USAID FROM THE AMERICAN PEOPLE | LEADERSHIP, MANAGEMENT & GOVERNANCE PROJECT
Inspired Leadership. Sound Management. Transparent Governance.

Utilizing Mobile-based Peer Support Networks to Improve Midwifery Service Delivery

Integrating the Use of WhatsApp into the Leadership, Management & Governance (LMG) for Midwifery Managers Course


Photo: Jerry Thomas

By:

Katie Martin
Senior Project Associate
Management Sciences for Health

Mackenzie Allen, MA
Project Associate
Management Sciences for Health

Funding was provided by the United States Agency for International Development (USAID) under Cooperative Agreement AID-OAA-A-11-00015. The contents are the responsibility of the Leadership, Management, and Governance Project and do not necessarily reflect the views of USAID or the United States Government.

I. Introduction: Mobile Technology & the Isolated Health Worker

Providing maternal, newborn, and child health services in rural locations can be a significant challenge due to community isolation, poor infrastructure, and rare or inadequate health worker training. In these locations, nurses and midwives often become the backbone of the local health system due to a lack of other available and/or qualified health professionals (Green, 2006). It is therefore critical to support this cadre of health workers with innovative learning and peer support opportunities that can transcend the boundaries of the traditional classroom or professional development training program.

Mobile learning[1] is emerging as a particularly useful tool for these populations of health workers because it provides a low-cost, readily available method to gain access to learning resources and peer support in hard to reach areas. While internet-based Communities of Practice have oftentimes been promoted as a viable method to reach these populations, low use and internet connectivity challenges indicate that this may not be the most effective method of engaging hard-to-reach populations. Alternatively, the very nature of mobile learning enables the health worker to collaborate with peers and professionals across cultural, geographical, and social boundaries using a device in the palm of their hand – therefore removing barriers to those working in professional isolation (Pimmer, et al., 2014).

To support the implementation of service delivery improvement projects, the Leadership, Management & Governance (LMG) Project integrated a peer support networking component into the LMG for Midwifery Managers course. This component was originally piloted via use of MSH's online social networking and learning platform, called LeaderNet.org. Unfortunately, poor internet connectivity and limited interest led us to pursue a mobile technology alternative. Many participants indicated that they already used mobile messaging platform WhatsApp in their daily lives for social purposes. As a result, we chose to utilize this platform to pilot two Cohort-specific messaging groups. The first Cohort is comprised of participants from Kenya, Malawi, Tanzania, and Uganda. The second Cohort is comprised of participants from Lesotho, Rwanda, Zambia, and Zimbabwe. This component enabled midwifery managers from eight[2] of the implementing countries to participate in cross-border conversations about service delivery improvement strategies, monitoring and evaluation data, and provide peer support and encouragement during their six-month workplace interventions.

[1] Mobile learning can perhaps be defined as 'any educational provision where the sole or dominant technologies are handheld or palmtop devices'

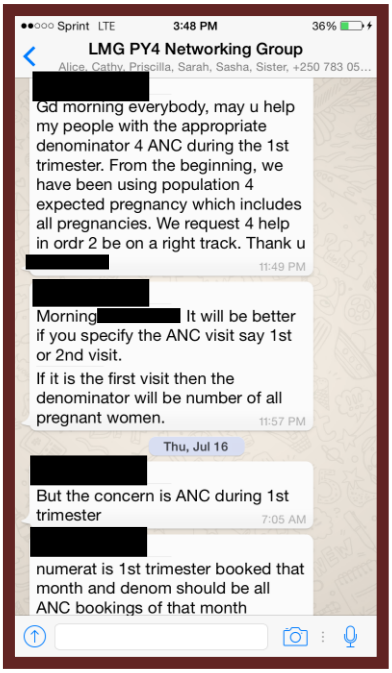
[2] Two countries' participants who completed the LMG for Midwifery Managers course, Ethiopia and South Sudan, did not participate in the mobile technology networking component. In Ethiopia, mobile messaging platform Viber is used in lieu of WhatsApp. In South Sudan, mobile phone utilization was uncommon among participants.

