenye maandishi, ningependa uangalie kila changamoto na uweke karatasi hiyo chini yake. Kabla ya kuweka karatasi hiyo, tumia kalamu za wino mzito zilizo kwenye meza kuchora mchoro wa ishara ili ukusaidie kujua ni ipi ndiyo yako:

- **Very likely – most young mothers will experience this/** Uwezekano mkubwa – Kinamama wengi wachanga watapitia hii
- **Somewhat likely – some young mothers will experience this/** Uwezekano kiasi – Baadhi ya kinamama wachanga watapitia hii
- **Not very likely – few young mothers will experience this/** Uwezekano mdogo sana – Kinamama wachache wachanga watapitia hii

Give a few minutes for the participants to get up and place their sticky notes. Don't let them take too long as they will get a chance to change their answers after the question period.

Ok, now I want to go through each of the barriers and ask you a few questions.

For each barrier ask:

Ok, now I want to go through, Ok, sasa ningependa kupitia kila changamoto/kizuizi na kukuuliza maswali machache

Kwa kila kizuizi uliza:

4.4.1 Why did you rate it that way?

PROBE:

Mbona uliiweka katika kiwango hicho?

DADISI:

- What were you thinking about that influenced your decision to rate it this way?/ *Ni nini ulichokuwa ukifikiria kilichokushawishi hadi ukaamua kuiweka katika kiwango hiki?*

- If all participants rated generally the same: why do you think you rated these the same? *Iwapo washirika wote waliweka katika kiwango kilicho sawa: unadhani kwa nini mliweka katika kiwango hicho?*
- If participants rated differently: why do you think there is such a difference in ratings?/ *Iwapo washirika waliiweka katika viwango tofauti: wadhani kwa nini kuna tofauti hiyo ya viwango?*

Section 5: Totohealth: Overcoming Challenges and General Well-Being (10 minutes)/ Sehemu ya 5: Totohealth: Kushinda changamoto na Uzima/Afya ya Jumla (dakika 10)

The purpose of this section is to get a better understanding how Totohealth has helped the young mothers deal with any challenges accessing maternal and child health information and to see if there has been any impact on other aspects of their lives.

Now I would like to talk to you about your specific experiences with Totohealth./

Sasa ningependa kuzungumzia kuhusu uzoefu wenu na Totohealth

5.1 Thinking of each of the challenges we just discussed, has Totohealth helped you deal with any of them? Why or why not?

For each barrier ask:

PROBE:/

Unapofikiria kila changamoto tuliyojadili, je Totohealth ilikusaidia kukabiliana na changamoto hiyo? Ni kwa sababu gani, au kwa nini sivyo?

Kwa kila kizuizi uliza:

DADISI:

- Has Totohealth helped address any challenges with accessing information? /

  Je Totohealth imekusaidia kusuluhisha/kukabiliana na changamoto yoyote ya kupata habari?
- Has Totohealth helped address any challenges with accessing services? /

  Je Totohealth imekusaidia kusuluhisha changamoto yoyote ya kufikia/kupata huduma?

5.2 In general, can you tell me a bit more about your overall well-being? How do you feel about other areas of your life (apart from health and development of your child)? /

Kwa jumla, je waweza kuniambia zaidi kidogo kuhusu afya yako kwa jumla (uzima wako kwa jumla)? Unahisi vipi kuhusu sehemu nyingine za maisha yako (mbali na afya na ukuaji wa mtoto wako)?

5.3 Has participating impacted other parts of your life? If so, how has participating in Totohealth impacted these other parts of your life?

PROBE:/

Je kushiriki kwako katika kikao hiki kumeathiri sehemu nyingine za maisha yako? Iwapo ni hivyo, je kushiriki kwako katika Totohealth kumeathiri vipi sehemu hizi nyingine za maisha yako?

DADISI:

- Are you better able to control any other areas of your life? /

  Je uko katika nafasi bora zaidi ya kudhibiti/kuelekeza sehemu nyinginezo za maisha yako?
- What specifically have you changed as a result of participating in Totohealth? /

  Ni nini hasa ambacho kimebadilika kutokana na kushiriki katika Totohealth?

Section 6. Wrap up and close (10 minutes)/ Sehemu ya 6: Malizia na ufunge (dakika 10)

The purpose of this final section is to gather some insights into how programmes and services can better address the needs of young mothers in accessing maternal and child health information and services.

We are almost at the end of our focus group. Thank you for being so energetic and participating in our conversations, we just have a few questions left. These next questions are to help for future programmes and services to make sure they are better targeting the needs of young mothers across the country./

Karibu tunamaliza majadiliano yetu ya kundi. Asanteni sasa kwa kushiriki katika mazungumzo haya, sasa tumebakisha maswali machache tu. Maswali haya yafuatayo yatatusaidia kuendeleza mipango na huduma katika siku zijazo kwa kuhakikisha kuwa mipango na huduma hizo zinatimiza zaidi mahitaji ya kinamama wachanga.

6.1 Thinking about maternal and child health information and services across the country… what do you think could be done to help strengthen access to this information and these services for young mothers?/

Unafikiria ni nini kinachoweza kufanyika ili kusaidia kuimarisha upatikanaji wa habari na huduma za afya ya wajawazito na watoto miongoni mwa kinamama wachanga?

6.2 Does anyone have any final comments or questions? Anything else that you think is important to mention?/

Je kuna yeyote aliye na maoni au maswali ya kumalizia? Je kuna jambo linguine lolote ambalo unafikiria ni muhimu kuzungumziwa?

THANK AND CLOSE/ SHUKRANI NA KUFUNGA

Thank you very much for taking the time to speak to us today and for your participation. You provided a lot of great information and insight.

The information you provided to us will be used to better understand issues around the well-being and health of young mothers and their children. This will help strengthen services like Totohealth and help inform future programmes that support young mothers such as yourselves. /

Asante sana kwa kutumia muda wako kuzungumza nasi leo pamoja na kushiriki kwako katika mahojiano haya. Ulitupa habari/maelezo muhimu zaidi.

Habari ulizotupa zitatumika kusaidia kuelewa mambo yanayohusu uzima na afya ya kinamama wachanga na watoto wao. Habari hizi zitatusaidia kuimarisha huduma kama vile za Totohealth pamoja na kusaidia kupanga mipango ya kuwasaidia kinamama wachanga kama nyinyi.

Table 14: Focus Group Discussions – Note Taking Template

Date:	
Name of facilitator:	
Name of note taker:	
Start time:	
End time:	
Location:	
Category (circle one):	received texts while pregnant or received texts after giving birth

Table 15: Respondents Information

No.	Name	Age	Consent to participate and record? (Y/N)
1			
2			
3			
4			
5			
6			
7			
8			

Section 2: Activity: The Story Bag (15 minutes)

Table 16: Story Bag Template

Story	Main maternal and child health themes from each story	How realistic are the stories?	Have you ever experienced any of these scenarios yourself?
1 **200 KSH** **Leaf** **Notebook**			
2 **Mango** **Condom** **Pen**			

Table 17: Additional Observations

General Observations *Please make note about any girl dynamics and communication while they were creating and presenting their stories – for example: whether girls are speaking, agreeing or disagreeing with each other, if they feel uncomfortable talking.*	

Section 3: Understanding Barriers - Focus Group Question Period (30 minutes)

Table 18: Knowledge Barriers

Question	Summary/key points	Observations	Notable Quotes *(also write girl # and time of quote)*
3.1 Who do your turn to for advice on pregnancy and raising your children? Why do you turn to these sources for advice?			
3.2 Who do your turn to for advice on pregnancy and raising your children? Why do you turn to these sources for advice?			

Table 19: Decision-Making Barriers

Question	Summary/key points	Observations	Notable Quotes *(also write girl # and time of quote)*
3.3 What are the key roles and responsibilities of a young mother in the family?			

3.4 Who makes the decisions about health in the family?			
3.5 Are you able to make final decisions about the health of you and your baby?			

Table 20: Cultural Barriers

Question	Summary/key points	Observations	Notable Quotes *(also write girl # and time of quote)*
3.6 What are some common or traditional beliefs that people in your community have about the health of young mothers and their children?			

3.7 Do these beliefs differ from other information you have heard about these issues?			
3.8 How much do these cultural beliefs impact your decisions about you and your child's health?			

Table 21: Health Facility Barriers

Question	Summary/key points	Observations	Notable Quotes *(also write girl # and time of quote)*
3.9 Do you have access to health services for you and your child?			

3.10 Do you have access to health services for you and your child?			
3.11 Have you ever had any negative experiences accessing health services as a young mother?			

Section 4: Risk Assessment (20 minutes)

Table 22: Identifying Challenges

Challenges identified *List challenges identified*	
Differences of opinions *Record any interesting conversations on differences in opinions when listing challenges and selecting the top 5.*	
General observations	

Record any other interesting observations around their decision-making process.	

Table 23: Assessming Main Challenges and Likelihood

Use the numbers assigned during the activity, write in the corresponding top five challenges.

Main Challenge *Copy top 5 challenges here*	**Why is this a main challenge?**	**Likelihood of Happening** *Write number of moms*	**Top reasons for likelihood rating**
1:		Very Likely: _____ Somewhat likely: _____ Not very likely: _____	
2:		Very Likely: _____ Somewhat likely: _____ Not very likely: _____	
3:		Very Likely: _____ Somewhat likely: _____ Not very likely: _____	

4:		Very Likely: _____ Somewhat likely: _____ Not very likely: _____	
5:		Very Likely: _____ Somewhat likely: _____ Not very likely: _____	

Section 5: Totohealth: Overcoming Challenges and General Well-Being (10 minutes)

5.1 Thinking of each of the challenges we just discussed, has Totohealth helped you deal with any of them? Why or why not?

Table 24: Totohealth and Overcoming Challenges

Main Challenge (write the same top 5 challenges)	**How has Totohealth helped overcome challenge?**	**Why did Totohealth not help overcome challenge?**	**Notable Quotes** *(write girl # and time of quote)*
1:			

2:			
3:			
4:			
5:			

Table 25: Well-Being and Totohealth

Question	Summary/key points	Observations	Notable Quotes *(also write girl # and time of quote)*
5.2 In general, can you tell me a bit more about your overall well-being? How do you feel about other areas of your life (apart from health and development of your child)?			
5.3 Has participating impacted other parts of your life? If so, how has participating in Totohealth impacted other parts of your life?			

