



OPERATIONAL RESEARCH FOR MOMCONNECT

Technical Report : October 2015



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EXECUTIVE SUMMARY

MomConnect, is the National Department of Health (NDoH) of South Africa's initiative to improve maternal, children's and women's health services by registering all pregnant women to receive preventative health messages via mobile phones. The initiative celebrated its one year anniversary in August 2015 as the program had registered well over 300,000 mothers onto MomConnect by June 1, 2015. Even with this progress, registration numbers fell short of national targets of reaching at least 60% of all pregnant mothers during their first antenatal care (ANC) visit by June 2015. The NDoH is interested in understanding why registration targets are not being achieved at the facility level. This operational research sought to learn how MomConnect is implemented at facilities, the management structures for it between the different levels of South Africa's health system, how facilities were trained on MomConnect, and whether there were common characteristics between high and low registration facilities.

A process evaluation framework was used to guide this operational research. Three districts, each from a different province, were purposively selected to represent an urban, peri-urban and rural area. The facilities were stratified then randomly selected from each district to be included in the study—five facilities from the highest performing quartile, five from the lowest performing quartile, and ten from the two middle performing quartiles. ANC staff were interviewed at each facility about registration processes, training received, and management structures related to MomConnect. Supervisors were also interviewed at facilities and district and provincial offices, as well as three training partners.

The study found that facilities registered mothers in one of three ways: 1) individually, 2) as a group, or 3) in batches, where mothers' information was recorded in a logbook and registered by a staff member at a later time. Facilities that registered in batches had higher registration numbers, although batched registrations were not as common as individual or grouped registrations. The mean registration percentage (against its target) of facilities performing grouped registrations were higher than facilities that performed individual registrations, indicating that group registrations yielded higher efficiency and higher performance. Those facilities with staff respondents that had worked a shorter time at the facility (new staff) were higher performing facilities. Network issues was unilaterally mentioned as a barrier to MomConnect registrations. Network timeouts specifically was the second most common barrier. Despite the persistent issues with network and timeouts, staff generally had a positive perception of MomConnect and thought it was a beneficial program to mothers.

The study also found that there was a lack of a supportive management or supervision structure for MomConnect, and a lack of adequate training. There were variations and uncertainty on how and to whom reports should be sent.

It is recommended that the NDoH consider and develop protocols for batched and group registration processes. A management structure for the initiative should also be developed at all levels, including supportive supervision, reporting protocols and prioritization of appropriate feedback to facility staff. Lastly, there should be retraining for all facilities, which incorporates findings from this study, including the re-emphasis that registrations must occur during the first ANC visit and that all the required registration information be available before starting the registration process to prevent timeouts.



Operational Research for MomConnect

PROJECT SUMMARY

MomConnect is a South African National Department of Health (NDoH) initiative, which aims to register all pregnant women in South Africa to a national database, through the use of cell phone-based technologies integrated into maternal, child and women’s health services. It provides a means for pregnant women to receive stage-based relevant information about their pregnancy and also allows them to provide feedback on the services that they receive at clinics. MomConnect was launched on 21 August 2014, and is sending messages to a large cohort of pregnant women and new mothers.

By 1 June 2015, 3274 facilities (92% of facilities which provided antenatal care) had sent through at least one registration to the MomConnect system. In addition, over 30,000 health care workers had been oriented in registering women on MomConnect.

This effort resulted in approximately 7,334 new clinic-based registrations per week, and an approximate total of 305,000 clinic-based MomConnect registrations over the 5 month period of January-May 2015. Although this was a significant number, it was below the approximately 19,000 first antenatal visits per week in South Africa. The actual number of registrations per month is shown in Figure 1.

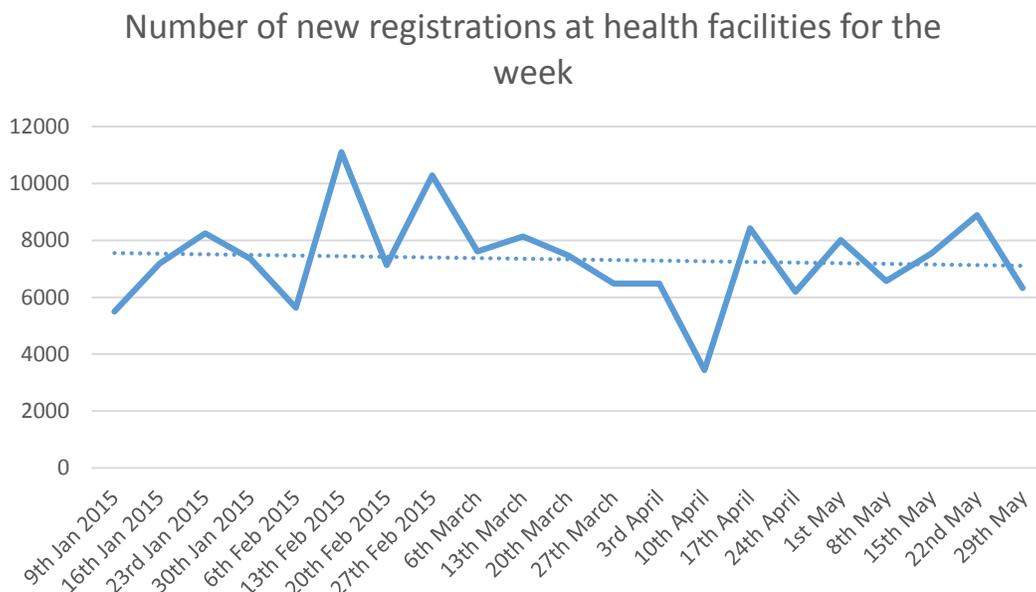


Figure 1. MomConnect registrations by week

It is unclear why many facilities only registered between 30% and 70% of newly pregnant women.

Preliminary site visits to one hospital and one clinic with antenatal care (ANC) services, and discussions with various stakeholders, indicated that MomConnect is being implemented in a variety of ways across different facilities. For example, some facilities practice group registrations, where a staff member guides a group of up to 20 women through the registration process at one time. Other facilities register mothers through MomConnect on an individual basis. Staff and stakeholders described varying supervision structures during the preliminary site visits; there were no clear processes for how trainings were provided or how registrations were managed for MomConnect. Some additional issues identified at the site visits included: 1) registration occurring on second instead of first ANC visits, 2) network issues and 3) perceived time burden of MomConnect registrations on facility staff. Understanding the different registration approaches and the complications experienced at facilities could help determine reasons for the low number of registrations thus far.

There are many other elements of MomConnect that warrant attention for operational research, e.g., the low numbers of transitions from subscriptions to registrations, and the effectiveness of the help desk function. The research team, NDoH and other stakeholders discussed and agreed that the first priority for operational research would be to determine the current MomConnect training and registration processes, and identify the common characteristics of high and low registration facilities.

PROBLEM STATEMENT

South Africa's NDoH aims to have 100% of all mothers registered onto MomConnect during their first visit to ANC facilities. Staggered goals for registering mothers were put in place for the initial implementation of the initiative—40% of mothers during their first ANC visit in the first five months of the program (August – December 2014), 60% of mothers from January – June 2015, 80% of mothers from July – December 2015, and 100% of mothers from 2016 onward. The approximate 305,000 MomConnect registrations at facilities, as of June 2015, fell short of the national targets. There is no clear understanding of why the national targets were not met. Preliminary site visits revealed several possible contributing factors such as training for health workers on the MomConnect program during the initial roll out was not standardized, uncertainty with the training and re-training protocols for existing and new employees, unclear supervisory structures for MomConnect at the facility, district and provincial levels and varying methods for registering mothers to the MomConnect system. It has been difficult for MomConnect stakeholders, including the NDoH, to fully understand how MomConnect is really implemented on the ground. This has made it difficult to determine reasons for the low registration rates. Operational research (OR) was needed to determine the reality of MomConnect at the facility level, help determine characteristics of high and low registration facilities, and approaches for improving the MomConnect program.

OBJECTIVES

The general objective for conducting OR for South Africa's NDoH's MomConnect program was to better understand how MomConnect is being implemented at the facility level, the management structures that are in place to support MomConnect, and to determine barriers and facilitators of MomConnect registrations at facilities.

The specific objectives included:

1. To understand how MomConnect is implemented and the perceptions of MomConnect at the facility level
2. To learn of the different training approaches that were used and /or are being used for MomConnect
3. To understand the management structures between the provincial, district, sub-district and facility levels as related to MomConnect
4. To determine characteristics of high and low registration facilities.

The priorities for the OR were finalized in consultation with the NDoH and other MomConnect stakeholders.

METHODS

Operational research (OR) is often used to study the implementation of new or innovative programs to improve service delivery and to strengthen aspects of the program. A process evaluation framework guided the OR of MomConnect. It included qualitative and quantitative methods to determine how mothers were registered to the program at the facilities, explore the challenges and perceptions of MomConnect, identify initial and ongoing training methods, and determine the management structures that are in place to support MomConnect.

Study Design

A process evaluation design approach was used for this research. Process evaluations assess the implementation of programs and help provide explanations for their successes or failures. Conducting a process evaluation for formative purposes during the early implementation stages of a program allows for program improvement by identifying inadequacies during various program stages; from the design, planning and training to actual implementation. While there are many existing frameworks for process evaluations, this study used Saunders, Evans and Joshi's (2005)¹ framework which focuses on targeted health promotion interventions. It emphasizes the elements of fidelity, dose delivered, dose received, reach, recruitment and context. Each element and its relation to MomConnect is described in Table 1.