II. Background

The Leadership, Management & Governance for Midwifery Managers Course

To improve the capacity of midwifery managers to positively affect the quality of service provision, Management Sciences for Health (MSH) and Amref Health Africa developed the in-service LMG for Midwifery Managers course under the umbrella of the USAID-funded LMG project. The course consists of a five-day workshop focused on a variety of leadership, management, and governance (L+M+G) skills, including: assertive communication, advocacy, coaching and mentoring, database management, change management, and strategic problem solving. Following this workshop, participants utilize their new skills to each implement a six-month action plan to address a clinical workplace challenge and improve maternal, newborn, and child health (MNCH) outcomes in their facility. During the implementation phase, it is critical that participants remain actively engaged with facilitators and each other to ask questions and receive feedback on how to meet their goals. While traditional email communication can be utilized to this end, it is less flexible and accessible to rural participants than using a web-based or mobile platform. Given our previously discussed difficulties with a web-based platform, staff from MSH and Amref connected Cohort participants through semi-facilitated WhatsApp messaging groups.

As of September 2015, the LMG for Midwifery Managers course has been delivered in two cohorts. The first pilot cohort was launched in June 2014, training 48 midwives from Ethiopia, Kenya, Malawi, Tanzania, and Uganda. The second cohort was launched in spring of 2015, training an additional 48 midwives from Lesotho, Rwanda, South Sudan, Zambia, and Zimbabwe.[3] Each group is connected via a Cohort-specific WhatsApp group to encourage more relevant and timely discussions.



WhatsApp

WhatsApp, launched in 2009, is one of the fastest growing social networks in the world. It recently reached 900 million monthly active users, eclipsing its rivals Facebook Messenger (700m) and Twitter (300m) in scope (Baidya, 2015). The mobile application can function on both Android and Apple smartphones, allowing users to utilize internet-based data networks for free group messaging, calls, and file transfers.

Each Cohort's messaging group aims to connect the multi-national participants in a meaningful dialogue to promote the continued use of L+M+G skills through peer support and technical exchange. (The figure to the left shows a typical conversation between a trainer, participant, and facilitator discussing proper ways to measure program impact). This paper

[3] Ethiopia (Cohort One) and South Sudan (Cohort Two) are excluded from the evaluation because they have opted to not participate in the WhatsApp group at the time of data collection.

will compare data from the first two cohorts' WhatsApp messaging groups to draw conclusions as to the efficacy of its use and make recommendations for implementing partners who wish to integrate mobile networks into health programming.

III. Methodology

Three factors were used to measure the quality of exchange within both Cohorts' WhatsApp groups: 1) Message Content; 2) Degree of Active Facilitation; and 3) Participation Rate.

Analysis covered the first 51 days of conversation in each Cohort's WhatsApp group, as each group had a differing start date and this was the maximum amount of data available for Cohort Two. Cohort One's data therefore begins on April 8, 2015, and Cohort Two begins on June 29, 2015. Both groups are still active, and continue to engage in technical exchange after the conclusion of implementing their six-month action plan.

Since participants did not give express consent to have their messages shared, each participant's name and number has been replaced with a naming convention as follows: [Country, Randomly Assigned Number]. For instance, names and phone numbers of Kenyan participants have been replaced with Kenya 1, Kenya 2, Kenya 3, and so on. This allows each participant's identity to be respected while the analysis of the available data is shared.

Message Content

Each message in the WhatsApp groups has been categorized as one of the following seven codes below.[4] To make analysis more consistent, each message was assigned only one code that corresponded with the dominant nature of the message.

General Pleasantry: Messages that focus on basic conversational mannerisms, not discussing a technical issue, question, feedback, or update. This category includes messages such as: "hello," "happy Sunday," "good morning," "thank you," "good luck," and basic introductions.

Peer Support: Messages that aim to provide substantial support, encouragement, and appreciation to colleagues beyond general pleasantry.