Section 6. Wrap up and close (10 minutes)

Table 26: Wrap-up and Close Template

6.1 Strengthen maternal and child health programmes *Record recommendations for improving MCH programmes such as: other services and information, who should be involved, training or capacity building opportunities, incentives, better address needs, etc.*	
6.2 Final comments/ observations	

Record any final comments or observations. *Highlight anything that might need to be flagged to Totohealth.*	

Screening survey

Hello,

I am calling from Research Plus Africa. I'm <name> from the research company Research Plus Africa. I am working in partnership with Totohealth to learn more about some of the challenges young mothers face when accessing maternal and child health information and services. We have you listed as being subscribed to Totohealth in 2016/2017. Could we ask you some further questions? This shouldn't take longer than 5 minutes./

Halo,

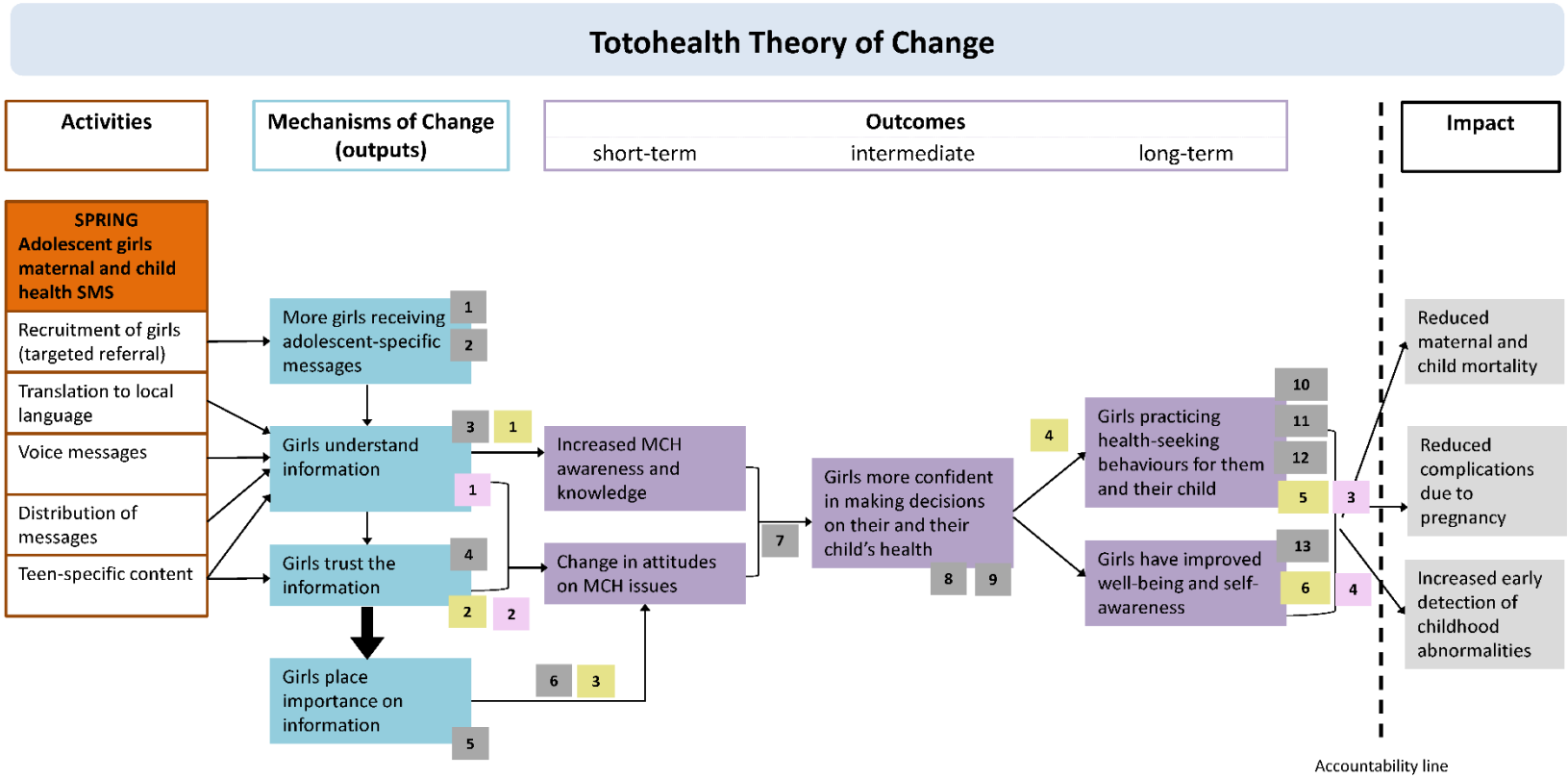
Ninakupigia kutoka kampuni ya Research Plus Africa. Jina langu ni (Jina) kutoka kampuni hiyo ya utafiti ya Research Plus Africa. Ninafanya kazi kwa ushirikiano na mradi wa Totohealth ili kujifahamisha zaidi kuhusu baadhi ya changamoto zinazowakabili kinamama wachanga pale wanapoenda kutafuta habari/maelezo na huduma za kinamana wajawazito au afya ya mtoto. Tunalo jina lako kama mmoja wa waliojiandikisha kwa huduma za Totohealth katika mwaka wa 2016/2017. Je waweza kuturuhusu kukuuliza maswali zaidi? Mazungumzo yetu hayatapita dakika 5.

Table 27: Screening Survey

Questions/Maswali	Response/ Majibu
1) Would you be willing to take part in one of our research activities? To thank you for your time, we will provide you with a token of appreciation. / Je waweza kukubali kushiriki sehemu ya shughuli zetu za utafiti? Tutakupa zawadi ndogo kama njia ya kukushukuru kwa muda wako.	Y / N
2) Can we ask you some further questions to confirm some while we have you on the phone?/ Je twaweza kukuuliza maswali zaidi ili kuthibitisha mambo fulani huku tukiendelea kuzungumza kwenye simu?	Y / N
a. When did you first register with Totohealth?/ Je, ni lini ulipojiandikisha kwa mara ya kwanza na Totohealth?	_ _ _ _ year _____ month
b. How old were you when you first registered for Totohealth?/ Ulikuwa na umri gani ulipojiandikisha na Totohealth?	_____ years
c. Are you still receiving messages from Totohealth? – Y/N i. I N: When did you stop your subscription? Je, bado umejiandikisha kwenye Totohealth? Y/N - IN: Ni lini ulipojiondoa?	Y / N _ _ _ _ year _____ month
d. How old was your baby when you registered (or were you pregnant)? i. Pregnant (how many months) ii. 0-1 years	_____ months _____ years

iii. 2 years Mtoto wako alikuwa na umri gani ulipojiandikisha (ama ulikuwa mjamzito)? i. Mjamzito (Mimba ilikuwa ya miezi mingapi) ii. (Mwaka 0-1) iii. (Miaka 2)	
3) In what neighbourhood / area do you live?/ Je unaishi katika mtaa/kijiji kipi?	
4) Bonus questions *a. Have you had a baby / pregnancy since? [If we hit none, then that's okay]* *b. Have you used the help desk?* *c. Did you get a totobag?* *Maswali ya ziada* *d. Je umewahi kupata mtoto/ au kushika mimba tangu wakati? [Kama ni bado, hiyo ni sawa]* *e. Je umewahi kutafuta ushauri kwenye dawati letu la usaidizi au ushauri kwa wateja)?* *f. Je ulipata begi ya toto?*	Y / N Y / N Y / N

Annex D: Data Analysis Tools



Category	Mechanisms of Change (outputs)	Outcomes
Assumptions	1. Girls receive the SMS messages 2. Girls can afford the fee for service 3. SMS implemented as planned (right information at the right time) 4. Content meets the needs of the girls 5. Girls prioritize health over other factors (e.g., school, work, home life) 6. Girls enrolled want to improve health outcomes for them and their babies	7. Receiving trustworthy and accurate information will lead to girls learning and taking action 8. Girls have decision-making/negotiating power 9. Girls are confident in the health services provided 10. Girls can get to the health services 11. Quality health services are available (physical, skilled health workers) 12. Health services are inclusive (safe environment, stigma-free) 13. Girls have an encouraging and supportive environment
Barriers	1. Stigma associated with girls accessing MCH information 2. Competing other sources of information 3. Cultural beliefs on MCH issues	4. Stigma associated with girls accessing MCH services 5. Access to alternative health services 6. Girls status within household and society
Influencing Factors	1. Helpdesk support 2. Encouraging other sources of information	3. Totobag 4. Girls going to school and participating in other social programs

Table 28: Relevant Explanation Finder

	Explanation	Mechanisms	Mechanism Type	Mechanism Level	Assumptions	Identifiers
1	Girls have more awareness and knowledge on MCH issues as a result of target SMS content.	• Girls are receiving more adolescent-specific content • Girls understand the information	Primary mechanism	Output	• Girls are receiving messages • Girls are receiving messages as planned • Content is meeting girl's needs • Girls can afford the fee for service • No stigma associated with girls accessing MCH information	**Main Explanation:** • Increase in knowledge on MCH issues **Additional:** • Messages received (order and frequency) • Girls think messages are clear and easy to understand • Girls find messages relevant to their needs • Girls feel safe accessing information on their phones • Girls don't find messages confusing against other sources of MCH information • Girls ok with paying a fee for service
2	Girls have a positive attitude on MCH issues as a result of receiving targeted SMS content.	• Girls trust the information • Girls place an importance on the information	Primary mechanism (if 1 is satisfied)	Output	• Girls prioritize health, when needed over other factors (e.g., school, finances, work, home) • Girls want improved health outcomes for them and their child (motivation) • Receiving accurate and trustworthy information will lead to positive attitude changes • Other sources of information don't contradict SMS content • SMS messages don't significantly contradict embedded cultural beliefs	**Main Explanation:** • Positive change in attitudes on MCH issues **Additional:** • Girls trust the source of the information • Girls trust the information • Girls value the information • Girls prioritize their health • Girls prioritize their child's health
3	Girls are more confident in making decisions about their health and their child's health as a result of receiving SMS content that is accurate, easy to understand and trustworthy.	• Girls have an increased knowledge and awareness of MCH issues • Girls have a positive change in attitude on MCH issues	Primary mechanism (if 1 and 2 are satisfied)	Outcome	• Girls have decision-making/negotiating power to take control of their and their child's health • Girls are confident in the health services available to them • No stigma associated with girls accessing health services	**Main Explanation:** • Increased confidence in making decisions for them and their child **Additional:** • Girls feelings towards available services (is positive)

						• Girls feel comfortable accessing MCH services • Girls have the ability to make decisions about them and their child's health
4	Girls are practicing positive health seeking behaviours for them and their child as a result of receiving SMS content that is accurate, easy to understand and trustworthy.	• Girls are confident in making decisions on their and their child's health	Primary mechanism (if 1, 2 and 3 are satisfied)	Outcome	• Girls can get to health services • Quality health services are available for girls • Health services are inclusive • No stigma associated with girls accessing MCH services • Girls are not receiving MCH services from alternative sources	**Main Explanation:** • Positive change in health-seeking behaviours (across identified behaviour outcomes) **Additional:** • Quality health services are available (physical services, skilled health-care providers) • Health services provide a safe environment for girls (free of stigma) • Girls are comfortable accessing health services • Girls only access services from the health facility
5	Girls have improved well-being and confidence as a result of receiving SMS content that is accurate, easy to understand and trustworthy.	• Girls are confident in making decisions on their and their child's health	Primary mechanism (if 1, 2 and 3 are satisfied)	Outcome	• Girls have an encouraging and supporting environment	**Main Explanation:** • Increased confidence in being a parent • Improved overall feeling of well-being (not just health and child development related) **Additional:** • Girl's social networks support their decisions on their and their child's health • Girl's physical environments support healthy behaviours
6	Girls confidence in making decisions on MCH issues is influenced by other sources of information	• Girls have an increased knowledge and awareness of MCH issues from other sources of information • Girls place a different level of trust on different sources of information	Influencing factor (enhancing or inhibiting)	Output	• Other sources of information encourage a girl to seek out MCH information and services; and/or • Other sources of information discourage a girl from seeking out MCH information and services	**Main Explanation:** • Change in confidence in making decisions for them and their child • Trust in information sources **Additional:** • Level to which information provided by other sources either supports or contradicts information provided by Totohealth.