¹ Saunders RP, Evans MH, Joshi P. (2005) Developing a Process-Evaluation Plan for Assessing Health Promotion Program Implementation: A How-To Guide. *Health Promotion Practice*, 134-147. DOI: 10.1177/1524839904273387

Table 1: Description of process evaluation elements and their relation to MomConnect

| | Description | Relation to MomConnect |
|--------------------------------------|---|--|
| Fidelity (quality) | The extent to which the intervention was implemented as planned | <ul style="list-style-type: none"> - Whether the correct process is followed in registering mothers on MomConnect - Identify all processes being used for implementation at facilities (both correct and incorrect) and determine if processes are effective - Whether ANC staff understand the importance of MomConnect - The percentage of MomConnect registrations will reflect high quality delivery |
| Dose Delivered (completeness) | The amount or number of intended units of each intervention or component delivered or provided by interventionists | <ul style="list-style-type: none"> - Whether all necessary content was covered during training for MomConnect - Whether there was sufficient time for training - Whether all intended training methods, strategies and activities were used |
| Dose Received (exposure) | <p>The extent to which participants actively engage with, interact with, are receptive to, and/or use materials or recommended resources</p> <p>Can also include satisfaction with program and implementation staff</p> | <ul style="list-style-type: none"> - Whether trained staff remember the training - Whether the training material or knowledge is shared - Whether staff is receptive to the intervention and the training methods for the intervention - The proportion of the priority target staff that participated in each training session |
| Reach (participation rate) | The proportion of the intended priority audience that participates in the intervention | <ul style="list-style-type: none"> - Whether enough staff were appropriately trained at the facility, district and provincial levels - Whether the right staff were trained at each level |
| Recruitment | The procedures used to approach and attract participants at individual or organizational levels, which includes the maintenance of measurement components of the study | <ul style="list-style-type: none"> - Whether there were perceived or real barriers to registration and the registration process - Identify the planned and actual procedures that were used to encourage continued involvement of ANC staff, supervisors and mothers - Whether there are perceived or real barriers to continued involvement |
| Context | The aspects of the environment that may influence intervention implementation or study outcomes | <ul style="list-style-type: none"> - Whether there are organizational, community, social or political factors that affected the program implementation (and possibly outcome) - If contextual factors are identified, how will they be monitored? |

The process evaluation used an iterative six step process (see figure 2). Steps 1 and 2 ensured that researchers fully understand the program being implemented, i.e., the NDoH's MomConnect program. Step 1 entailed a full description of the program, including any theoretical framework that was used to

guide the program design, its inputs and expected impacts and outcomes. MomConnect’s general aims and objectives were described in the project summary section of this document. Its logic model is outlined in Figure 3.

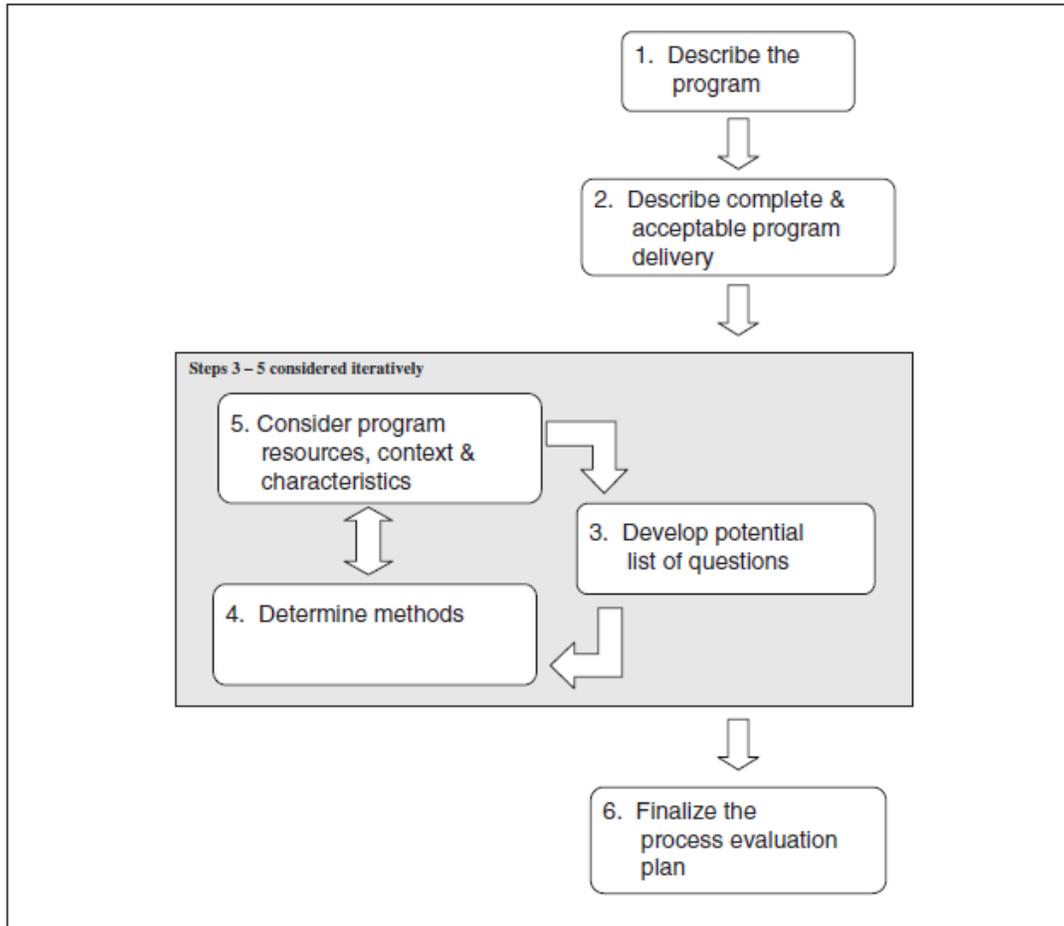


Figure 2. Steps in Process Evaluation Process¹

| Inputs → | Immediate Impact → | Short-Term Impact | → Behavioral Impact | → Health Outcomes |
|---|--|--|--|--------------------------------------|
| Providing MomConnect training, technology infrastructure and materials and consultation to ANC staff and supervisory staff will | result in the registration of all mothers on the MomConnect system, which will | result in increased maternal knowledge of antenatal health, which will | result in increased health-seeking behaviors related to antenatal care, which will | reduce infant and maternal mortality |

Figure 3. MomConnect logic model

Step 2 required the researchers, in consultation with MomConnect stakeholders, to agree on the most critical and acceptable components of MomConnect delivery. This included training components and registration components.

Training - various workshops, presentations, a staff manual, posters and cheat sheets were developed for training purposes. The NDoH, in agreement with MomConnect stakeholders outlined training instructions that included the use of training materials. The training instructions were a participatory demonstration which included notes on the USSD numbers to use during registration.

Registration – the most critical and only acceptable registration component was that it be completed on the first ANC visit. Additionally, registrations must be performed or guided by trained personnel.

Steps 3-5 involved the iterative process of developing potential questions, research methods, consideration of resources and context, and finalization of the evaluation plan to address the six process evaluation elements specific to MomConnect. These steps incorporated data collection methods, sampling approaches, data analysis and costs.

Data Collection Questions and Methods

The following data collection tools captured questions regarding the elements of fidelity, dose delivered, dose received, reach, recruitment and context from the process evaluation model and in the context of MomConnect.

Facility staff survey²—A facility staff survey captured staff knowledge, attitudes and perceptions of the MomConnect program, processes followed in registering women on MomConnect, barriers to registering women on MomConnect, and challenges to continued involvement with MomConnect. These reflected the elements of fidelity, dose delivered, dose received, recruitment, and context. The survey consisted of quantitative and open-ended qualitative questions. Qualitative questions allowed researchers to get an in-depth picture of processes being used at the facilities.

Provincial/district/sub-district based staff survey³—A survey for supervisory or management staff at the provincial, district and sub-district levels captured supervisory staffs knowledge, attitudes and perceptions of the MomConnect program, supervision processes related to MomConnect, the perceived challenges with implementation of MomConnect, and district-based ownership of the registration process. These reflected the elements of dose received, recruitment and context. This survey also included quantitative and qualitative questions.

MomConnect trainers' survey⁴ – A survey for those partners that administered training for MomConnect captured the training processes, documentation kept of the training, follow up activities that were completed, and the challenges encountered with the training. These reflected the elements of fidelity, dose delivered, dose received and context. The trainers' survey consisted mainly of quantitative questions on training processes, with open-ended qualitative questions around barriers to the training process.

² See Appendix 1 for the ANC facility staff survey

³ See Appendix 2 for the Provincial/district/sub-district based staff survey

⁴ See Appendix 3 for the MomConnect trainers survey

Sampling Frame

The units of interests for this study included 1) ANC staff responsible for registering mothers to MomConnect at selected facilities, 2) Facility managers that oversee the MomConnect program and district and provincial managers of those facilities and 3) MomConnect trainers.

Public health facilities were sampled from a stratified master list of public health facilities. There are approximately 3,500 public health facilities in South Africa that provide ANC services across 9 provinces and 52 districts. ANC staff and facility supervisors surveyed were from the selected facilities. District and provincial managers surveyed were from district and provincial offices that oversee the selected facilities.

Sampling Strategy

Convenience and stratified purposive sampling approaches were used to select health facilities. Limited financial resources and time restrictions required that the provinces and districts selected be easily accessible from Pretoria. The selection of provinces and districts with existing strong working relationships further facilitated the timeliness of data collection.

The health facilities were stratified into geographical categories that might have influenced MomConnect registration rates. The geographical strata included provincial and sub-district levels. Furthermore, the provinces were purposively selected to capture districts in urban and rural areas. Selected provinces included one province with a conveniently accessible urban district, one province with a conveniently accessible rural district and one province with a conveniently accessible peri-urban district. Facilities in the selected districts were also purposively selected: five high-registration facilities, five low-registration facilities and 10 mid-registration facilities. Figure 4 summarizes the stratified sampling approach.

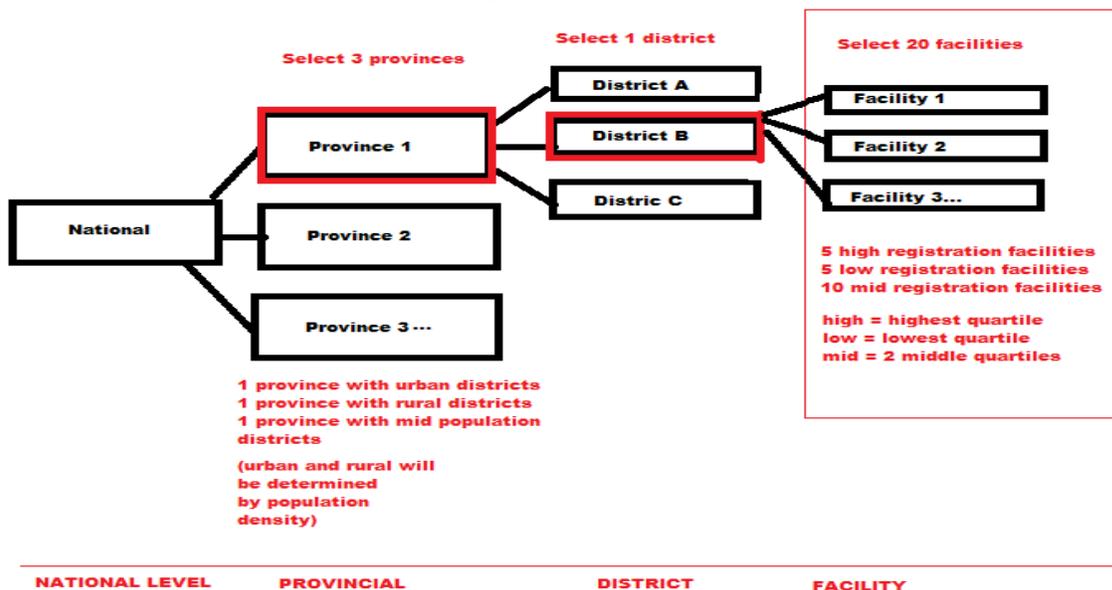


Figure 4. Stratified Purposive Sampling Logic

Lastly, district-level HIV prevalence among pregnant women was considered for the selection of the districts. Higher prevalence had higher priority for selection.