Data Exchange/MER Feedback: Messages that report on project results or focus on M&E through questions, feedback, reporting updates, and the discussion of indicators.

Active Facilitation: This category only includes messages from the two MSH facilitators or the singular Amref facilitator when asking for data, updates, or more information; it may also include instances in which they use a message to jumpstart or guide the conversation. Note: Not every message from a facilitator is considered Active Facilitation – only messages that fit under the above criteria.

[4] An eighth category, Swahili, was included for Cohort One due to a running conversation of 11 messages in Swahili that could not be properly translated for evaluation.

General Facility/Program Updates: Messages that provide basic updates on participants' workplaces, not in-depth reports on specific clinical challenges or discussions regarding programming feedback and strategies. Alternatively, this category can include general updates on the LMG for Midwifery Managers program and its delivery in other places.

Service Delivery Improvement Strategies/Feedback: Messages that actively seek out, or provide information on, implementation strategies, areas for clinical improvement, or specific questions on how to improve specific aspects of service delivery.

Other: Messages that are chainmail in nature, oftentimes involving religious themes.[5]

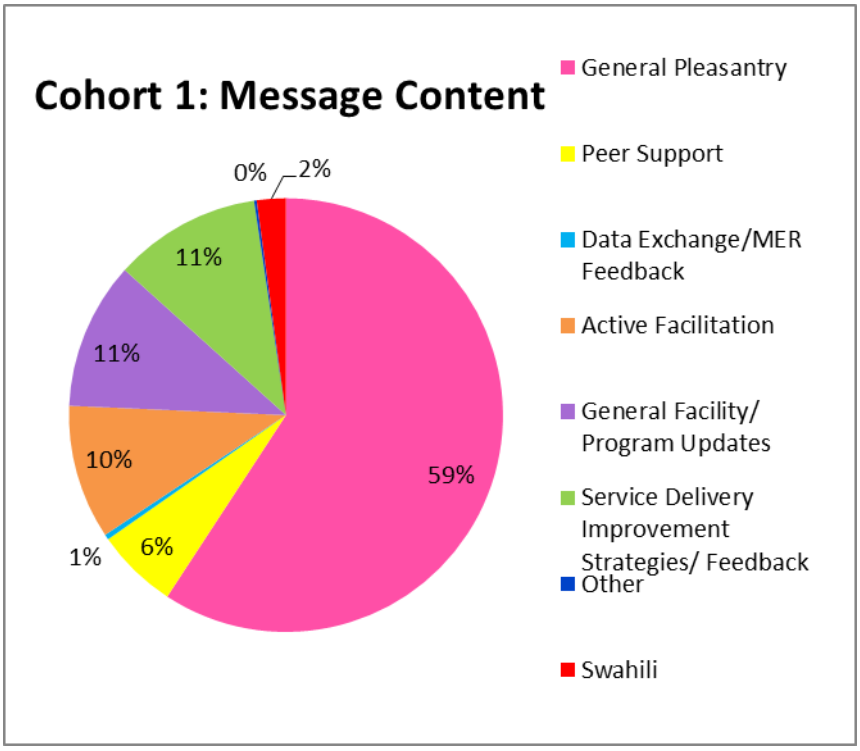
Degree of Active Facilitation

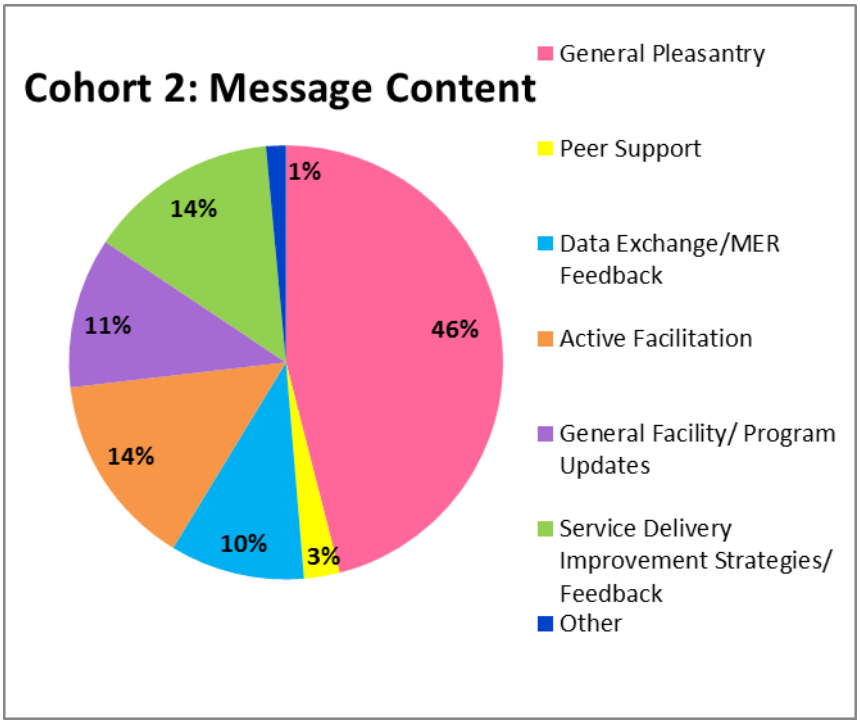
In an unstructured messaging group, Active Facilitation (category four above) can sometimes produce more focused discussions. However, this requires designated facilitators (in this case, MSH and Amref program management staff) to have a closer engagement with the forum, which may include attention outside of typical business hours. The comparative levels of Active Facilitation in both Cohorts will be evaluated, along with any potential ripple effects this may have caused in the message content of each group. While direct causal relationships cannot be confidently established, it is still a useful exercise to draw broad connections between the degree of active facilitation and differences in the associated message content.

Participation Rate