7	Girls do not access MCH services because they are not comfortable and have negative attitudes.	• Girls are not confident in accessing MCH services because of stigma and embedded cultural beliefs	Influencing factor (inhibiting)	Outcome	• There is stigma associated with young girls accessing MCH services such as: antenatal care, family planning, nutrition, etc.) • Embedded cultural practices may differ from Totohealth's messaging (e.g., breastfeeding, family planning, safe delivery, child development, etc.) • Past experiences at the health facility influence a girl's decision to access services.	**Main Explanation:** • No (or negative) change in health-seeking behaviours (across identified behaviour outcomes) **Additional:** • Types of stigma girls face accessing MCH services • Cultural beliefs that are embedded in girl's lives that contradict Totohealth's messages • Girl's previous experience with the health service
8	Girls do not access MCH services because of their status within household and society	• Girls are not confident in accessing MCH services because of they don't have decision-making and negotiating power.	Influencing factor (inhibiting)	Outcome	• Traditional power structures in the family and community act as barriers to girl's taking control over their and their child's health.	**Main Explanation:** • No (or negative) change confidence in making decisions for them and their child **Additional:** • Power/status factors that influence a girl's ability to make decisions.
9	Girls are practicing positive health seeking behaviours for them and their child as a result MCH offered by alternative sources of health care.	• Girls are confident in making decisions on their and their child's health by receiving health services from other sources (traditional, information, businesses, non-profit)	Alternative explanation	Outcome	• Other sources of health services provide the same services as the health facility. • Alternative health care sources produce the same outcomes as services provided at the health facility.	**Main Explanation:** • Positive change in health-seeking behaviours (across identified behaviour outcomes) **Additional:** • Availability of alternative sources of health care • Alternative sources of health care are easier to access • Girls want to access alternative health care sources
10	Girls have improved well-being and confidence as a result	• Girls are confident in making decisions on their and their child's health by	Alternative explanation	Outcome	• Other programs (e.g., nutrition, life skills, education, financial, etc. in the community are providing information and services that help to build a girl's confidence and contribute to overall well-being.	**Main Explanation:** • Increased confidence in being a parent • Improved overall feeling of well-being (not just health and child development related)

	of other knowledge and skill-building programs	participating in programs offered by other organizations (non-profits, schools, business) in their local communities				**Additional:** • Girls are participating in other programs in their communities • Other programs support building a girl's skills and confidence.

Table 29: Totohealth second level coding framework

Totohealth Level 2 Coding Framework						
Dimension	**Code**	**Code Type**	**Guidance**	**Tools**	**Link to REF**	**Link to SPRING Evaluation Questions**
Activities	Activities	Parent	To be used to distinguish that the response was from an activity	FGD		
	Activities - story bag	Child		FGD		
	True Story	Child				
	Unwanted Pregnancy	Child				
	Abortion	Child				
	Girl has disability	Child				
	Parents disapprove of pregnancy	Child				
	Activities - risk assessment	Child		FGD		
Demographics	Registration	Parent	When the girls registered for Totohealth	KII - Intro and Coversheet		
	Registration - pregnant 0 to 4 months	Child	Girl registered in first 4 months of pregnancy			
	Registration - pregnant 5 months +	Child	Girl registered in month 5 or after			

	Registration - child 0 to 5 months	Child	Girl registered when baby was 0 to 5 months			
	Registration - child 6 to 12 months	Child	Girl registered when baby was 6 to 12 months			
	Registration - child 12 months +	Child	Girl registered when baby was over 12 months			
	Subscription	Parent	How long the girls have been registered	KII - Intro and Coversheet		
	Subscription - under 1 year	Child	Girl subscribed for less than 1 year			
	Subscription - 1 to 2 years	Child	Girl subscribed 1 to 2 years			
	Subscription - 2 to 3 years	Child	Girl subscribed 2 to 3 years			
	Subscription - over 3 years	Child	Girl subscribed over 3 years			
	Subscription - unsubscribed	Child	Girl unsubscribed from Totohealth (this does not include not receiving messages. This is for girls who actively unsubscribed)			
Totohealth impact	Totohealth impact	Parent	Totohealth's direct impact across all dimensions (based on girl's opinions)	KII & FGD	All	
	Totohealth impact - some	Child				
	Totohealth impact - a lot	Child				
Knowledge	Outcome knowledge	Parent				
	Outcome knowledge - antenatal	Child	Definition: going to the clinic before giving birth to make sure mom and baby are healthy. Includes: visiting the clinic, mother getting vaccinated, monitor baby's developments, health tests, detecting complications with pregnancy.	KII & FGD	All	E1.4 Health

	Outcome knowledge - safe delivery	Child	Definition: going to the clinic to deliver baby. Includes: planning delivery, normal length of pregnancy, signs of labour.	KII & FGD	All	E1.4 Health
	Outcome knowledge - pregnancy health	Child	Definition: making sure that the mother and child are healthy during pregnancy. Includes: nutrition, symptoms or pregnancy, lifestyle and insurance.	KII & FGD	All	E1.4 Health
	Outcome knowledge - immunisation	Child	Definition: protects child from getting diseases (or sick). Includes: full vaccine series, types of vaccinations, timing of vaccinations, deworming and vitamin A supplements.	KII & FGD	All	E1.6 Wellbeing
	Outcome knowledge - breastfeeding & nutrition	Child	Definition: baby should drink milk from the breast when they are young and healthy food when they get a bit older. Including: feeding timing, exclusive breastfeeding, length of breastfeeding, introducing foods, food sources.	KII & FGD	All	E1.6 Wellbeing
	Outcome knowledge - child development	Child	Definition: signs of issues in child's development that are important to look for to prevent issues. Includes: abnormalities, warning signs (physical, emotional and intellectual).	KII & FGD	All	E1.6 Wellbeing
	Access & use	Parent	Experiences subscribing and using Totohealth SMS service including: frequency, timing, relevance and clarity.	KII - Section 3	1	
	Access & use - learn Totohealth	Child	How did the girls learn about Totohealth	KII - Section 3	N/A	
	Access & use - subscription motivation	Child	Why did the girls sign up	KII - Section 3	N/A	
	Access & use - messages received	Child	Girls are receiving messages (in the right order and at the right frequency)	KII - Section 3	1.1	

	Access & use - messages clear	Child	Message clarity - are they easy to understand?	KII - Section 3	1.2	
	Access & use - messages relevant	Child	Do the messages meet the needs of the girls? Are they useful?	KII - Section 3	1.3, 2.2	
	Access & use - phone	Child	Are phones a good source of information?	KII - Section 3	1.4	
	Information source	Parent	Source of information girls receive MCH information from	KII - Section 4		
	Information source - Totohealth	Child	Information source	KII - Section 4		
	Information source - mothers/family	Child	Information source	KII - Section 4		
	Information source - radio	Child	Information source	KII - Section 4		
	Information source - friends	Child	Information source	KII - Section 4		
	Information source - clinic staff	Child	Information source	KII - Section 4		
	Information source - school/education	Child	Information source	KII - Section 4		
	Information source - traditional midwives	Child	Information source	KII - Section 4		
Attitudes	Outcome attitudes	Parent				
	Outcome attitudes - antenatal	Child	Definition: going to the clinic before giving birth to make sure mom and baby are healthy. Includes: visiting the clinic, mother getting vaccinated, monitor baby's developments, health tests, detecting complications with pregnancy.	KII & FGD	All	E1.4 Health
	Outcome attitudes - safe delivery	Child	Definition: going to the clinic to deliver baby. Includes: planning delivery,	KII & FGD	All	E1.4 Health

			normal length of pregnancy, signs of labour.			
	Outcome attitudes - pregnancy health	Child	Definition: making sure that the mother and child are healthy during pregnancy. Includes: nutrition, symptoms or pregnancy, lifestyle and insurance.	KII & FGD	All	E1.4 Health
	Outcome attitudes - immunisation	Child	Definition: protects child from getting diseases (or sick). Includes: full vaccine series, types of vaccinations, timing of vaccinations, deworming and vitamin A supplements.	KII & FGD	All	E1.6 Wellbeing
	Outcome attitudes - breastfeeding & nutrition	Child	Definition: baby should drink milk from the breast when they are young and healthy food when they get a bit older. Including: feeding timing, exclusive breastfeeding, length of breastfeeding, introducing foods, food sources.	KII & FGD	All	E1.6 Wellbeing
	Outcome attitudes - child development	Child	Definition: signs of issues in child's development that are important to look for to prevent issues. Includes: abnormalities, warning signs (physical, emotional and intellectual).	KII & FGD	All	E1.6 Wellbeing
	Trust	Parent			2	
	Trust - Totohealth vs other sources (differ)	Child	How Totohealth has differed from other sources of information	KII - Section 2 Knowledge Assessment and Section 4	2.1, 6.1	
	Trust - Totohealth vs other sources (agree)	Child	How Totohealth has corroborated other sources and vice-versa, improving adherance or practice	KII - Section 2 Knowledge Assessment and Section 4	2, 6.1	
	Trust - pay fee	Child	Are girls willing to pay a fee for service?	KII - Section 4	1.6, 2.3	