The provinces and districts selected for the study included:

1. **Gauteng Province, Tshwane District** – Tshwane is an urban district with an approximate population of three million and a population density of 460 people per km². The HIV prevalence is 26% among pregnant women tested at ANC facilities in Tshwane district.
2. **KwaZulu/Natal Province, uThungulu District** – uThungulu is a peri-urban district with a population of around one million and a population density of 110 people per km². The HIV prevalence among antenatal women in uThungulu is 39%, among the highest in South Africa.
3. **Free State Province, Thabo Mofutsanyana District** – Thabo Mofutsanyana is a rural district with an approximate population of 750,000 and a population density around 20 people per km². The HIV prevalence is 34% among antenatal women in this district.

Convenience sampling was used to select MomConnect training partners to be interviewed.

Sample Size

Costs largely determined the sample size of facilities for site visits and facility ANC staff interviews. Available resources allowed for interviews in 60 facility visits across 3 provinces and 3 districts. The limitation of 60 facilities also restricted the number of ANC staff interviews and supervisory staff interviews.

Seven organizations provided MomConnect training throughout the country. The organizations, or training partners, trained all facilities in the districts that were assigned to them. The three MomConnect training partners that were selected to participate in the study were those that provided training for the three selected districts.

Data Analysis

All of the quantitative data collected from the tools described above were related back to the actual performance of the associated clinic with respect to registrations against targets. The facilities were grouped into five categories, based on their performance: <50%, 50% - 99%, 100% - 149%, 150% - 199% and over 200%. Quantitative analysis was primarily univariate and bivariate because of the descriptive nature of the study. Correlation analysis in Stata identified characteristics that were influencing high or low performance and any additional patterns that emerged from the data. Qualitative data from the instruments was analyzed to identify common themes using *Atlas.ti*; a qualitative data analysis software.

Ethical Review

This study sought and obtained exemption/approval from the DDG Strategic Health Programs.

RESULTS

The research team completed ANC staff interviews at 54 of 60 facilities; 17 in Thabo Mofutsanyana district, 20 in Uthungulu district and 17 in Tshwane district. As previously mentioned, the sampling strategy required that five facilities be selected from the highest quartile, five from the lowest quartile and 10 from the middle two quartiles, based on performance in each district. For analyses, the facilities were stratified into five categories, based on performance: <50%, 50% - 99%, 100% - 149%, 150% - 199% and 200% or higher.

Supervisory/management staff surveys were completed at 42 facilities, two district and two provincial offices. Three training partners were also interviewed.

50 of 54 interview respondents were ANC nurses. Three respondents were community health workers (CHWs) and one was a data collector. See table 2 for a summary of the facilities and the types of respondents that were interviewed.

Table 2: Summary of facilities interviewed

| District Performance levels (% against target) | Number of facilities visited | Type of Respondent | | | Length of time Respondent has been in position (years) | | | | Mean registration performance % against targets (DHIS2 data) |
|--|---------------------------------------|--------------------|----------|-------------------|---|-----------|----------|-----------|---|
| | | Nurse | CHW | Data Collector | <1 | 1-3 | 4-5 | >5 | |
| Thabo Mofutsanyana | 17 | 16 | | 1 | 4 | 4 | 2 | 7 | 66.4 |
| Less than 50% | 8 | 7 | | 1 | 3 | 3 | | 2 | 18.9 |
| 50% to 99% | 4 | 4 | | | | | 1 | 3 | 72.7 |
| 100% to 149% | 3 | 3 | | | | 1 | 1 | 1 | 113.6 |
| 150% to 199% | 2 | 2 | | | 1 | | | 1 | 173.3 |
| 200% or higher | | | | | | | | | |
| Uthungulu | 20 | 20 | | | 9 | 6 | 3 | 2 | 104.9 |
| Less than 50% | 7 | 7 | | | 2 | 4 | 1 | | 28.8 |
| 50% to 99% | 4 | 4 | | | 1 | 1 | 1 | 1 | 76.5 |
| 100% to 149% | 4 | 4 | | | 1 | 1 | 1 | 1 | 109.2 |
| 150% to 199% | 2 | 2 | | | 2 | | | | 171.2 |
| 200% or higher | 3 | 3 | | | 3 | | | | 270.4 |
| Tshwane | 17 | 14 | 3 | | 3 | 6 | 1 | 7 | 96.3 |
| Less than 50% | 3 | 3 | | | | 1 | | 2 | 26.6 |
| 50% to 99% | 7 | 5 | 2 | | 1 | 2 | | 4 | 77.1 |
| 100% to 149% | 5 | 5 | | | 1 | 2 | 1 | 1 | 122.6 |
| 150% to 199% | 1 | 1 | | | | 1 | | | 162.3 |
| 200% or higher | 1 | | 1 | | 1 | | | | 242.2 |
| TOTAL | 54 | 50 | 3 | 1 | 16 | 16 | 6 | 16 | 90.1 |

There was a difference in performance between the provinces. Kwazulu-Natal was the higher performing province; on average, the facilities in Kwazulu-Natal achieved 105% of registrations against their targets. Gauteng achieved 96% of its target and Free State achieved 66% of its target. The overall average for the three districts was 90.1%.

Approximately 60% of the respondents had worked in their position at their facility for three years or less, and 30% for less than one year.

Simple regression analysis determined that a negative association existed between a facility's performance against its target and the length of time the respondent had been in his/her position at the facility ($p=0.06$). That is, the facilities where respondents had worked in their position at the facility for a shorter length of time generally had higher performance.

Implementation of MomConnect at the facility level

The study found that MomConnect registrations at facilities occurred in one of three ways:

1. Individual registration—Facility staff individually facilitated or performed the MomConnect registration for each mother during her private consultation session with the staff. While staff performed or facilitated each registration individually, most respondents said that they introduced information on the MomConnect program to mothers during group sessions.
2. Group registration—Facility staff introduced the MomConnect program to all mothers that were visiting the facility for her 1st ANC visit as a group. After the introduction and mothers' agreement to participate, the staff facilitated a group registration process. The staff gave verbal instructions for the registration and the mothers followed on their personal mobile phones. Staff provided additional support to individual mothers as needed.
3. Batched registration – Mothers' information is collected during first ANC visit to the facility in a log book. When a staff member had time, usually at a later time during the week, the staff member registered each mother onto MomConnect, using information from the logbook.

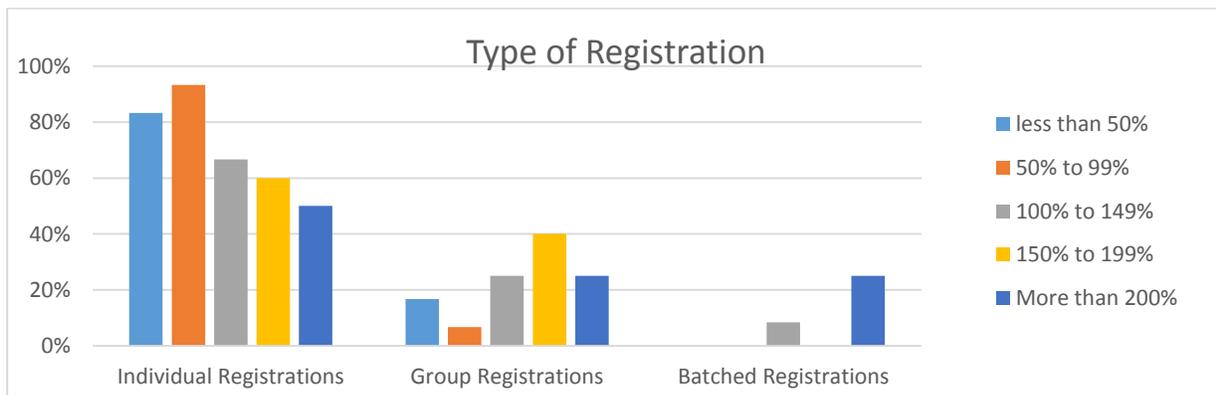


Figure 5: Type of Registration

Most facilities, 78%, reported doing individual registrations. Eighteen percent and 4% reported doing group registrations and delayed batched registrations, respectively. When the data was desegregated by performance groups, a higher percentage of the higher performing facilities did either group or delayed batched registrations (see figure 5). No facility that achieved lower than 100% of registrations against its target reported doing batched registrations. A comparison of means of facilities' performance percentage between individual, group and batched registration methods showed that those facilities that performed group registrations had a higher registrations than those facilities that performed individual registrations (see figure 6). The performance was even higher for facilities that registered mothers on MomConnect in batched registrations. The mean performance percentage for facilities that did individual, group and batched registrations are as follows, respectively: 81%, 110% and 179%.