The number of times each participant contributed to the WhatsApp conversations were tallied in an effort to assess individual and country-level participation levels and engagement. This allowed connections to be made in regards to the number of active participants in each group, as well as the proportion of the conversation they each carried.

[5] Each category was assigned a specific color in the transcript (provided upon request). General Pleasantry-pink, Peer Support-yellow, Data Exchange/MER Results-light blue, Active Facilitation- orange, General Facility Updates-purple, Service Delivery Improvement Strategies/Feedback-green, and Other -dark blue, Swahili-red.





IV. Results

Message Content

The pie charts on the left show the breakdown of message content for Cohorts One and Two. The dominant category for both Cohorts was classified as General Pleasantry (Cohort One: 59%, Two: 46%). While this represents a large proportion of the messages, it is important to note that engaging in General Pleasantry is a positive indicator of active use of and access to the group.

Following General Pleasantry, both Cohorts' second most prominent category was Service Delivery Improvement Strategies/Feedback (Cohort One: 11%, Cohort Two: 14%). This indicates that after basic conversation, the participants were engaged in deeper discussions and were committed to helping their peers overcome clinical challenges by providing problem solving strategies.

Overall, technically relevant or workplace focused conversations (Peer Support, Data Exchange/MER Feedback, General Facility Updates, and Service Delivery Improvement Strategies/Feedback) comprised 29% of Cohort One's total messages. For Cohort Two, this measure rises to 38% when focusing on the same categories. It is possible that Cohort Two's results could be at least partially related to an increase in active facilitation, where facilitators guided participants to focus more on Data Exchange/MER Feedback or Service Delivery Improvement Strategies/Feedback in lieu of General Pleasantry.

Message Examples from Technically Relevant Categories

Below you will find selected message examples from each of the technically relevant categories. As mentioned above, these types of exchanges collectively accounted for 29% and 38% of Cohort One and Two's messages, respectively.

Peer Support:

4/11/15, 2:46:50 AM: Kenya 1: That's a nice idea Uganda 1.

4/11/15, 2:48:31 AM: Malawi 1: That's good Uganda 1 sharing ideas can bring something great.