	Trust - save or share	Child	Girls save or share Totohealth information	KII - Section 4	2.3	
	Trust - Willingness to subscribe for subsequent child	Child	Would girls sign up for Totohealth if they had another child?	KII - Section 4	2.3	IE - Lessons Learned/Recommendations
	Trust - Performance Legitimacy	Child	Did girls trust Totohealth more after they witnessed how helpful it could be/how accurate the information was?	KII - Section 4	2.3	
	Priorities	Parent		KII - Section 5	2, 3	
	Priorities - Adjusting for health	Child	Top priorities for girls. Have girls adjusted the priorities in their lives as a result of Totohealth?	KII - Section 5	2.4, 2.5	
	Confidence	Parent			3, 5	
	Confidence - decision mom health	Child	Making decisions about prioritization of mom's health, accessing health services	KII - Section 5 and Section 6	3, 5	
	Confidence - decision mom health- NO CHANGE	Child	No change in decision making	KII - Section 5 and Section 6	3, 5	
	Confidence - decision child health	Child	Making decisions about prioritization of child's health, accessing health services	KII - Section 5 and Section 6	3, 5	
	Confidence - decision child health- NO CHANGE	Child	No change in decision making	KII - Section 5 and Section 6	3, 5	
Practices	Outcome practices	Parent				
	Outcome practices - antenatal	Child	Definition: going to the clinic before giving birth to make sure mom and baby are healthy. Includes: visiting the clinic, mother getting vaccinated, monitor baby's developments, health tests, detecting complications with pregnancy.	KII & FGD	All	E1.4 Health

	Outcome practices - safe delivery	Child	Definition: going to the clinic to deliver baby. Includes: planning delivery, normal length of pregnancy, signs of labour.	KII & FGD	All	E1.4 Health
	Outcome practices - pregnancy health	Child	Definition: making sure that the mother and child are healthy during pregnancy. Includes: nutrition, symptoms or pregnancy, lifestyle and insurance.	KII & FGD	All	E1.4 Health
	Outcome practices - immunisation	Child	Definition: protects child from getting diseases (or sick). Includes: full vaccine series, types of vaccinations, timing of vaccinations, deworming and vitamin A supplements.	KII & FGD	All	E1.6 Wellbeing
	Outcome practices - breastfeeding & nutrition	Child	Definition: baby should drink milk from the breast when they are young and healthy food when they get a bit older. Including: feeding timing, exclusive breastfeeding, length of breastfeeding, introducing foods, food sources.	KII & FGD	All	E1.6 Wellbeing
	Outcome practices - child development	Child	Definition: signs of issues in child's development that are important to look for to prevent issues. Includes: abnormalities, warning signs (physical, emotional and intellectual).	KII & FGD	All	E1.6 Wellbeing
	Health service use	Parent	Types of services girls are accessing - linked to overall outcomes	KII - Section 5	4	
	Health service use - clinic	Child	Type of service	KII - Section 5		
	Health service use - traditional	Child	Type of service	KII - Section 5		
	Health service use - calendar keeping	Child	How did Totohealth affect the actual practice oh health care? Did calendar keeping feature prominently in this?	KII - Section 5		E1.4 Health E1.6 Wellbeing

	Wellbeing	Parent	How girls feel about overall well-being/areas of life outside of health and development	KII - Section 6 FGD - Section 5	6	E.1.6 Wellbeing E.2.2.1 Unintended Consequences - Positive
	Wellbeing - self care	Child	Girl's care of self	KII - Section 6 FGD - Section 5		E.1.6 Wellbeing E.2.2.1 Unintended Consequences - Positive
	Wellbeing - home	Child	Girl's care of household	KII - Section 6 FGD - Section 5		E.1.6 Wellbeing E.2.2.1 Unintended Consequences - Positive
	Wellbeing - manage new situations	Child	Girl's ability to deal with other situations in their lives	KII - Section 6 FGD - Section 5		E.1.6 Wellbeing E.2.2.1 Unintended Consequences - Positive
	Wellbeing - earning and saving	Child	Girl's earning and saving potential	KII - Section 6 FGD - Section 5		E.1.6 Wellbeing E.2.2.1 Unintended Consequences - Positive
	Wellbeing - negative - single mother	Child	Was subscriber a single mother and did she identify this as a source of negative wellbeing?	KII - Section 6 FGD - Section 5		E.1.6 Wellbeing E.2.2.1 Unintended Consequences - Negative
	Wellbeing - negative - financial worries	Child	Did the subscriber identify financial worries/insecurity as a source of negative wellbeing?	KII - Section 6 FGD - Section 5		E.1.6 Wellbeing E.2.2.1 Unintended Consequences - Negative
Influencing factors - barriers	Barriers knowledge	Parent	Factors influencing how girls access information. Use these in addition to the knowledge sources	KII - Section 5 FGD - Section 3	7, 8, 9	
	Barriers knowledge - safety/privacy	Child		KII - Section 5 FGD - Section 3		

	Barriers knowledge - stigma	Child		KII - Section 5 FGD - Section 3		
	Barriers knowledge - lack of guidance	Child	Were girls abandoned by community (parents) because of early pregnancy? Were they prevented from MCH knowledge-sharing for social reasons?	KII - Section 5 FGD - Section 3		
	Barriers decision making	Parent	Factors influencing how girls make decisions. Use these in addition to confidence	FGD - Section 3	7, 8, 9, 3.3	
	Barriers decision making - girl roles	Child	Girls roles as a young mother in the family	FGD - Section 3		
	Barriers decision making - parents	Child		FGD - Section 3		
	Barriers decision making - community	Child		FGD - Section 3		
	Barriers decision making - shame	Child		FGD - Section 3		
	Barriers decision making - financial difficulty	Child		FGD - Section 3		
	Barriers health facility	Parent		KII- Section 5 FGD - Section 3	7, 8, 9, 3.2, 4.1, 4.2, 4.3	
	Barriers health facility - access	Child	Physical access to health facility, cost, transport	KII- Section 5 FGD - Section 3		
	Barriers health facility - quality	Child	Services alignment with needs, services are available	KII- Section 5 FGD - Section 3		
	Barriers health facility - stigma	Child	Girls experience with stigma as a youth accessing services	KII- Section 5 FGD - Section 3		
	Barriers health facility - safety/abuse	Child	Were girls discouraged from seeking medical treatment due to beratement, humiliation or insults from medical staff. Includes privacy issues.	KII- Section 5 FGD - Section 3		

	Barriers cultural	Parent	Cultural and traditional factors influencing girl's access MCH services. Use these in addition to outcomes.	FGD - Section 3	7, 8, 9	
	Barriers cultural - practices	Child	traditional or cultural practice	FGD - Section 3		
	Barriers cultural - beliefs	Child	traditional or cultural belief	FGD - Section 3		
Influencing factors - enhancers	Enhance knowledge	Parent	Factors influencing how girls access information. Use these in addition to the knowledge sources	KII - Section 5 FGD - Section 3	7, 8, 9	
	Enhance - friends	Child		KII - Section 5 FGD - Section 3		
	Enhance - family	Child		KII - Section 5 FGD - Section 3		
	Enhance decision making	Parent	Factors influencing how girls make decisions. Use these in addition to confidence	FGD - Section 3	7, 8, 9, 3.3	
	Enhance decision making - girl roles	Child	Girls roles as a young mother in the family	FGD - Section 3		
	Enhance decision making - parents	Child		FGD - Section 3		
	Enhance decision making - community	Child		FGD - Section 3		
	Enhance health facility	Parent		KII- Section 5 FGD - Section 3	7, 8, 9, 3.2, 4.1, 4.2, 4.3	
	Enhance health facility - access	Child	Physical access to health facility, cost, transport	KII- Section 5 FGD - Section 3		
	Enhance health facility - quality	Child	Services alignment with needs, services are available	KII- Section 5 FGD - Section 3		

	Enhance cultural	Parent	Cultural and traditional factors influencing girl's access MCH services. Use these in addition to outcomes.	FGD - Section 3	7, 8, 9	
	Enhance cultural - practices	Child	traditional or cultural practice	FGD - Section 3		
	Enhance cultural - beliefs	Child	traditional or cultural belief	FGD - Section 3		
Unintended Consequences	Unintended consequences	Parent				
	Unintended consequences - positive	Child				E.2.2.1 Unintended Consequences - Positive
	Unintended consequences - negative	Child				
Lessons Learned	Lessons learned	Parent				
	Lessons learned - information desired from Totohealth	Child	What could Totohealth have done differently?	KII - Section 3		KII - Section 3
	Lessons learned - strengthen MCH	Child	What else could be done to help strengthen MCH information and services to youth?	KII - Section 7 FGD - Section 6		
	What features worked for reaching girls	Child	What features of the product worked for reaching target audience?	KIIs and FGDs		
	What features didn't work for reaching girls	Child	What features of the product did not work for reaching target audience?	KIIs and FGDs		

Annex E: Totohealth Endline Concept Note

Purpose

This concept note describes the proposed re-design of the Totohealth Impact Evaluation. Totohealth was selected as one of the two businesses from Cohort 1 to participate in the impact evaluation. There have been several changes to Totohealth's SPRING prototype since baseline data collection, which are explored in more detail in this Concept Note. As a result of these changes, several facets of the original design of the impact evaluation are no longer feasible. This concept note presents the ways in which we will substantially adapt the impact evaluation design following changes to the prototype, and explores the options for endline data collection.

The structure of this concept note is as follows:

- The scope and aims of the SPRING impact evaluation and the context and design of the C1 impact evaluations as influenced by the changes in the SPRING programme, both from the original ToRs and as it has iteratively adapted from Cohorts 1 to 3;
- An overview of the design of the original Totohealth impact evaluation;
- A brief account of the data collected thus far (baseline);
- Updates to the Totohealth prototype and implementation, including changes the prototype affecting the design of the impact evaluation;
- An indicative outline of proposed revised approach for endline and mitigation steps; and
- The next steps and timelines.

Upon approval, this concept note provides the blueprint for the following next steps. The next deliverable (the Data Collection Tool Guide) will further elaborate on the following evaluation design details:

- Updated sample size and protocols;
- Design limitations;
- Research permissions process and ethical protocols;
- The design of the data collection tools; and
- Final drafts of the data collection tools.

Background and context of the SPRING Impact Evaluation

As one of the three components of the overall SPRING evaluation, the impact evaluation will provide evidence of the overall effects of SPRING in terms of improvements in economic and social outcomes for girls as a result of using products and services delivered by SPRING businesses. While other components focus on how well the programme works and what works (or does not work) well, the impact evaluation contributes evidence to understand the effect of SPRING-supported prototypes on the socio-economic circumstances of adolescent girls. In particular, it will examine if and how SPRING products, services, or business models have helped improve girls' (and their households') ability to: earn, learn, save, and stay safe and healthy. The impact evaluation will establish the extent to which SPRING has enabled girls to enhance their earning, savings, learning, safety and well-being, as well as measure any spill over, replication or demonstration effects of SPRING on the wider market for products, services or business models benefitting girls.