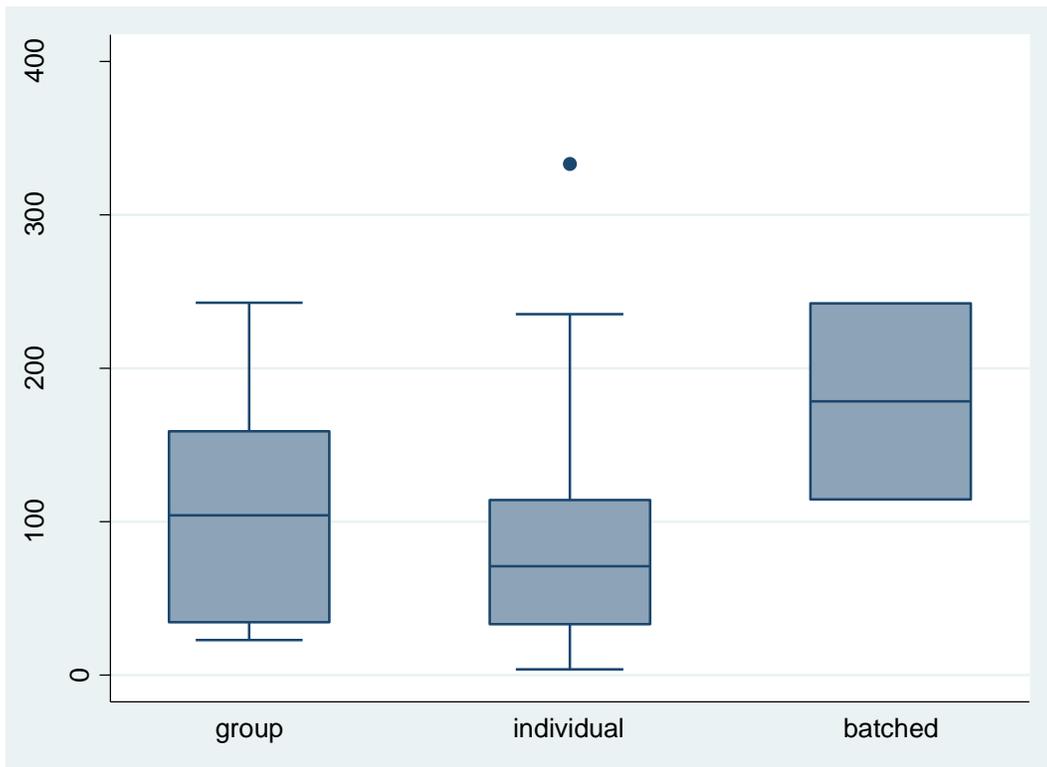


Figure 6: Boxplot of performance, by registration type

The most critical component of the MomConnect registration process was that registration must occur during a mother's first ANC visit. Ninety-one percent of facilities adhered to registering mothers during their first ANC visit. Five facilities reported registering mothers during their second ANC visit. Those facilities that adhered to registering mothers during the first ANC visit had a performance percentage average of 91.5%. Facilities that registered mothers during the second ANC visit had a performance percentage average of 75.7%.

The average time it took for ANC staff to facilitate a group registration was 21.4 minutes. For individual registrations, it took an average of 8.8 minutes. When asked how long a registration process should take, the staff reported a mean of 8.2 minutes as the preferred time—see figure 7. The lowest performing and the highest performing facilities took the shortest time for MomConnect registrations.

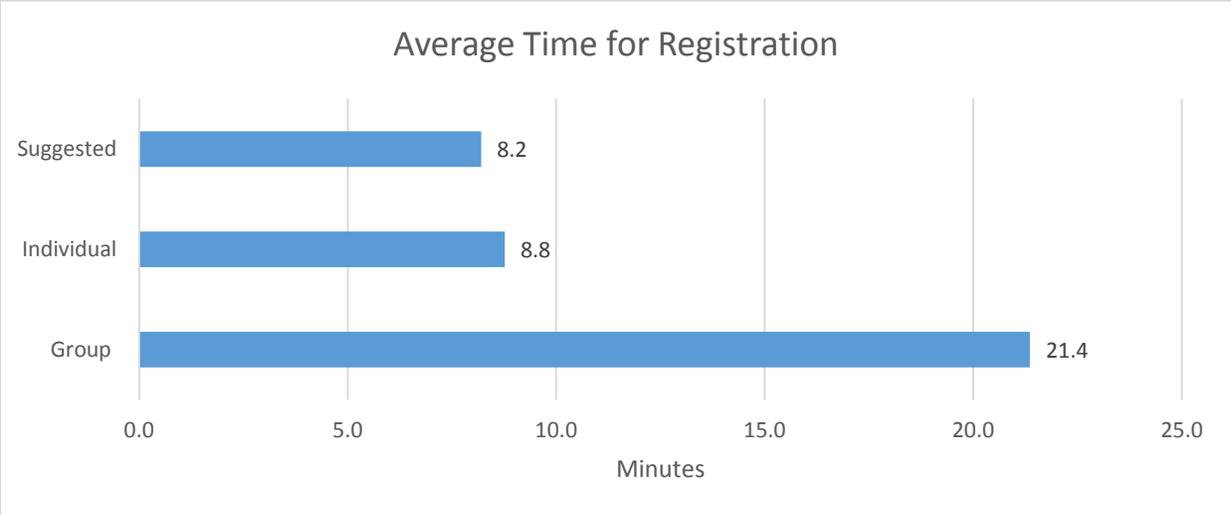


Figure 7: Average time for registration

The most common barrier to MomConnect registrations at facilities was network failure. Eighty-seven percent (87%) of respondents reported network failure as one of the main deterrents to registrations. Time-outs—which is when registrants are not able enter required information into the USSD system within a specified amount of time and the system reboots—was the second most common barrier to registration (43%). Phone issues and not having all the appropriate information during registrations were the next highest barriers, equally mentioned by 28% of facilities. The barriers to registration are summarized in figure 8.

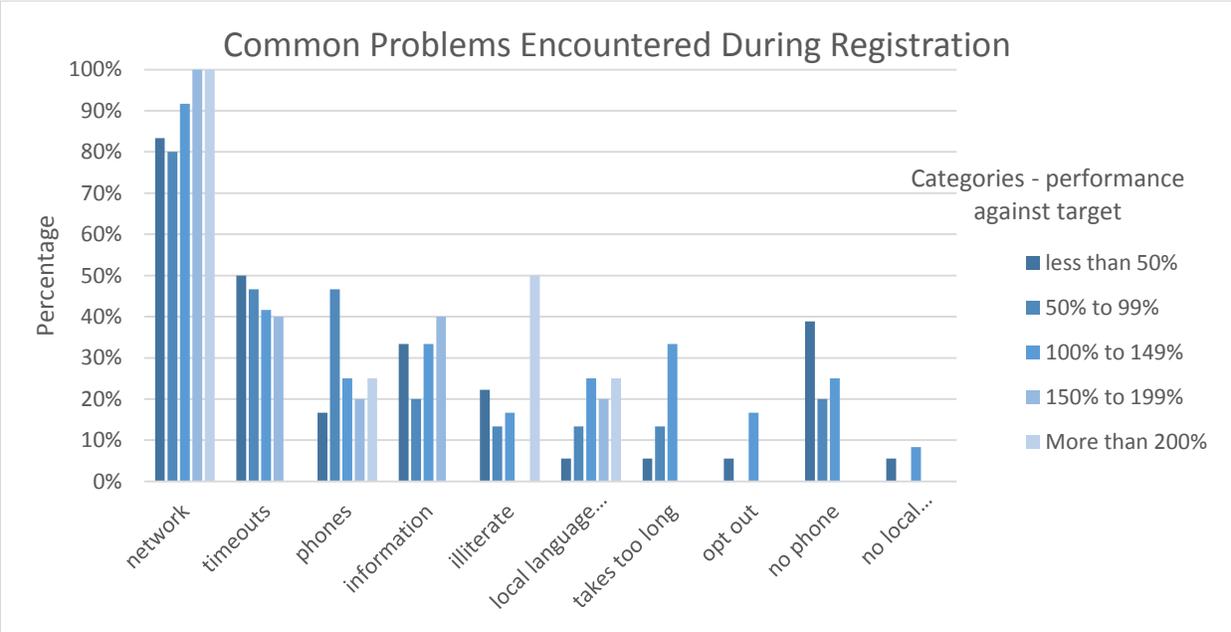


Figure 8. Common problems encountered during registration

Staff perception of MomConnect program

The data collection tool included Likert-scale data to assess the facility staff’s perception about MomConnect, represented in figure 9. The Likert data was relatively consistent across the five different performance groups, with a generally positive attitude towards MomConnect. The highest performing facilities had the most positive responses regarding MomConnect’s perceived usefulness to mothers. They also had the most positive response in regards to the amount of time they spend on MomConnect registrations and that they received feedback.

The questions that asked about registration time and whether staff received adequate training received the most negative responses.

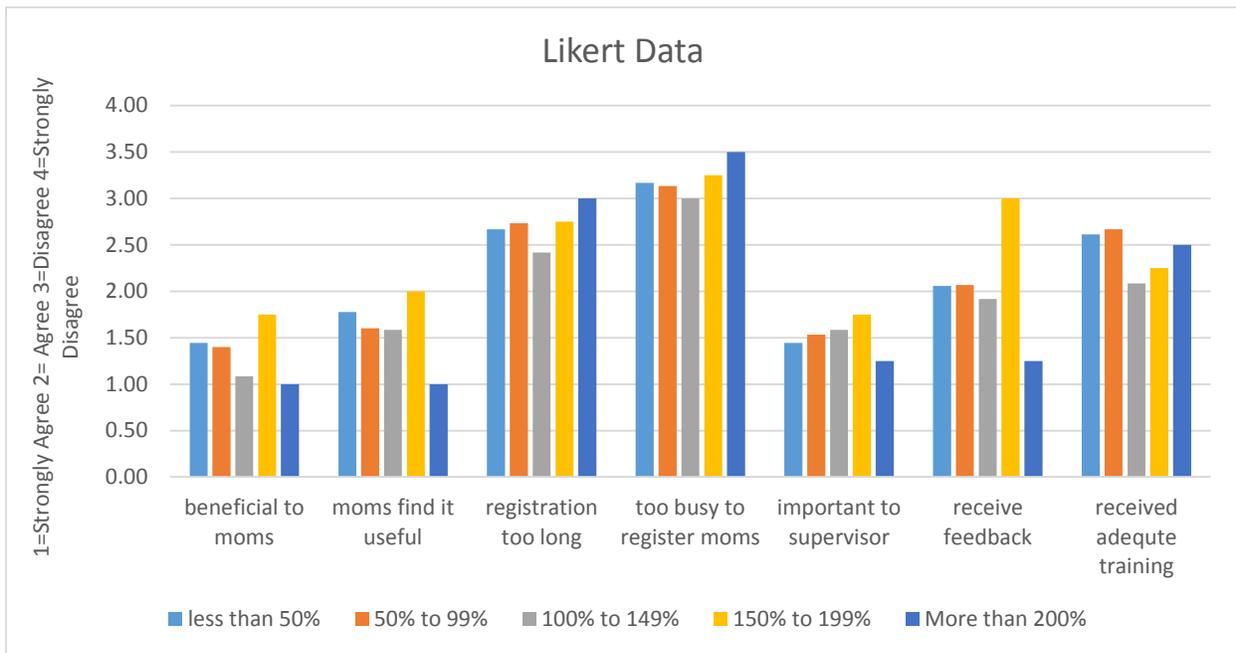


Figure 9: Likert Data Results

Training

As previously mentioned, the NDoH and Praekelt developed training materials and guidelines for partners to use during training for the facilities. The study team was interested in learning whether there was fidelity to using the training materials and guidelines. The Likert data on ANC staff perceptions of MomConnect indicated that there was ambivalence in regards to whether there was adequate training, with a slight lean towards inadequate training. Most of the training provided was for less than a day (61.1%) and only 14.8% received any follow-up or retraining after the initial training. The training material most mentioned by respondents was the staff manual (24.1%). Fifty percent of respondents said that their supervisor was also trained on how to register mothers onto MomConnect. New staff were primarily trained on MomConnect by previously trained employees (57.4%). Only 5.6% of respondents recalled the MomConnect poster during training, and 20.1% of facilities had a poster visible during the site visit. See table 3 for all results regarding MomConnect training.

Table 3. Training results

| Training Results | |
|---|---------|
| | Percent |
| Type of training received | |
| Training for more than 1 day | 2.8 |
| Training for less than a day | 61.1 |
| Provided training materials | 5.6 |
| Supervisor provided training | 22.2 |
| Another staff provided training | 8.3 |
| Training materials/methods recalled by respondents | |
| Staff manual | 24.1 |
| Cheat sheet | 1.9 |
| Flip book | 11.1 |
| Poster | 5.6 |
| Training on actual phones | 7.4 |
| Follow up or retraining | |
| Yes | 14.8 |
| No | 44.4 |
| Supervisor trained | |
| Yes | 50.0 |
| No | 14.8 |
| I don't Know | 35.2 |
| New staff trained | |
| By staff who have been trained | 57.4 |
| By outside partner who visits clinic | 5.6 |
| By facility manager | 9.3 |
| I don't know | 25.9 |

The training partners' survey indicated that training partners felt their organization was well prepared to train facilities, provided high quality training to facilities, left the facilities well equipped to register mothers on MomConnect, and followed up with the facilities after training. Supervisory staff (at the facilities and district offices) that were trained received the same training as the facility staff, with no additional guidance on how to provide support for the facility staff. While the training partners also felt that the facilities understood the benefits of MomConnect, they reported that facility staff were not excited to learn about MomConnect.

Supervisory/Management

A total of 46 supervisory/management staff surveys were completed, including 42 facilities, two district offices and two provincial offices. Of the 46 supervisory/management staff, only 67% were trained on MomConnect (see figure 10). Sixty-four percent (64%) of those that received training had onsite training for less than a day by an outside trainer. The remainder of the respondents either received training materials only or training from another staff. Seventy-three percent (63%) of the respondents felt that the training or training materials they received were sufficient.

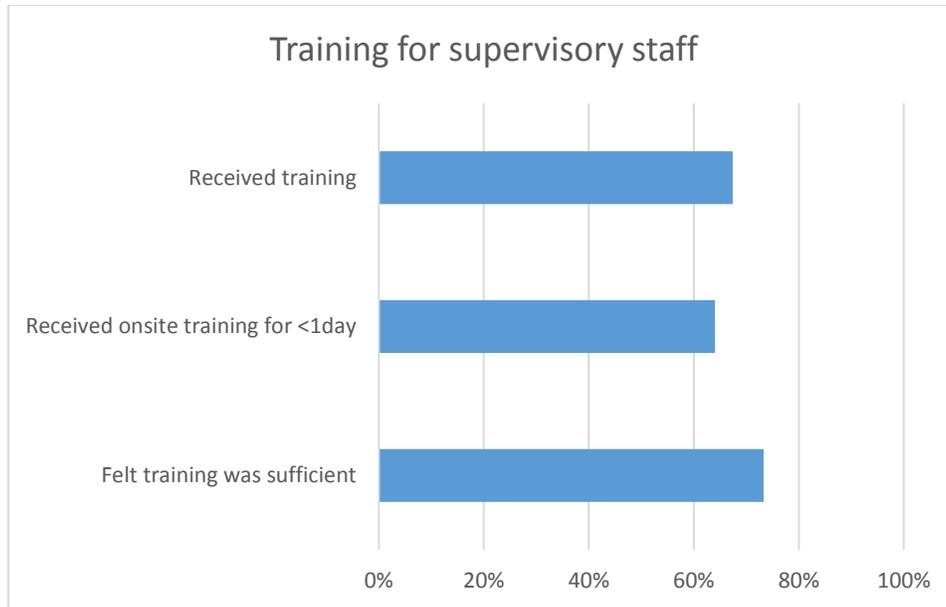


Figure 10: Summary of training received by supervisory staff

Fifty-four percent (54%) of the supervisory staff received reports on MomConnect registrations and 56% sent reports to their superior. The superiors that the supervisory staff sent reports to varied in their positions, including district managers, sub-district managers, district MomConnect champions, program managers, program directors, primary health care officers and maternal health coordinators. The reports were primarily in paper form.

DISCUSSION

It is not clear why there is a difference in performance between the three districts. Each district was purposively chosen to represent an urban, peri-urban and rural district. However, there were many more variables that were not accounted for in this study that could have attributed to the differences in performance between the districts beyond its urban/rural characteristics. In fact, it is important to note that due to the descriptive nature of this operational research, the emphasis on understanding the registration process on the ground and the small sample size, there were not a lot of statistically significant findings to show correlations between performance levels and other variables that were captured in this study. Nevertheless, frequencies and other descriptive statistics showed that there were some trends and characteristics of higher or lower performing facilities.

One statistically significant finding was that newer staff (or respondents who had worked for a lesser amount of time at their facility) was a predictor of higher performance. No additional information was collected about the respondents, other than their position and length of time in that position, so it was difficult to provide supplemental details to further explain this finding. However, it is possible that newer staff may have received training more recently, resulting in better performance.

The high percentage of new staff, both within the last three years and within the last one year, indicated that staff turnover is high at facilities. Therefore, it is important for MomConnect stakeholders to provide follow up and retraining opportunities to ensure that new staff are adequately trained to register mothers

to MomConnect. Follow-up and retraining is especially important to ensure quality, since the majority of respondents reported to having been trained by previously trained staff.

Higher performing facilities tended to do more group registrations, as opposed to individual registrations. Group registrations were more efficient, taking less overall time to register a larger number of mothers. Registering mothers as a group was not an option presented in the Praekelt-developed training materials. However, it is clear that facilities adapted the registration process to include group registrations to accommodate the high demands on staff time, as it was mentioned severally by the facility and supervisory staff that MomConnect infringed on their time. The batched registration process, where staff kept mothers' information in a logbook and registered the mothers on MomConnect at a later time, was also more common among the highest performing facilities. The facilities' mean performance percentage against their targets was almost 80% higher for those facilities that performed batched registrations than those that performed group registrations. It is 100% higher than the mean for facilities performing individual registrations. We cannot explain why some facilities that are doing group registrations still have low registrations, but still believe that the group and batched registration processes could be better developed and adopted into the formal processes of MomConnect registration as a way to improve overall registration performance.

Example of a Low-Performing Facility

- Facility had a mean registration performance of 29.9% against its target.
- The staff member interviewed was a “Professional Nurse” and had been working at the facility in that role for more than 5 years.
- The respondent reported that the facility had been implementing MomConnect since September 2014 and that either nursing or administrative staff performed registrations.
- MomConnect registrations were done individually, by actual staff members, during private consultations with the mothers.
- Registrations were completed during first ANC visits.
- It was estimated that the average registration process took 15 minutes.
- During observation, network complications were observed, though there seemed to be strong network coverage in the area. The phone was restarted. The staff member also experienced a timeout.
- No MomConnect poster or materials were visible at the facility.
- The respondent had a positive perception of MomConnect but did not feel the training was adequate, recalling that training was provided approximately 10-12 months prior but that he/she did not participate in that training session.
- New staff were trained to use MomConnect by other staff that had been previously trained.
- MomConnect registration data were verbally reported weekly to the district supervisor.

While the registration process was adapted, it was important that registration occur during the first ANC visit. This was the most critical component of the registration process that was measured under the process evaluation's fidelity element. Only a few facilities were not adhering to first ANC visit registrations, and those facilities tended to be the lower performing facilities. This requirement will need to be reemphasized during follow up or retraining in the future.

The Likert results showed that there was an overall positive outlook of the MomConnect program. There was general agreement that MomConnect is a beneficial program to pregnant women and that they find it useful. The highest performing facilities, with a performance percentage against its target of more than 200%, had the best perception of MomConnect and indicated that they received feedback from supervisors, suggesting that both can influence performance. While there was not a strong correlation, (since low performing facilities also had a generally positive perception of MomConnect), it is likely that further improving staff perception of MomConnect can also further improve registrations.

The Likert-scale question about whether staff received adequate training was the one that received the lowest ratings from both high and low performing facilities. This is contrary to training partners' perception that they provided high quality training and that facility ANC staff were well equipped for MomConnect registrations after the training. This discrepancy further supports the fact that retraining is needed. Supervisory staff had higher satisfaction with the training on the registration process, but many still requested additional training specifically around reporting and providing support to their staff. Training partners acknowledged that no additional training was provided to supervisory staff on reporting procedures and how to support their staff with MomConnect. This could be due to the fact that training partners largely considered their role as "orienting" facilities to the MomConnect program; the word "orientation" was more often used than "training" to describe the training sessions. It could also be due to the fact that there were no clear supervision processes in place for MomConnect when the initiative was originally launched. Therefore, there would have been no additional expectations of facility, sub-district and district supervisors to monitor or support MomConnect performance.

Example of a High-Performing Facility (Batched Registration)

- Facility achieved 242.2% of registrations against its target.
- The person interviewed for the survey was a data collector that had been working at the facility for less than a year.
- The facility started enrolling mothers in MomConnect in September 2014; nurses, community health workers and administrative staff could register mothers on MomConnect.
- Information was collected (from mothers during her first ANC visit) into a logbook and staff performed batched registrations at a later time, when there was sufficient time and available network.
- The average time it took to complete one registration was seven minutes (network complications slowed down the registration process); staff preferred that the registration time take less than a minute.
- Network was listed as a common problem, though network was available during the interview.
- A MomConnect poster was visible during the interview.
- Training was provided to the facility more than one year prior to the study. The respondent received training from a supervisor, without any training materials other than the use of an actual phone.
- MomConnect registration data were verbally reported to the Head Nurse each day that registrations were completed (facility did not perform registration every day).

Example of a High-Performing Facility (Grouped Registration)

- Facility achieved 242.6% of registrations against its target.
- The person interviewed for the survey was an ANC nurse that had been working at the facility for less than a year.
- The facility started enrolling mothers in MomConnect in August 2014; ANC nurses and peer educators were responsible for MomConnect registrations.
- Registrations occurred during group sessions. Peer educators incorporated an introduction of MomConnect into regular health talks that are usually part of all first ANC visits. A peer educator or nurse then facilitated the registration process. Mothers used their own phones for registration.
- The average time it took to complete a registration session was fifteen minutes; staff preferred that it only take 5 minutes.
- Network was listed as a common problem, though network was available during the interview. Respondent also listed illiteracy and language barrier as additional barriers to registration.
- A MomConnect poster was not visible during the interview.
- Training was provided to the facility more than one year prior to the study.
- The respondent received training from a previously trained staff. A MomConnect flipbook was used during training and no retraining has been provided.
- Staff reported MomConnect registration numbers to the district supervisor every day that registrations were completed, via paper reports.