Overview of the Impact Evaluation approach

We conduct impact evaluations of eight businesses across the four cohorts, two business within each cohort. When possible, we will conduct quasi-experimental impact evaluations to assess whether and how adolescent girls have benefitted from SPRING products, services or income-generation opportunities. The approach for each will be tailored to fit the context and business model, i.e. whether the business aims to impact girls as consumers, as participants within the value chain or a combination of both.

The overall design of the SPRING Impact Evaluation is explained in more detail in Annex A.

Changes to the SPRING programme since the selection of Cohort 1 Impact Evaluation participants

The impact evaluation has evolved since the original design of the Cohort 1 impact evaluations with Shekina and Totohealth, in response to the changes in the SPRING programme overall. After Cohort 1, SPRING has adapted its offerings to businesses, which have resulted in the development of more refined prototypes in the duration of the SPRING accelerator programme. As a result, for the impact evaluations for Cohort 2 onward, selection and design of each impact evaluation necessarily taken place in a later phase of the prototype development (towards the end of cohort), in order to allow refinements in the prototype to take place before impact evaluation design.

As a result, the prototypes of C1 businesses have undergone refinements and iterations since the original design of the I impact evaluation, necessitating some changes to the design of each impact evaluation. The general principles remain the same, whereby each impact evaluation draws upon a toolbox of data collection methodologies that have been carefully designed and adapted to best gather qualitative and quantitative data for each impact evaluation.

SPRING has also expanded its understanding of girls' economic assets to include learning, health, safety and wellbeing, as well as earning potential and savings. In addition, reference to the base of the pyramid (BOP) has been removed, as per the changes to the SPRING ToC and logframe.

Totohealth selection for Cohort 1 Impact Evaluation

Totohealth was selected as a candidate for the impact evaluation after reviewing the feedback of the IP team[29] and our own assessment of the evaluability of the businesses. Totohealth was selected amongst the six businesses with whom we conducted Business Performance Evaluation case studies, and was deemed to have good staying power, and a product that was proven to work in other geographies. It was also anticipated to have the biggest potential reach of the first cohort BPE grantees, and a good ability to generate data. Totohealth also had a digital component of SMS messaging which was seen as capable of generating interesting lessons. Totohealth's model revolves around collecting health information for its customers, where its impact on girls' health and well-being was seen to be evaluable.

Original approach to Totohealth Impact Evaluation

Description of Totohealth

Totohealth is one of the participating businesses in SPRING's Cohort 1. Totohealth is a Kenya-based start-up company providing products and services to mothers and fathers during pregnancy and the first five years of their children's lives. The company was established in 2014.

Prior to SPRING, Totohealth had mainly received funding from NGOs for one-off SMS campaigns, but was looking to develop a subscription service for young parents directly. With SPRING funding, Totohealth has focused on targeting adolescent mothers and developing SMS content and helpdesk support appropriate to their needs and designing a maternity box/bag also targeted towards adolescent mothers.

Totohealth's SPRING-funded prototype

Totohealth's SPRING prototype included two features:

- An SMS message service tailored to teen mothers in Kenya to educate them on the health of their child from month five of pregnancy to age five. Automated messages were sent up to twice weekly and allowed the young mother to learn about and monitor their own health and that of their child. The SMS messages included a series of yes/no 'trigger' questions based on child developmental data to determine whether there were any problems with the child's development. Parents could follow up with Totohealth's helpdesk to ask questions.
- Maternity starter packs (Totobag) from a box to a bag for sale to the target market, to make it easier to carry. The starter packs include items a new parent needs at the point of delivery and for the first one year of a

[29] To help ensure that we selected the most appropriate business for inclusion in the Impact Evaluation we asked key members of the IP team to provide their opinions of the six Business Performance Evaluation (BPE) businesses against a number of criteria. We asked the IP team to consider the following criteria: chances of **business survival** (so there is a good chance that the business will be operational at the endline stage); **depth of impact** (the impact upon girls that is measureable); **breadth of impact** (to ensure we can collect a good sample of beneficiary girls) and **potential for learning** (to help inform future programming).

newborn's life (e.g. nappies, nappy cream, blanket and clothes.) Totohealth initially envisaged that adolescent mothers would be able to sell the starter packs and earn income from sales commission.

Totohealth has made further refinements to their prototype; details of these refinements are explained later in this concept note.

Testing Totohealth's Theory of Change

Although Cohort 1 businesses did not map theories of change (as later SPRING businesses have been required to do), Totohealth has specified the following impact:[30]

- **Impact on adolescent girls' learning**: Totohealth provides learning by enabling girls to understand more about their own health and their child's development. Attribution of Totohealth products and services to adolescent mothers can be evidenced by mapping subscribers' knowledge of child development and self-confidence before and after receiving SPRING products and services, and by using a comparison group.
- **Impact on adolescent girls' knowledge**: Totohealth's SMSes help adolescent mothers identify routine, serious, and potentially life-threatening 'triggers' of conditions impacting the development of their children. The most common conditions identified are motor difficulties, but triggers also cover conditions like malnutrition.
- **Impact on adolescent girls' wellbeing**: Totohealth SMSes may directly impact adolescent girls' wellbeing by increasing their health literacy and knowledge of pregnancy, pre- and post-natal health and infant nutrition and development. It may increase the confidence of young mothers.
- **Impact on adolescent girls' wellbeing**: Totohealth SMSes encourage subscribers to take up antenatal care, safe delivery of their baby, immunization, family planning and regular visits to healthcare facilities; as well as advise on good breastfeeding practice and child nutrition. This behaviour may impact the health of mother and child. The Kenyan Demographic and Health survey (KDHS) also monitors this behaviour. Attribution of SPRING support to changing behaviour can be determined by comparing the behaviour of subscribers to Totohealth services to that of the overall population of adolescent girls and mothers.

Original evaluation design and methodology

Design summary

In the design phase of the Totohealth Impact Evaluation (February 2016), Totohealth had identified a group of adolescent mothers that were enrolled in a standard (general content) SMS messaging programme. We understood that Totohealth had not finalised its new message service and content tailored to adolescent girls. This was originally scheduled to roll out in September 2016, and was later postponed to January 2017.

To form our baseline, we interviewed adolescent girls that were already subscribed to the Totohealth service and were receiving general content (comparison group), in order to compare their knowledge of and confidence in ante- and post-natal care to that of adolescent girls receiving the newly designed tailored teen content that was developed through SPRING funding (treatment group). By interviewing a cohort of girls who received the standard messages and those receiving the messages tailored to adolescent mothers, our intention was to assess the additional effect of the tailored messaging.

In addition to the survey, we planned to conduct a series of in-depth Key Informant Interviews (KII) to explore the influence the messages has had upon the girls in more depth including their impact on the girls' knowledge, attitudes and behaviours, reasons why the messages may not have had the desired impacts, and any unintended effects of the service. The sample would be recruited from the telephone survey and included girls that received the original Totohealth messaging and those that received the messages targeted specifically at adolescent girls. As far as possible, the same girls would then be followed up at endline to enable a longitudinal study of behaviour change.

In May 2016 we carried out baseline research among Pre-SPRING Totohealth subscribers who receive the standard Totohealth SMSes (our comparison group). We then carried out our research among adolescent girls receiving the SPRING funded SMSes in December / January 2016/17 (our treatment group). The research among both groups included quantitative telephone surveys with all subscribers and 12 follow-up semi-structured

[30] See: Totohealth Consolidated Baseline Report (2017).

interviews. We then planned to interview these same girls again 12 months (endline) after their first interview to assess the effect of the different service: the standard SMSes (comparison group) vs SPRING-funded SMSes (treatment) on a range of indicators.

Table 1: Original design data collection timetable

	Comparison group (Pre-SPRING subscribers)	Treatment group (SPRING-funded content)
Baseline Survey (telephone) and qualitative interviews	May – June 2016	December 2016 – January 2017
Endline Survey (telephone): 1 Year	May – June 2017	December 2017 – January 2018

Baseline data collection was completed for both the original designed comparison and treatment groups.

Sampling methodology

Quantitative telephone interviews

The telephone survey included *all* adolescent girls that had subscribed to Totohealth services before the end of December 2016. The cut-off of December 2016 was imposed as we anticipated that in January 2017, Totohealth would introduce new SMS content specific to adolescent girls. Totohealth provided us with the names of 436 girls that had consented to be contacted. Of these, we succeeded in interviewing 104 adolescent girl subscribers.

Both the total number of girl beneficiaries and the number of completed interviews was less than we anticipated. Reasons for the low number of completed interviews included:

- A large proportion (109) of the adolescent girls that had subscribed prior to SPRING funding were over the age of 21[31] and so not eligible to be included. Following SPRING funding, Totohealth improved the accuracy of its database to address this issue.
- Our sampling protocols included at least six repeat attempts to contact each number at different times of the day and different days. Despite this, a large proportion (119) of adolescent girls that subscribed post-SPRING funding were unavailable. This included instances where telephone was never switched on, or combinations of the phone being switched off, the number ringing out or a shared phone prevented us from reaching the right individual.
- Some respondents stated they were not subscribed to Totohealth services or did not recall having subscribed to Totohealth services, but were receiving messages.

Qualitative semi-structured interviews

Our qualitative baseline comprised of 24 face to face semi-structured interviews with a selection of Totohealth beneficiary girls. We purposively selected the from the telephone survey sample to include a broad range of respondents according to the following criteria:

- **Income levels** (using Progress out of Poverty Index).
- **Age of child registered with Totohealth** to ensure we captured a range of child ages as targeted by the Totohealth service (SMSes content and messaging sequence is dependent on the age of the child).
- **Use of Totohealth's help desk** to ensure we spoke to the minority of girls that had indicated in the survey they had used the helpdesk service.
- **Extent to which Totohealth had influenced behaviour** to allow us insight into the factors that impacted on why girls might or might not feel influenced by Totohealth messaging.

Data collection instruments

Quantitative telephone survey

[31]As girls could have been 20 when they registered with Totohealth but have turned 21 since registration, we decided to keep 20 year old girls within the sample.

We designed a quantitative survey to gather information from adolescent girls that had subscribed to the Totohealth service. The same survey was used for both the May and December 2016 fieldwork.

The survey gathers baseline information on the following:

- Questions about their experiences of subscribing to and using Totohealth to enable us to assess the effectiveness of Totohealth referral process; and
- Specific health-related behavioural questions to enable us to measure the impact of the Totohealth messaging on: ante-natal care and delivery; breastfeeding; child development and nutrition; immunisation; family planning; and healthcare seeking behaviours.

The telephone survey was designed in consultation with and approved by Totohealth before we began the fieldwork process to ensure we understood the business and, as far as possible, gathered information that was useful to the business. Following approval, the survey was translated in Kiswahili and scripted for computer-aided telephone interviewing (CATI). This ensured all questions were correctly routed.