Results from the supervisory staff survey further supports the finding that there is not a clear management structure or reporting protocol, and the need for a more formalized management structure to support the system. Reports were sent to personnel in a variety of positions, and there were no obvious plans to support or troubleshoot problems with MomConnect registrations. This, coupled with the requests from supervisors for more clarity on reporting structures, calls for the development of a management, supervision and reporting strategy.

Another point of agreement among all facilities was that network issues are a strong barrier against MomConnect registrations. Timeouts were the second most mentioned barrier. It is possible that timeouts were misunderstood to be “network” problems by the respondents. For example, when asked to describe an encounter with network issues, some respondents said that they were “kicked out” of the system before they were finished entering all the information. While this could have been related to failed network, it is also possible that the respondent took longer than the allotted time to enter information before the USSD system timed out, which on average is 180 seconds or 20 seconds of inactivity. Network issues and timeouts were also mentioned by training staff and the data collection team. They existed even among high performing facilities. This study did not explore the steps that were taken by high performing facilities to overcome the barriers. If they had developed a strategy to overcome the persistent network and timeout issues, it would be valuable to share it with the NDoH and other facilities.

RECOMMENDATIONS

Based on the results and discussion above, the following is recommended:

- 1) **NDoH should consider “batched” and “group” MomConnect registrations methods, instead of individual registrations, as the standard process.** Batched registrations might require a different technology platform. For example, it might be easier for staff to enter facility and patient data onto an online database for uploading, or directly into the national DHIS database, instead of manually entering isolated pieces of information for each patient in the current USSD platform. Shifting from individual registrations to group registrations will require MomConnect partners to develop new registration platforms/infrastructure, training materials and protocols to appropriately train facility staff on the new registration approach.
- 2) **Re-emphasize that MomConnect registrations must occur during a mother’s first ANC visit.** This can be done during retraining or follow up processes.
- 3) **Develop a management structure for MomConnect, from the national to the facility level.** This must include reporting guidelines and proactive support functions that include feedback and mechanisms for troubleshooting issues that are encountered at the facility.
- 4) **Provide feedback, whether positive or constructive, back to the district, sub-district and facility levels.** Proper feedback on registration performance can help build rapport, improve attitudes and improve registrations.
- 5) **Explore solutions to overcome network and timeout issues.** One of the other problems commonly encountered was that mothers and staff did not have the necessary information readily available during registration. This likely contributes to the timeouts as the time spent searching for the information mid-registration process takes longer than the system allows. Facility ANC staff should be advised to ensure that all information is available before registrations starts, to limit issues with timeouts. The batched registration method of recording details on a form or logbook and entering later in an area with network may be a suitable solution in some cases. This is an area which will warrant further study.

Lastly, and most importantly, the findings from this study suggest that there is a strong need to

- 6) **Develop a new training protocol, one which incorporates the above recommendations, and retrain all facilities on the appropriate MomConnect registration procedures.** The new training protocol will also introduce management structures so all staff will know the appropriate lines of support, and when and how to expect feedback on the facility’s registration performance.

CONCLUSION

NDoH's database indicated that most facilities successfully registered mothers onto MomConnect. However, registration targets were not achieved, indicating that there were challenges that needed to be addressed for all facilities to achieve the goal of registering all pregnant mothers. Respondents listed network issues and timeouts as primary barriers to registrations at facilities. Adequate training for staff (with follow up) and effective management and feedback were additional areas of concern. The use of logbooks followed by batched registration proved to be an effective registration method and was associated with higher performing facilities. Batched registrations may be a promising practice in some cases to overcome the network issues and improve registration rates. The challenges identified in this study may further be effectively addressed by implementing a new training protocol that includes clear supervision structures and continual improvement planning using performance feedback received from the MomConnect database.



Facility ANC Staff Survey

| No. | Question | Coding categories |
|--|---|--|
| SECTION 1. FACILITY AND FACILITY STAFF INFORMATION | | |
| To be filled out before the interview by interviewer | | |
| Q102 | Province | Free State 1 Kwazulu Natal 2 Gauteng 3 |
| Q103 | District | Thabo Mofutsanyana 1 Uthungulu 2 Tshwane 3 |
| Q104 | Facility Name: | |
| Q105 | Facility Code: | |
| READ: Hello, my name is <your name>, and I am working with the National Department of health to complete a survey about the MomConnect. | | |
| IF RESPONDENT AGREES, CONTINUE. | | |
| READ CONSENT FORM, HAVE RESPONDENT INITIAL IT, AND HAND FACT SHEET TO RESPONDENT. | | |
| Q106 | What is your current job role at this facility? | Facility Manager 1 Medical Doctor 2 Antenatal Care Nurse 3 Administration 4 Community Health Worker 5 Data Collector 6 Other, Specify: _____ 7 |

| No. | Question | Coding categories |
|---|---|---|
| Q107 | How long have you worked in this position at this facility? | Less than one year 1 1-3 years 2 4-5 years 3 More than 5 years 4 |
| SECTION 2. MOMCONNECT QUESTIONS | | |
| READ: Now I'm going to ask more specific questions about the training that this facility received on MomConnect. | | |
| Q201 | Does this facility register mothers on MomConnect? If "No" then skip to question Q203 | Yes 1 No 2 I don't know 3 |
| Q202 | When did the facility start registering moms on MomConnect? | DATE: ____/____/____ DD MM YY |
| Q203 | Do you know how to register moms on MomConnect? | Yes 1 No 2 |
| Q204 | Who at this facility registers mothers on MomConnect? Select all that apply. | ANC nurses 1 Medical doctors 2 Community Health Workers 3 Data Collectors 4 Administrative staff 5 Anyone who is available 6 |
| Q205 | At this facility, are mothers registered as a group or individually? If not "3" then skip to Q207 | Group 1 Individually 2 Both 3 I don't know 4 |

| No. | Question | Coding categories |
|------|--|--|
| Q206 | If both, describe when a group registration would occur and when an individual registration would occur. | |
| Q207 | <p>At this facility, do staff register the mothers on MomConnect or do the staff facilitate the registration and the mothers register themselves?</p> <p>If not "3" then skip to Q209</p> | <p>Staff perform registrations 1</p> <p>Staff facilitate registrations 2</p> <p>Both 3</p> <p>I don't know 4</p> |
| Q208 | If both, describe when a staff would perform the registration and when a staff would facilitate the registration | |
| Q209 | <p>At this facility, during which ANC visit are most mothers registered on MomConnect?</p> <p>If "I don't know" then skip to Q211</p> | <p>The mother's first ANC visit 1</p> <p>The mother's second ANC visit 2</p> <p>I don't know 3</p> |
| Q210 | Why do you think most mothers are registered during (answer from Q209)? | |

Q211

**Can you talk me through an entire MomConnect registration process,
from beginning to end?**

Please use this space to take detailed notes of the registration process, as describe by interviewee.

| No. | Question | Coding categories |
|------|--|--|
| Q212 | Approximately how much time does the registration process take? | Minutes _____ |
| Q213 | How much time do you think should be spent on registering mothers onto MomConnect? | Minutes _____ |
| Q214 | What common problems are encountered during the registration process? (Select all that apply) | Network Issues 1 Time outs 2 Phones do not work 3 Do not have required information available 4 Illiterate 5 Moms cannot read in available languages 6 Take too much time 7 Mothers do not want to register 8 Other, Specify: _____ 9 |
| Q215 | What are common reasons for mothers who opt out of MomConnect? | List all that apply: _____ _____ _____ _____ |
| Q216 | Please select Strongly Agree, Agree, Disagree or Strongly Disagree. | |
| | A. MomConnect is beneficial to pregnant women. | 1 Strong Agree 2 Agree 3 Disagree 4 Strongly Disagree |
| | B. Expectant mothers find MomConnect useful. | 1 Strong Agree 2 Agree 3 Disagree 4 Strongly Disagree |
| | C. MomConnect registration takes too long. | 1 Strong Agree 2 Agree 3 Disagree 4 Strongly Disagree |
| | D. I am too busy to register moms on MomConnect. | 1 Strong Agree 2 Agree 3 Disagree 4 Strongly Disagree |
| | E. My supervisor treats MomConnect as an important part of my job | 1 Strong Agree 2 Agree 3 Disagree 4 Strongly Disagree |

| No. | Question | Coding categories |
|---|---|--|
| | F. I receive feedback from my supervisors about MomConnect. | 1 Strong Agree 2 Agree 3 Disagree 4 Strongly Disagree |
| | G. I received adequate training for MomConnect. | 1 Strong Agree 2 Agree 3 Disagree 4 Strongly Disagree |
| SECTION 3. MOMCONNECT TRAINING/SUPERVISORY QUESTIONS | | |
| READ: Now I'm going to ask more specific questions about the training that this facility received on MomConnect. | | |
| Q301 | <p>How many staff members are trained at this facility to use MomConnect?</p> <p>If "None" then skip to Q307</p> | <p style="text-align: right;">None 1</p> <p style="text-align: right;">1-5 2</p> <p style="text-align: right;">6-10 3</p> <p style="text-align: right;">More than 10 4</p> <p style="text-align: right;">I don't know 5</p> |
| Q302 | When was this facility trained to use MomConnect? | <p style="text-align: right;">1-3 Months ago 1</p> <p style="text-align: right;">4-6 months ago 2</p> <p style="text-align: right;">7-9 months ago 3</p> <p style="text-align: right;">10-12 months ago 4</p> <p style="text-align: right;">Over a year ago 5</p> |
| Q303 | <p>Were you trained to use MomConnect?</p> <p>If "no" or "I don't know" skip to Q307</p> | <p style="text-align: right;">Yes 1</p> <p style="text-align: right;">No 2</p> <p style="text-align: right;">I don't know 3</p> |
| Q304 | Which of the following best describes the training you were provided? | <p style="text-align: right;">Trainer provided onsite training for 1 more than 1 day</p> <p style="text-align: right;">Trainer provided onsite training for 2 less than 1 day</p> <p style="text-align: right;">Was provided training materials 3</p> <p style="text-align: right;">Supervisor provided training 4</p> <p style="text-align: right;">Another staff provided training 5</p> |

| No. | Question | Coding categories |
|------|--|--|
| Q305 | Can you recall any of the training materials that were used during the training that you received? Select all that apply | Staff manual 1 Cheat Sheet 2 Flipbook 3 Poster 4 Training was only done on the actual phone 5 |
| Q306 | Has there been any follow up or retraining after the original training? | Yes 1 No 2 I don't know 3 |
| Q307 | Has your supervisor been trained on MomConnect? | Yes 1 No 2 I don't know 3 |
| Q308 | How are new ANC staff trained on MomConnect? | By staff who have been trained 1 By an outside partner who visits the clinic 2 By the Facility Manager 3 I don't know 4 |
| Q309 | Are the number of MomConnect registrations at this facility reported separately? If "No" or "I don't know," skip to Section 4. | Yes 1 No 2 I don't know 3 |
| Q310 | If yes, how often are the MomConnect registrations reported? | Daily 1 Weekly 2 Every 2 weeks 3 Monthly 4 |
| Q311 | To whom are the MomConnect registrations reported? | Facility Manager 1 Clinic Supervisor 2 District Supervisor 3 Provincial Supervisor 4 Other, Specify: _____ 5 |
| Q312 | How are MomConnect registrations reported? | Paper report 1 Verbal report 2 Other 3 |

SECTION 4. OBSERVATION OF MOMCONNECT REGISTRATION

If you are able to observe a MomConnect Registration process, then take detailed notes and proceed to Q401.