Qualitative in-depth interviews with key informants

The qualitative discussion guide followed the structure of the quantitative survey but included detailed questions to enable us to explore the influence that the messages have had upon the girls in more depth including:

- Their impact on the girls' knowledge, attitudes and behaviours;
- Reasons why the messages may not have had the desired impacts; and
- Any unintended effects of the service.

As per the telephone survey, the qualitative guide was designed in consultation with and approved by Totohealth before we began the fieldwork process to ensure we understood the business and, as far as possible, gathered information that was useful to the business. Following approval, the guide was translated in Kiswahili.

Baseline data collection and results

In May 2016, we undertook a telephone survey to gather baseline data from adolescent girls that we understood were receiving general SMS content (comparison group). In December 2016, we carried out baseline data collection amongst adolescent girls that had subscribed since May 2016 and, we understood, had received tailored adolescent girl SMS content (treatment group). Both surveys were complemented by a series of in-person KIIs.

Using the contact details provided to us by Totohealth, we sought to maximise the number of participants by making multiple attempts to contact each girl and where necessary, arranging convenient times to call the girls back to take part in the interview if she was unable to at the time of the original call.

Table 2: Sample output summary at baseline (May 2016 and December 2016)

	Total	Comparison group (Pre-SPRING subscribers)	Treatment group (SPRING-funded content)
Total initial sample provided	**436**	**194**	**242**
Aged 21 or over	117	109	8
Unavailable	155	20	135
Wrong number/don't recall registering	46	8	38
Refused	12	6	6
Toto baby > 5 years	1	1	0
Baby died	1	1	0
Completed baseline interviews	**104**	**49**	**55**

Some of our difficulties in reaching respondents in December 2016 were the result of rogue recruitment practices identified by Totohealth, where one health volunteer in particular reported registering over 1,000 subscribers but simply provided a list of incorrect telephone numbers and fictitious details. The sample output report is detailed below (Table 3) and further details on the results can be found in Annex B.

We further collected endline data in May 2017 (Group 1 endline) as well as re-contacted Group 2 respondents in order to maintain contact to try to mitigate against attrition. At this point, were able to re-contact 18 adolescent girls in Group 1, and 28 in Group 2 (see Table 3 below).

Table 3: Sample output summary

	Total	Group 1 (May 2017)	Group 2 (December 2016)
Total initial sample provided	436	194	242
Completed baseline interviews	104	49	55
Follow up interviews completed	46	18	28

Totohealth prototype updates

In February 2017, Totohealth informed us that there had been internal confusion regarding the introduction of the SPRING funded adolescent girl SMS message service and that the targeted SMS content had been introduced in December 2015 and already sent out to all subscribers 20 years and under.

In addition, Totohealth informed us that during a systems upgrade at the start of November 2016, the adolescent girl content had been disabled and had not been sent out again till the start of February 2017. Rather, the general Totohealth SMS content was sent out to all subscribers. This meant that most of our research participants (both treatment and comparison) had received both general and adolescent girl specific SMS content[32].

During 2017, Totohealth provided us with an update on changes to the prototype:

- From November 2016 Totohealth introduced a charge for the SMS service of 200 KSH per annum for individuals that subscribed directly to the service (and not via an NGO/Government funded service).
- In March 2017, Totohealth introduced a charge for the helpdesk of 250KSH per annum.
- In March 2017, at the same time as introducing the charge for the helpdesk, Totohealth amended all trigger questions to direct subscribers to healthcare professionals and not back to Totohealth helpdesk.
- Contacts with four government counties and three organisations were currently funding most of their subscriptions.
- The Totobag was only marketed for sale via Facebook and the bag was not directly targeted at adolescent girls and there was no record of who was buying it. By March 2017, 22 Totobags has been sold.
- Paid for subscriptions (those sponsored by Governments or NGOs) are provided free for a year under a new standard contract. Thereafter, subscribers are required to pay for the service. It is unclear when Totohealth introduced charges for existing subscribers.

In their programme updates, Totohealth said of their prototype: *"For us, we have tried different business models with the young girls but none is yet to be sustainable…. What we do currently is to derive a secondary value to other NGOs working in adolescent girls space and charge a fee for that value."*[33]

In October 2017, discussions with Totohealth reflected that they had stopped most operations, given up their offices; and has stopped all campaigning until they manage to obtain more funding. They do have some new prospects, but they have been investing their own money to keep the operation going. Their biggest current prospect is a Safaricom + Worldvision incubator (Strathmore Immersion Programme) which was meant to start

[32] Just over 40% of the comparison group respondents had subscribed to the service before the adolescent girl content was introduced and will have received general SMS content prior this date.
[33] KPI submission (Year 2), July 2017.

January 2017 but had not started yet. Partnerships with Government Counties is still ongoing, but the prospect of SPARKS did not come through. Fonda Ruiter, Head of Content at Totohealth, resigned at the end of October 2017.

Revised approach to the Totohealth Impact Evaluation at endline

Reasons for the revised approach

Given the significant changes to Totohealth's level of operations, implementation and its prototype (with added new features such as charging fees, which has impacted attrition rates), several facets of the original impact evaluation design are no longer feasible. These include:

- **Loss of comparison group due to implementation of adolescent girl content to all subscribers:** The changes to the prototype have meant that we no longer have a comparison group at baseline and endline and are thus **unable to measure attributable** observed change in the treatment group to Totohealth. We have previously proposed to consolidate both baseline surveys to creating a single treatment group of adolescent girls that have received Totohealth SMS services.
- **Attrition rates due to the introduction of charges for SMS content and inaccuracies in the initial provided sample**: At successive measurement points (e.g. Group 1 endline), we experienced greater sample attrition than anticipated (See Table 3). The overall sample size for Group 1 reduced by 63% from 49 to 18 respondents. Furthermore, at endline data collection, we re-contacted Group 2 baseline respondents in order to assess attrition rates; we were successful in reaching a total of 28 respondents, with an attrition rate of 49%.
- **Significant changes to the Helpdesk feauture:** Although the Helpdesk still exists as a supplementary paid service for old subscribers, Totohealth is slowly phasing this out due to financial and resourcing challenges. Since changing it to a supplementary paid service, demand has been limited and fewer girls have been using the Helpdesk. To prevent measuring a varied experience of the service, the revised approach will exclude the Helpdesk feature and only focus on the SMS service.

In light of the small number of completed interviews we anticipate we will achieve at endline, we will not be able to continue with our original impact evaluation design to draw quantitative and attributable conclusions regarding how Totohealth SMSes have influenced and impacted girls' choices and knowledge. Additionally, given the changes to the SMS service (including removal of trigger questions, charging for helpline support, and variation in general/teen content sent out) we would be measuring quite a varied experience of the service.

Revised design summary

Building on a review of literature on alternative approaches to impact evaluation,[34] we propose to use the principles of Contribution Analysis (CA) for the revised approach to the Totohealth impact evaluation. CA is a theory-based approach used to evaluate programmes in complex and dynamic settings. It examines supporting conditions or alternative explanations which could affect programme achievements and outcomes.[35]. This entails evidence-based testing of the programme's Theory of Change (ToC) against logic and available evidence, examining other influencing factors. One can then assess whether the intervention made an observable contribution to the outcome.

CA seeks to provide plausible evidence to reduce uncertainty regarding programme impact on observed outcomes. This method was first applied to the evaluation of public sector programmes by Mayne[36], who proposed using a series of steps to address attribution through performance measurement, including the development of a results chain and the assessment of alternative explanations.

We will use a combination of quantitative analysis with existing data collected from baseline and endline for Group 1 and baseline for Group 2, and the addition to extensive qualitative research with our treatment group at endline, to apply CA to determine the **contribution of Totohealth** to observed changes and to explain how and why intended changes have, or have not, happened.

The first step will be to work closely with Totohealth and the SPRING M&E team to develop a detailed revised version of Totohealth's ToC. Following this, the analysis begins by generating a list of assumptions underpinning

[34] See: Stern, et al (2012) 'Broadening the Range of Designs and Methods for Impact Evaluation' *DFID Working Paper 38;* White and Phillips (2012) "Addressing attribution of cause and effect in small n impact evaluations: towards an integrated framework" *3IE Working Paper 15*;
[35] See: Biggs, et al (2014) "A Practical Example of Contribution Analysis to a Public Health Intervention" *Evaluation* 20(2): 214-220.
[36] Mayne, J (1999) "Addressing attribution through contribution analysis: using performance measures sensibly" *Canadian Journal of Program Evaluation* 16(1): 1-24.

programme logic, and testing whether they pose plausible barriers to achieving desired outcomes. This entails identifying examples of 'influencing factors', contextual conditions that might assist or inhibit mechanisms and alternative explanations.

Using Mayne's methodology[37], CA will be undertaken employing the following steps:

- **Analysing the cause-effect relation.** The CA will begin by understanding and interpreting the proposed mechanisms by which Totohealth's activities and interventions aim to result in the specified outcomes. It will analyse the outcomes observed on the ground (data collected at baseline), and develop a theoretical link between these and the intervention, using the reasoning underlying the programme's ToC.
- **Assessing rival explanations.** The CA will take into account possible alternative explanations for the outcomes observed. This will be achieved by analysing the contextual factors and rival explanations identified through consultation with the IP, Totohealth, and beneficiaries, and through literature review.
- **Analysing existing evidence on the Theory of Change.** Using the evidence accumulated in the previous phase, the ToC will be assessed and potential limitations to it will be identified. Methods employed will include KIIs with previous Totohealth subscribers (e.g. re-contacted baseline participants).
- **Assembling the contribution story, and identifying challenges to it.** Once the data collection has been carried out, a "contribution story" will be developed, seeking to link empirical evidence with theoretical assumptions regarding programme impact. After a link has been established between outcomes and inputs, challenges to this reasoning will be identified, pointing to potential alternative explanations.
- **Gathering and analysing additional evidence.** In order to "test" the previously developed theoretical linkages, the CA will employ findings from secondary sources to determine the contribution of each component to the intended outcomes.
- **Revise and strengthen the contribution story**. Once additional data has been gathered and analysed, the CA will conclude by assessing whether programme interventions can be assumed to have contributed to observed outcomes, or if the other explanatory factors identified appear more credible.

Therefore, we can deduce if a reasonable contribution claim can be made via CA if:

- The intervention's ToC is reasoned and well-developed;
- Programme activities were implemented as established in the ToC;
- The ToC is supported by evidence on observed results and underlying assumptions; and
- Other influencing factors have been analysed and were either shown to not have made a significant contribution, or recognised as having contributed to the outcome.