Take detailed notes of the observation of the MomConnect Registration process on the paper provided to you, labeled

"Section 4. OBSERVATION OF MOMCONNECT REGISTRATION".

If you are unable to observe a MomConnect Registration, please proceed to Q408

Please use this space to take detailed notes of the registration process.

| No. | Question | Coding categories |
|------|--|---|
| Q401 | Who facilitated/performed the registration? | ANC Nurse 1 Medical Doctor 2 Community Health Worker 3 Volunteer Health Worker 4 Administrative staff 5 |
| Q402 | Was it a group or individual registration? If "Individual" then skip to Q404 | Individual 1 Group 2 |
| Q403 | If group, how many mothers were in the group? | Number _____ |
| Q404 | Did the staff provide the correct USSD registration number? | Yes 1 No 2 |
| Q405 | Did the staff provide the correct facility code? | Yes 1 No 2 |
| Q406 | Did the mother(s) seem receptive to MomConnect? | Yes 1 No 2 Could not tell 3 |
| Q407 | List any challenges you observed during the registration (e.g. no network, moms did not understand, time outs) | 1. _____ 2. _____ 3. _____ |
| Q408 | Was there a MomConnect poster visible at the facility? | Yes 1 No 2 |
| Q409 | Were there other printed MomConnect materials available during the interview? | Trifolds 1 Registration Cheat Sheets 2 Registration Manual 3 Other, Specify: _____ 4 |
| Q410 | As far as you can tell, was cellular or wireless networks available in the facility? | Cellular network only 1 Wireless only 2 Cellular and wireless 3 No available network 4 I don't know 5 |

END OF SURVEY



Supervisory/Management Staff Survey

| No. | Question | Coding categories |
|---|--|--|
| SECTION 1. GENERAL INFORMATION | | |
| To be filled out before the interview by interviewer | | |
| Q102 | Province | Free State 1 Kwazulu Natal 2 Gauteng 3 |
| Q103 | District | Thabo Mofutsanyana 1 Uthungulu 2 Tshwane 3 |
| Q104 | If facility supervisor, Name of Facility | Facility Name _____ |
| Q105 | If facility supervisor, Facility Code | Facility code _____ |

| No. | Question | Coding categories |
|--|--|--|
| <p>READ: Hello, my name is <your name>, and I am working with the National Department of health to complete a survey about the MomConnect.</p> <p style="text-align: center;">IF RESPONDENT AGREES, CONTINUE.</p> | | |
| <p>READ CONSENT FORM, HAVE RESPONDENT INITIAL IT, AND HAND FACT SHEET TO RESPONDENT.</p> | | |
| Q106 | What is your current job role in this district/province? | Sub District Officer/Manager 1 District Officer/Manager 2 Facility Manager 3 Head Nurse 4 Other, Specify _____ 5 |
| Q107 | How long have you worked in this position? | Less than one year 1 1-3 years 2 4-5 years 3 More than 5 years 4 |
| <p>SECTION 2. MOMCONNECT QUESTIONS</p> | | |
| <p>READ: As I mentioned, this survey is intended to help the National Department of Health improve the MomConnect program. Therefore, the remainder of this survey will ask questions specific to your role, as it relates to MomConnect.</p> | | |
| Q201 | Can you describe your role in MomConnect? | _____ _____ _____ _____ _____ _____ _____ |
| Q202 | Did you receive any kind of training to fulfil this role? If “No” or “I don’t know” then skip to Q204. | Yes 1 No 2 I don’t know 3 |

| No. | Question | Coding categories |
|------|---|--|
| Q203 | If yes, how would you describe the training that you received? | Trainer provided onsite training for more than 1 day 1 Trainer provided onsite training for less than 1 day 2 Was provided training materials 3 Supervisor provided training 4 Another staff provided training 5 |
| Q204 | Do you feel that this training was sufficient? | Yes 1 No 2 I don't know 3 |
| Q205 | Do district/facility staff report MomConnect registration numbers to you? If "No" or "I don't know" then skip to Q208. | Yes, facility staff 1 Yes, sub-district staff 2 Yes, district staff 3 No 4 I don't know 5 |
| Q206 | If yes, how are the registration numbers reported to you? | Via telephone 1 Via email 2 Via paper 3 Verbally 4 |
| Q207 | In what ways do you provide support for staff that report to you, related to MomConnect? | Accessing their training needs 1 Logging Problems/Issues and escalating them 2 Giving a standard process for registering women on MomConnect 3 Giving feedback on compliments and complaints received 4 Other, specify _____ 5 |
| Q208 | Do you report MomConnect registration numbers to the district/provincial office? If "No" or "I don't know" then skip to Q211. | Yes 1 No 2 I don't know 3 |

| No. | Question | Coding categories |
|------|--|--|
| Q209 | If yes, how do you report the registration numbers to district/provincial personnel? | Email 1 With other paper based data reports 2 Telephone conversation 3 |
| Q210 | If yes, to whom at the district/provincial office do you report the registration numbers to? | District Manager 1 Sub District Manager 2 District MomConnect Champion 3 Health Information Officer 4 |
| Q211 | Please select Strongly Agree, Agree, Disagree or Strongly Disagree. | |
| | A. MomConnect is beneficial to pregnant women. | 1 Strong Agree 2 Agree 3 Disagree 4 Strongly Disagree |
| | B. Expectant mothers find MomConnect useful. | 1 Strong Agree 2 Agree 3 Disagree 4 Strongly Disagree |
| | C. Facility staff should treat MomConnect as an important part of their job. | 1 Strong Agree 2 Agree 3 Disagree 4 Strongly Disagree |
| | D. I treat my duties related to MomConnect as an important part of my job. | 1 Strong Agree 2 Agree 3 Disagree 4 Strongly Disagree |



Training Partners Survey

| No. | Question | Coding categories | | | | | | | | | | | | |
|---|---|--|------------------------|---|------------------------------|---|------------------------------------|---|---|---|---|---|-----------------------|---|
| SECTION 1. GENERAL INFORMATION | | | | | | | | | | | | | | |
| To be filled out before the interview by interviewer | | | | | | | | | | | | | | |
| Q102 | Name of Training Partner Organization | _____ | | | | | | | | | | | | |
| <p>READ: Hello, my name is <your name>, and I am working with the National Department of health to complete a survey about the MomConnect.</p> <p style="text-align: center;">IF RESPONDENT AGREES, CONTINUE.</p> | | | | | | | | | | | | | | |
| READ CONSENT FORM, HAVE RESPONDENT INITIAL IT, AND HAND FACT SHEET TO RESPONDENT. | | | | | | | | | | | | | | |
| Q103 | Which of the following best describes your current role in this organization? | <table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">High level, Management</td> <td style="text-align: right;">1</td> </tr> <tr> <td style="text-align: right;">Technical Consultant/Advisor</td> <td style="text-align: right;">2</td> </tr> <tr> <td style="text-align: right;">Program Manager (oversee projects)</td> <td style="text-align: right;">3</td> </tr> <tr> <td style="text-align: right;">Program Coordinator (oversee field teams)</td> <td style="text-align: right;">4</td> </tr> <tr> <td style="text-align: right;">Field Staff (provide training or data collection)</td> <td style="text-align: right;">5</td> </tr> <tr> <td style="text-align: right;">Other, Specify: _____</td> <td style="text-align: right;">6</td> </tr> </table> | High level, Management | 1 | Technical Consultant/Advisor | 2 | Program Manager (oversee projects) | 3 | Program Coordinator (oversee field teams) | 4 | Field Staff (provide training or data collection) | 5 | Other, Specify: _____ | 6 |
| High level, Management | 1 | | | | | | | | | | | | | |
| Technical Consultant/Advisor | 2 | | | | | | | | | | | | | |
| Program Manager (oversee projects) | 3 | | | | | | | | | | | | | |
| Program Coordinator (oversee field teams) | 4 | | | | | | | | | | | | | |
| Field Staff (provide training or data collection) | 5 | | | | | | | | | | | | | |
| Other, Specify: _____ | 6 | | | | | | | | | | | | | |
| Q104 | How long have you worked in this position? | <table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">Less than one year</td> <td style="text-align: right;">1</td> </tr> <tr> <td style="text-align: right;">1-3 years</td> <td style="text-align: right;">2</td> </tr> <tr> <td style="text-align: right;">4-5 years</td> <td style="text-align: right;">3</td> </tr> <tr> <td style="text-align: right;">More than 5 years</td> <td style="text-align: right;">4</td> </tr> </table> | Less than one year | 1 | 1-3 years | 2 | 4-5 years | 3 | More than 5 years | 4 | | | | |
| Less than one year | 1 | | | | | | | | | | | | | |
| 1-3 years | 2 | | | | | | | | | | | | | |
| 4-5 years | 3 | | | | | | | | | | | | | |
| More than 5 years | 4 | | | | | | | | | | | | | |

| No. | Question | Coding categories |
|---|---|---|
| SECTION 2. MOMCONNECT QUESTIONS | | |
| READ: As I mentioned, this survey is intended to help the National Department of Health improve the MomConnect program. Therefore, the remainder of this survey will ask questions specific to your role, as it relates to MomConnect. | | |
| Q201 | Can you describe your organization’s role in the MomConnect program? | <hr/> <hr/> <hr/> <hr/> <hr/> |
| Q202 | How was your organization prepared to provide training for the MomConnect program? | <p style="text-align: right;">Training received from Praekelt 1</p> <p style="text-align: right;">Training materials provided by Praekelt 2</p> <p style="text-align: right;">Training received from NDOH 3</p> <p style="text-align: right;">Training materials received from NDOH 4</p> <p style="text-align: right;">Other, Specify: _____ 5</p> |
| Q203 | If you received training from Praekelt or NDOH, who in your organization was trained? | <p style="text-align: right;">Organization managers 1</p> <p style="text-align: right;">Training staff 2</p> <p style="text-align: right;">Both managers and training staff 3</p> <p style="text-align: right;">Other, Specify _____ 4</p> <p style="text-align: right;">Did not receive training from Praekelt or NDOH 5</p> |
| Q204 | Approximately how many facilities did your organization train? | Number _____ |