Totohealth Evaluation Questions

Rather than ask, 'To what extent can the specific impact be attributed to Totohealth', the revised design of the Totohealth Impact Evaluation approach will instead seek to answer the following questions:

- **Has Totohealth had an impact on adolescent girls?** What causes are necessary or sufficient for the effect? Was the intervention needed to produce the effect? Would these impacts have happened anyhow? What is, if any, the added impact of Totohealth's intervention?
- **How has Totohealth had an impact on adolescent girls?** How and why have the impacts come about? What causal factors have resulted in the observed impacts? Has Totohealth resulted in any unintended impacts? For whom has Totohealth made a difference?
- **What generalisable lessons can we learn about Totohealth's impact**? Can this intervention be scaled up or transferred elsewhere? Is the intervention or impact sustainable?

Sampling methodology

[37] See: Mayne, J (2008) "Contribution Analysis: An approach to exploring cause and effect" *ILAC Brief 16.*

The sample for the proposed Totohealth endline would be derived through purposive sampling[38]. This will include KIIs with Totohealth staff members and with SMS beneficiaries as identified in the baseline and midline data collection.

Building on the sample size attained in May 2017, we anticipate being able to obtain a **population of 46 adolescent girl subscribers** from which to sample (see Table 3 above, total number of girls re-contacted).

Beneficiaries will be selected on the basis of previous participation (e.g. subscription) to Totohealth SMSes, availability and willingness to participate, and on the basis of recontact.

We will re-analyse the sample to determine a sampling framework, and will account for the following criteria amongst our sample:

- Age of subscriber (16-18; 19 and above); education, and household composition;
- Levels of poverty (based on PPI score);
- Length of registration and degree of engagement with Totohealth services (e.g. services subscribed);

As with baseline, a sample size of approximately 24 respondents (12 from Group 1, 12 from Group 2) is estimated for endline.

Data collection instruments

The tool used for data collection will be a revised version of the interview guide applied to baseline and midline data collection, incorporating elements and themes of the quantitative survey. This will be applied through face-to-face interviews with project staff and beneficiaries. Interviews will be conducted in Kiswahili, with appropriate female interviewers.

In addition, a Relevant Explanation Finder[39] will be constructed in order to systematically and explicitly determine the qualitative extent of influencing factors and alternative explanations.

Permissions and consent

As with baseline and midline data collection, the research permissions processes will be led by our local research partner, Research Plus. As with the permissions process for data collection in Kenya for the Ubongo impact evaluation, we will pursue the appropriate permits including with the National Commission for Science, Technology and Innovation (NACOSTI), the Department of Health and Human Services' Common Rule, or any additional body or relevant ministry as identified as relevant by our local research partner. The specific process will be further outlined in the subsequent Data Collection Guide.

Consent to participate has been obtained through Totohealth through an opt-out process sent to all registered SMS subscribers. Consent will be further obtained at the point of re-contact for the sample of girls selected for interview.

Limitations

As noted previously, as a result of the changes to the Totohealth prototype and its implementation (and the resulting attrition rates), we will no longer be able to quantitatively evaluate the extent of impact of Totohealth SMSes on subscribed girls. This will also affect our ability to measure the percentage of beneficiaries who report improved outcomes linked to economic empowerment as a result of SPRING-supported services.

The range of time that has elapsed, in conjunction with the possibly high attrition rates of SMS usage amongst subscribers means that respondents are likely to have difficult in recalling information from SMS messages.

However, qualitative data collection will allow us to qualitatively understand if and how outcomes are achieved given the design of Totohealth's intervention, as well as to generate lessons learned on the nature of the design of intervention.

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[38] Purposive sampling is a non-probability sampling technique, whereby respondents are identified using the judgement of the researcher. The research will apply specialist knowledge of the research issue, and adjust for the participant's capacity and willingness to participate in the research. This is best applied when research designs necessitate that the researcher decides on which individual participants are mostly likely to contribute appropriate data, in terms of relevance and depth. See: Oliver, P (2013). "Purposive Sampling" in V. Jupp, *The SAGE Dictionary of Social Research Methods*.

[39] See: Lemire, S et al (2012) "Making contribution analysis work: A practical framework for handling influencing factors and alternative explanations" *Evaluation* 18(3): 294 – 309.

Table 4: Next Steps

Timing	Tasks
September	Finalise concept note Design data collection instruments Seek appropriate research permissions and finalise ethnical protocols
October	Finalisation of data collection instruments Enumerator training and Totohealth fieldwork
November	Data collection
December	Data analysis
January	Reporting
February	Final report submitted

Annex A: Overall Design of the SPRING Impact Evaluation

Background and Context of the SPRING Impact Evaluation

As one of the three components of the overall SPRING evaluation, the IE will provide evidence of the overall effects of SPRING in terms of improvements in economic and social outcomes for girls as a result of using products and services delivered by SPRING businesses. While other components focus on how well the programme works and what works (or does not work) well, the IE contributes evidence to understand the effect of SPRING-funded business activities on the socioeconomic circumstances of adolescent girls. In particular, it will examine if and how SPRING-funded activities have helped improve girls' (and their households') ability to: earn, save, learn and stay safe and healthy. The IE will establish the extent to which SPRING has enabled girls to enhance their earning, savings, learning, safety and well-being, as well as measure any spillover, replication or demonstration effects of SPRING on the wider market for products, services or business models benefitting girls.

Overview of the Impact Evaluation Approach

We conduct impact evaluations of eight businesses across the four cohorts, two business within each cohort; when possible, we will conduct quasi-experimental impact evaluations to assess whether and how adolescent girls have benefitted from SPRING products, services or income-generation opportunities. The approach for each will be tailored to fit the context and business model, i.e. whether the business aims to impact girls as consumers, as participants within the value chain or a combination of both.

Evaluation Questions

The following questions from the SPRING evaluation framework guide the IE:

Table 1: Impact Evaluation Questions40

Evaluation questions		Suggested Sub-questions
Effectiveness	D3 What works in reaching adolescent girls with products, services, and business models?	D3.1 What products, services and business models worked in reaching adolescent girls, and which have the greatest potential for reaching girls at scale?
		D3.2 To what extent were the products, services and businesses models that worked to reach adolescent girls also commercially viable?
		D3.3 Which products, services, and business models did not work and why?
Impact	E1 To what extent have girls improved their earning potential (including employability skills) and savings as a result of accessing products, services, or business opportunities provided by SPRING businesses?	E.1.1 In what ways did SPRING products, services and business models intend to help girls increase their earning potential and / or savings?
		E.1.2 Did girl beneficiaries report having predictable income from safe sources and / or improved opportunities for income from safe sources?
		E.1.3 How have the income-generating activities of girls changed between baseline and endline?
		E.1.4 To what extent and how did SPRING products, services, and business models contribute to this change, as opposed to other factors?
		E1.5 To what extent have benefits been experienced by adolescent girls and their household, with regard to earning potential and savings, promoted girls' ability to learn, earn, and stay safe and healthy?
	E2 To what extent have girls improved their	E.2.1 In what ways did SPRING products, services, and business models intend to improve girls' safety and wellbeing?

[40] Evaluation questions and the Evaluation Framework continue to be revised.

	safety and well-being as a result of accessing products, services, or business opportunities provided by SPRING businesses?	E.2.2 Did SPRING target girls show improved perceptions of their safety and wellbeing?
		E.2.3 Extent to which key risk factors to girls' safety and wellbeing have decreased between baseline and endline.
		E.2.4 To what extent and how did SPRING products, services or business models contribute to this change, as opposed to other factors?
	E3 What have we learned about girls as end-consumers or beneficiaries in the value chain?	E.3.1 What factors helped or hindered girls from using SPRING products, services, or business opportunities?
		E.3.2 Were there any unintended consequences?
		E3.3 How well does the programme deliver positive outcomes for girls through the delivery of direct assets, compared to other economic empowerment programmes targeted at girls?

Quasi-Experimental Approach to the Impact Evaluation

The SPRING impact evaluations adopt a **quasi-experimental design approach**. We have selected this design over an RCT approach as it accommodates the limitations imposed where interventions are administered by businesses, whose priority is to establish a profitable prototype in an uncertain world. These limitations include:

- **Self-selection** of beneficiaries in the treatment groups which means we cannot randomly assign participants to treatment and comparison groups;
- **Relatively small and highly varied interventions** across the businesses which require different design and data collection solutions. For example, interventions that involve a single contact with the beneficiary may require a shorter evaluation period than interventions where beneficiaries have repeat contact with the business. Methods of data collection (e.g. in-person or self-complete) will also depend on the context within which the intervention is delivered;
- **Changing interventions or prototypes** over the lifetime of the SPRING programme and beyond the programme as businesses pursue an optimum revenue solution and continually iterate on their prototype means that evaluations may be compromised as the nature of the intervention changes in response to market factors; and
- **Short timelines** to assess the characteristics of the treatment group and the needs of suitable comparison groups.

We believe the quasi-experimental design approach offers the greatest adaptability and cost-efficiency by taking into account the adaptive and iterative nature of the SPRING prototypes, and the diversity of SPRING businesses considered for the evaluation.

We will use both qualitative and quantitative methods to triangulate the impact of the businesses on adolescent girls. The type and representativeness of methods used will depend on the number of adolescent girls targeted and their position, i.e. working in the supply chain, or as end users of a product or service.

Our quasi-experimental impact evaluation approach will also **use comparison groups to construct our comparison**. A comparison group will be selected to represent what would have happened if the access to the prototype had not taken place. We will purposively define a comparison group that matches the girls (or communities) in the treatment group with regards to key characteristics. For example, we may select communities that are not (yet) targeted with the product or service as a comparison group.

Our baselines will consider the heterogeneity across the two groups. Where possible, our preference will be to use propensity score matching (PSM) to overcome the influence of independent variables on the final impact. PSM will allow us to compare two similar groups (treatment and comparison) to establish the average difference in observable characteristics, or propensity score, and select the range of least difference. The use of PSM enhances the comparability of the average characteristics of the treatment and comparison groups mitigates against bias in an impact estimate where treatment and comparison areas are systematically different. Using PSM, the changes in the relevant outcome variables that occurred over the time of the project will then be compared between the matched individuals in treatment and comparison areas, in order to estimate the impact of the programme.

There are certain limitations to matching. The process of matching for similar traits is time-consuming and the comparison group can never be an exact match. Moreover, proper comparison groups may not always be available or become 'contaminated' after baseline if 'comparison' girls start to take up a SPRING product, service or business opportunity scales. This is an inherent risk of market development programmes aiming for scale. Additionally, using PSM will likely reduce our sample sizes, as we exclude sample from respondents that lie outside the range of least difference. While we will minimize this loss by designing comparable samples for data collection at the outset and applying a suitable range of least difference in matching.

Design approaches will seek to include a comparison group to facilitate **difference-in-differences analysis** to calculate impact. The difference-in-differences method will allow us to estimate the average treatment effect by comparing treatment and comparison groups (first difference) and between baseline and endline (second difference). This is done by carrying out identical surveys just prior to project start (baseline) and just after the project end (endline). In some cases, we would also survey at midline to measure early impacts of the programme.

The impact estimates obtained from this approach are only valid, however, if the parallel trend assumption holds true. This is the assumption that the two groups would have developed at the same speed in the absence of the SPRING prototype. This may not be the case if change over time is determined by unobserved characteristics of either group, but will be mitigated by the use of PSM.

Within the quasi-experimental approach, each impact evaluation is tailored to the individual circumstances and business models of the selected businesses. All impact evaluation design approaches share several common features:

- **Develop and build common impact indicators:** In each impact evaluation we will build on indicators developed and adopted in previous cohorts for the impact areas of **learning, earning, safety and well-being** so that in all cohorts, as far as possible, we gather comparable data from beneficiaries hoping to achieve a certain impact.
- **Develop custom indicators specific to each impact evaluation:** In each impact evaluation we will design new impact indicators where necessary to enable us to consider and capture data specific to each intervention and associated impact pathway.
- **Ensuring the use of suitable, local female interviewers:** Adolescent girls may be hesitant to open up to male interviewers. We will use local female interviewers as we hope to build trust between interviewer and respondent and thereby improve the quality of response. This is particularly important for enterprises or contexts which are sensitive, such as menstruation or pregnancy.
- **The use of Girl Safety Protocols and Ethical Guidelines**: To ensure the safety of girls, our research is guided by best practise Girl Safety Protocols and Ethical Guidelines. All participants will be asked to provide informed consent before taking part in any SPRING research. Researchers and enumerators who are in contact with adolescent girls will be trained to conform to these protocols, data will be held securely, and responses reported will be anonymised. A full set of protocols and guidelines will be adapted and tailored to each impact evaluation as necessary.
- **Triangulation with other data sources:** Our impact evaluations will consider data from other official sources, data from other programmes, and data from within the SPRING programme so that we consider the social, political and economic context within which the interventions are delivered and which can influence the causal chain.
- **The consideration of unintended consequences:** Comprehensive data collection will facilitate the identification of any unintended consequences. This includes both primary data collection for the impact evaluation and as well as data collected as part of the PPE and BPE components of the SPRING evaluation, from businesses and stakeholders to elicit potential unintended consequences.

Limitations to the Evaluation Design

Early business selection: In order to ensure that baseline data is collected within the cohort timeframes, we are required to select candidates for the Impact Evaluation at an early stage of the accelerator cohort. As a result, businesses that only show stronger performance later in the cohort, or who have not yet reached a sufficiently evaluable scale, can be overlooked as potential or shortlisted candidates for participation in the impact evaluation. We have mitigated this risk by conducting our evaluability assessment and selection following Bootcamp 2, allowing for the finalisation of the SPRING prototypes.

Generalisability: The sample of businesses selected for impact evaluation and from which to draw conclusions is small, and although chosen in part based on their ability to generate lessons learned, these should not be taken as representative of the SPRING programme as a whole. Nevertheless, we have widened our scope for learning by drawing on data gathered through the BPE in order to inform our analysis of why selected businesses were or were not successful in achieving impact amongst their target girls.

Heavy reliance on businesses for information: The evaluation team relies on the businesses to provide information about their prototype to inform the evaluation design and gain access to beneficiaries. There is a risk their interest and buy-in into the impact evaluation will lessen over time, making it more challenging for the evaluation team to trace the business beneficiaries. The progress and timing of research is also impacted by the progress businesses have made in prototyping and distributing their products and services. Therefore, timelines may shift over time.

Parallel trends assumption: Where possible, we will adopt a difference-in-differences method. However, we recognise a major limitation of this method is that it is based on the assumption that the indicators of interest follow the same trajectory over time in treatment and comparison groups (the 'parallel trends assumption'). Where this assumption is correct, a programme impact estimate made using this method would be unbiased. If there are differences between the groups that change over time, however, then this method will not help eliminate these differences.

Data limitations

Data used in the Impact Evaluation is largely dependent on self-reporting by the girls themselves, subject to recall and positive response bias. To help identify any bias in our results, we will triangulate data against data gathered by the businesses themselves.

Robustness of the data is limited by the numbers of girls surveyed. For our evaluations, we have selected businesses with substantial numbers of projected targets of girl beneficiaries. However, final numbers of beneficiaries reached are still subject to refusal and attrition. This will be minimised by:

- Gathering comprehensive contact data on the girl and their guardian for all research;
- Where possible, arranging a convenient time to conduct the interview with girls; and
- Making up to 3 attempts to interview each girl for each round of data collection.

Annex B: Summary of Totohealth data collection and results – baseline

Accessing Totohealth services

The baseline data collected yielded some preliminary results on the effectiveness of the Totohealth SMS's and adolescent girls' access.[41] Phone ownership influenced how girls interacted with Totohealth, with respondents indicating that those using a shared phone had difficultly receiving messages frequently, saving messages to refer back to, and interact with Totohealth compared with girls that had their own phone.[42]

88% of all respondents reported reading the most recent SMS, and 69% were able to describe its content. 68% of respondents shared the SMS messages, with almost half sharing the messages with their partners (47%), a friend (39%), or a parent or relative (20%). Sharing of SMS content among friends in particular, will be instrumental in growing subscriptions.

All informants spoke highly of Totohealth advice, accessing support alongside (and sometimes instead of) health care professionals and family.

When asked how much they trusted different sources if information, respondents stated they placed greatest trust in information from Totohealth (90% stating they trusted Totohealth a lot) and other healthcare professionals (84%), with friends trusted the least (18% trusted a lot).

Fourteen percent of respondents reported they had used the helpdesk and all users spoke highly of the service as providing them with a source of reassurance regarding their baby's development. The Helpdesk was perceived as less useful in emergency situations where an immediate response was required. This may be an area where Totohealth could improve (or possibly better manage user expectations).

Less than half of girls became aware of and subscribed to the SMS messaging support while pregnant. This suggests that Totohealth struggles to identify and target expectant adolescent mothers with pregnancy and safe delivery messaging support.

Health related behaviour amongst young and expectant mothers

All key informants felt they had benefited from the information provided by Totohealth. When directly asked if their behaviour had changed as a result of receiving Totohealth SMSes, many informants felt it had, as stated by one:

"*Totohealth has told me how...to feed and take care of the baby [and my behaviour] is different now.*"

In the survey, we gathered behavioural data on the uptake of antenatal care; delivery; breastfeeding; immunization; family planning; and visiting health facilities. Where possible, this data has been triangulated against the Kenya Demographic and Health Survey.

Table 1: Summary of health-related behaviour results from Totohealth baseline

Behaviour	Findings
Antenatal care	96% of all respondents and 97% of those that subscribed to Totohealth services whilst pregnant, received antenatal care from a skilled provider43.This is comparable to the KDHS 2014 in which, 94% of 15-19 and 96% of 20-24-year olds received ANC from a skilled provider. 65% of respondents that had subscribed to Totohealth services while pregnant felt that it had influenced their behaviour, including 26% who said it had influenced them to a great extent.
Safe delivery	96% of respondents that had given birth had delivered their baby in a health facility44 and 7% gave birth at home. This compared with 62% of 15-19 and 62.5% of 20-24-year olds who had delivered their baby in a health facility in the 2014 KDHS survey.

[41] See Annex B for further details on the resulting sample. Further results can be found in the Totohealth consolidated baseline report (May 2017).
[42] We had not anticipated the use of shared phones, which became noticeable amongst 12 key informants that subscribed between June – December 2016, where five informants made use of a shared phone compared with just two of the twelve in May 2016. Totohealth does not collect details of which subscribers used a shared phone. We will gather data on shared phone usage amongst the full sample at endline. .
[43] Doctor, nurse or midwife
[44] Note small sample size at baseline: n= 18

	A third (33%) of respondents felt that Totohealth had influenced their decision on where to give birth during their pregnancy, and 51% felt it had not influenced them at all.
Breastfeeding	All of the 81 respondents that had given birth had breastfed their baby. 66% of respondents with babies over 6 months old had breastfed exclusively for 6 months. According to the KDHS 2014 findings, 61% of 15-49-year olds exclusively breastfed their baby for 6 months. 64% of mothers who had delivered their babies felt Totohealth had influenced their breastfeeding, rising to 68% amongst those with babies > 6 months. At endline all mothers should have babies over 6 months old.
Immunisation	Nearly all (96%) respondents that had delivered their baby had started taking their baby for vaccinations. The only respondents that had not taken their baby for vaccinations were mothers whose babies were days old. 94% of respondents who had delivered had taken their baby for a BCG vaccine. All respondents whose babies were older than 2 weeks had taken their baby for the Pentavalent vaccine and nearly all had taken their baby for Pneumococcal (99%) and Polio (94%). Most respondents (77%) had taken their baby for the Roto Virus and 81% for measles. According to the 2014 KDHS, coverage of children receiving the 1st dose of Pentavalent and polio stood at 98 and 97 percent, BCG (98%), measles (71%), while the third dose of Pentavalent and polio at 90% and 81%, respectively. 68% of respondents stated their baby had been given every mandatory vaccination, 24% said their baby had not and 8% did not know. The KDHS survey measures how many babies aged 12-23 months have received basic or full vaccinations. Our evaluation will triangulate this with the uptake of Totohealth respondents'. At this stage, only 24% (n=25) of the Totohealth respondents' babies were over 12 months. 69% of respondents that had delivered and 71% of those whose babies were >2 weeks olds felt that Totohealth SMS messages had influenced their decision to get their baby vaccinated.
Family planning	51 % of respondents that had delivered their baby were using some form of contraceptive. This compared with 14% of 15-20-year olds in the KDHS 2014 survey. The most common contraceptive was the use of injectables (69%). Twelve percent of respondents were using implants and 12% were using the pill. Five percent were using a male condom and only 2% had been sterilised or were using an IUD. Only forty one percent of respondents taking family planning felt Totohealth had influenced their decision and only 26% felt Totohealth had influenced them to a great extent. While respondents are more likely to use family planning than on average (as indicated by KDHS), fewer are likely to attribute their family planning decisions and behaviour to Totohealth SMSes than in other areas, e.g. immunization and breastfeeding.
Visiting a healthcare facility	Totohealth send messages encouraging users to visit healthcare facilities when they or their baby are showing signs of illness. In the last 12 months, respondents reported they visited a health care facility twice on average, 1.7 times for themselves and 3.2 times for their children. 30% of respondents thought they were visiting a healthcare facility more since receiving Totohealth messages, 37% thought it about the same and 26% thought it less.