| | | |
|------|---|--|
| Q205 | How did your organization provide training to facilities on MomConnect? | An offsite 1-2 day workshop for facility staff 1 Onsite 1-2 day workshop for facility staff 2 Onsite training for less than 1 day 3 Provided the facility with training materials 4 |
| Q206 | Who did your organization train at each facility? Select all that apply. | ANC nurses 1 Facility in charge/director 2 Administrative staff 3 Community Health Worker 4 Volunteer Health Worker 5 |
| Q207 | What materials and/or methods did your organization use to train facility staff? Select all that apply. | Powerpoint presentation 1 Demonstrations 2 Promotional booklets 3 Hands on interactive sessions 4 |
| Q208 | Please select Strongly Agree, Agree, Disagree or Strongly Disagree below | |
| | A. My organization was well prepared to provide MomConnect training to facilities | 1 Strongly Agree 2 Agree 3 Disagree 4 Strongly Disagree |
| | B. My organization provided high quality training to facilities | 1 Strongly Agree 2 Agree 3 Disagree 4 Strongly Disagree |
| | C. Facility staff easily understood the benefits of MomConnect | 1 Strongly Agree 2 Agree 3 Disagree 4 Strongly Disagree |
| | D. Facility staff were excited to learn about MomConnect | 1 Strongly Agree 2 Agree 3 Disagree 4 Strongly Disagree |
| | E. It was easy to teach facility staff how to register new mothers on Mom Connect | 1 Strongly Agree 2 Agree 3 Disagree 4 Strongly Disagree |
| | F. Facility staff were well-equipped to register mothers on MomConnect after the training | 1 Strongly Agree 2 Agree 3 Disagree 4 Strongly Disagree |
| | G. My organization followed up with facilities after the training | 1 Strongly Agree 2 Agree 3 Disagree 4 Strongly Disagree |

| | | |
|------|---|--|
| Q209 | <p>Did your organization provide any training at the provincial, district and/or sub-district level?</p> <p>If “No” then this is the end of the survey.</p> | <p>Yes, at the Provincial 1</p> <p>Yes, at the District 2</p> <p>Yes, at the Sub-District 3</p> <p>Yes, at both 4</p> <p>No 5</p> |
| Q210 | <p>Who was trained at the province, district and/or sub-district level?</p> <p>Select all that apply.</p> | <p>Provincial Supervisor 1</p> <p>District Supervisor 2</p> <p>PHC Director 3</p> <p>Information Officer 4</p> <p>Clinic Supervisor 5</p> <p>Other 6</p> |
| Q211 | <p>Was the training provided to provincial, district and sub-district personnel the same training that was provided to facility staff?</p> <p>If “Yes” then this is the end of the survey.</p> | <p>Yes 1</p> <p>No 2</p> |
| Q212 | <p>How was this training different than the training for facility staff?</p> <p>Select all that apply.</p> | <p>Additional training on how to receive and report data 1</p> <p>Additional training on how to provide support for MomConnect 2</p> <p>Additional training on how to troubleshoot MomConnect issues 3</p> <p>Also trained to monitor progress of MomConnect in the province/district 4</p> <p>Other, Specify: _____ 5</p> |

Appendix 4: List of selected facilities

Thabo Mofutsanyana District : Free State

| Sub-District | Facility | MConnect Registrations for month Jun-15 | Antenatal 1st Visits for month Jun-14 | Target for for month Jun-15 | Achievement against target % |
|------------------|------------------------------|---|---------------------------------------|-----------------------------|------------------------------|
| Maluti a Phofung | Boiketlo Clinic | 1 | 42 | 25.2 | 4 |
| Setsoto | Senekal Clinic | 1 | 25 | 15 | 6.7 |
| Nketoana | Petsana Clinic | 1 | 21 | 12.6 | 7.9 |
| Maluti a Phofung | Kopanong Clinic | 1 | 16 | 9.6 | 10.4 |
| Phumelela | Memel Clinic | 1 | 9 | 5.4 | 18.5 |
| Dihlabeng | Paul Roux Clinic | 1 | 7 | 4.2 | 23.8 |
| Dihlabeng | Bohlokong Clinic | 5 | 27 | 16.2 | 30.9 |
| Setsoto | Soetwater Clinic | 5 | 25 | 15 | 33.3 |
| Maluti a Phofung | Tebang Clinic | 6 | 29 | 17.4 | 34.5 |
| Setsoto | Phomolong (Ficksburg) Clinic | 6 | 16 | 9.6 | 62.5 |
| Maluti a Phofung | Harrismith Clinic | 7 | 18 | 10.8 | 64.8 |
| Phumelela | Bophelong (Vrede) Clinic | 7 | 17 | 10.2 | 68.6 |
| Setsoto | Clocolan Clinic | 11 | 24 | 14.4 | 76.4 |
| Maluti a Phofung | Qholaqhwe Clinic | 12 | 23 | 13.8 | 87 |
| Maluti a Phofung | Namahali Clinic | 13 | 20 | 12 | 108.3 |
| Maluti a Phofung | Blue Gum Bush Clinic | 25 | 36 | 21.6 | 115.7 |
| Maluti a Phofung | Riverside Clinic | 14 | 20 | 12 | 116.7 |
| Setsoto | Mamello CHC | 24 | 26 | 15.6 | 153.8 |
| Maluti a Phofung | Monontsha Clinic | 21 | 22 | 13.2 | 159.1 |
| Setsoto | Boitumelo (Senekal) Clinic | 9 | 8 | 4.8 | 187.5 |

Uthungulu District : KZN

| Sub-District | Facility | MConnect Registrations for month Jun-15 | Antenatal 1st Visits for month Jun-14 | Target for for month Jun-15 | Achievement against target % |
|---------------------|------------------------------|--|--|--|---|
| Mthonjaneni | KwaYanguye Clinic | 1 | 17 | 10.2 | 9.8 |
| Nkandla | Mfongosi Clinic | 2 | 24 | 14.4 | 13.9 |
| Ntambanana | Buchanana Clinic | 5 | 36 | 21.6 | 23.1 |
| uMlalazi | Siphilile Clinic | 3 | 15 | 9 | 33.3 |
| Nkandla | Thalaneni Clinic | 4 | 19 | 11.4 | 35.1 |
| uMlalazi | King Dinizulu Clinic | 13 | 58 | 34.8 | 37.4 |
| uMlalazi | Ndlangubo Clinic | 10 | 34 | 20.4 | 49 |
| uMlalazi | Gingindlovu Clinic | 8 | 20 | 12 | 66.7 |
| Nkandla | Nxamalala Clinic (Eshowe) | 13 | 29 | 17.4 | 74.7 |
| Mbonambi | Sokhulu Clinic | 6 | 13 | 7.8 | 76.9 |
| uMhlathuze | Thokozani Clinic | 61 | 116 | 69.6 | 87.6 |
| uMhlathuze | Phaphamani Clinic | 47 | 78 | 46.8 | 100.4 |
| Mbonambi | Ocilwane Clinic | 8 | 13 | 7.8 | 102.6 |
| uMhlathuze | Richards Bay Clinic | 75 | 109 | 65.4 | 114.7 |
| uMlalazi | Catherine Booth Hospital | 10 | 14 | 8.4 | 119 |
| uMlalazi | Ensingweni Clinic | 18 | 20 | 12 | 150 |
| Nkandla | Mpandleni Clinic | 60 | 52 | 31.2 | 192.3 |
| Ntambanana | KwaMbiza Clinic | 24 | 17 | 10.2 | 235.3 |
| uMhlathuze | Empangeni Clinic | 147 | 101 | 60.6 | 242.6 |
| Ntambanana | Luwamba Clinic | 10 | 5 | 3 | 333.3 |

Tshwane District : Gauteng

| Sub-district | Facility Name | MConnect Registrations for month Jun-15 | Antenatal 1st Visits for month Jun-14 | Target for for month Jun-15 | Achievement against target % |
|------------------|------------------------------|---|--|-----------------------------------|---------------------------------|
| Tshwane 2 | Mandisa Shiceka Clinic | 1 | 46 | 27.6 | 3.6 |
| Tshwane 3 | Hercules Clinic | 2 | 31 | 18.6 | 10.8 |
| Tshwane 1 | Boekenhout Clinic | 12 | 67 | 40.2 | 29.90 |
| Tshwane 6 | Silverton Clinic | 12 | 51 | 30.6 | 39.20 |
| Tshwane 2 | New Eersterus Clinic | 15 | 46 | 27.6 | 54.30 |
| Tshwane 6 | Pretorius Park Clinic | 15 | 42 | 25.2 | 59.50 |
| Tshwane 5 | Rayton Clinic | 5 | 13 | 7.8 | 64.10 |
| Tshwane 5 | East Lynne Clinic | 30 | 74 | 44.4 | 67.60 |
| Tshwane 7 | Zithobeni Clinic | 16 | 34 | 20.4 | 78.40 |
| Tshwane 3 | Bophelong (Region C) Clinic | 17 | 35 | 21 | 81.00 |
| Tshwane 2 | Kekanastad Clinic | 25 | 45 | 27 | 92.60 |
| Tshwane 1 | Phedisong 4 CHC | 36 | 62 | 37.2 | 96.80 |
| Tshwane 7 | Ekgangala Clinic | 15 | 25 | 15 | 100.00 |
| Tshwane 2 | Refentse Clinic (Odi) | 35 | 51 | 30.6 | 114.40 |
| Tshwane 1 | Soshanguve Block TT Clinic | 60 | 80 | 48 | 125.00 |
| Tshwane 1 | Mercy Winterveldt NGO Clinic | 24 | 30 | 18 | 133.30 |
| Tshwane 3 | Lotus Gardens Clinic | 53 | 63 | 37.8 | 140.20 |
| Tshwane 1 | Phedisong 1 Clinic | 37 | 38 | 22.8 | 162.30 |
| Tshwane 2 | Kameeldrift Clinic | 22 | 17 | 10.2 | 215.70 |
| Tshwane 1 | Kgabo CHC | 93 | 64 | 38.4 | 242.20 |