4/11/15, 2:54:00 AM: Malawi 1: And we can discuss better where others are having challenges.

Data Exchange/MER Feedback:

7/15/15, 11:49:22 PM: Lesotho 3: Good morning everybody, may you help me with the appropriate denominator for ANC during the 1st trimester. From the beginning, we have been using population for expected pregnancy which includes all pregnancies. We request for help in order to be on a right track. Thank you, Lesotho 3

7/15/15, 11:55:02 PM: Facilitator 1: Morning Lesotho 3. It will be better if you specify the ANC visit, say 1st or 2nd visit.

7/15/15, 11:57:58 PM: Facilitator 1: If it is the first visit then the denominator will be number of all pregnant women.

7/16/15, 7:05:43 AM: Lesotho 3: But the concern is ANC during 1st trimester

7/16/15, 7:12:00 AM: Zimbabwe 1: numerator is 1st trimester booked that month and denominator should be all ANC bookings of that month despite the trimester

General Facility Updates:

7/1/15, 2:26:48 AM: Lesotho 9: On my side, the project has improved the ANC attendance but we still have those resistance on facility based deliveries hence am working hard to improve on it

Service Delivery Improvement Strategies/Feedback:

4/9/15, 12:38:45 PM: Kenya 1: Am planning to start a mentorship program for midwives in our sub county whereby those in low volume facilities will be visiting high volume maternities for more experience in midwifery. What are your thoughts?

4/9/15, 12:40:29 PM: Facilitator 1: Kenya 1, that is a noble idea. It will improve the maternity services in the low volume facilities.

4/9/15, 12:41:52 PM: Kenya 4: Good idea

4/9/15, 12:44:48 PM: Malawi 2: That works better. It is more effective than the classroom for cases like vacuum extraction; breech delivery....skill acquisition is attained hearing it more than once in a classroom.

Degree of Active Facilitation

Facilitators and country trainers continually engaged the participants in formal and informal dialogue; they updated participants on workplace successes, notified them of key program milestones, and shared personal moments, such as birthdays and travels. Facilitators used the groups to move throughout professional, personal, and programmatic spaces to encourage sharing and promote the growth of meaningful relationships and networks. MSH and Amref facilitators were also able to interact with country trainers and ensure that they were providing appropriate M&E guidance to their trainees.

In Cohort One, 10% of the conversation involved Active Facilitation. This total is relatively low, showing that the facilitators were not responsible for initiating the majority of the dialogue; rather, participants were actively engaged to maintain continual conversation.

For Cohort Two, Active Facilitation increased to 14%. This does not necessarily mean that the second Cohort needed more facilitation; rather, the increased facilitation may have decreased the proportion of General Pleasantry, leading to a more diverse and technically focused conversation. For instance, the third highest category in Cohort Two was Data Exchange/MER Feedback at 12%. With a lower level of facilitation in Cohort One, this category represented only a meager 2% of conversation.[6]

These patterns showcase the importance of having a strong facilitator presence within the WhatsApp groups for occasional guidance, as well as to motivate participants to share program insights and provide feedback to support their peers.

Participation Rate

The participation rate among each group is vastly different. Within Cohort One's first 51 days, there were 20 active participants and 510 messages,[7] while Cohort Two had 30 active participants and 339 messages in the same time period. However, several midwives in Cohort One were visibly more active than some of their peers, providing a large portion of the total messages. Participants in Cohort Two, on the other hand, participated at a much more consistent rate compared to each other.

Country level participation also varied significantly among the two Cohorts. In Cohort One, Tanzania carried much of the conversation – providing 39% of the messages, despite comprising only a quarter of the group's participants. In Cohort Two, however, the percent of country-level participation was directly correlated to the number of active participants from that country. The one group where this does not hold true is Facilitator's participation.

[6] It is possible that an increase in Data Exchange/MER Feedback in Cohort Two could also be affected by a revision of the course in between the cohorts, adding more technical content related to M&E.

[7] Cohort One's participation during the following 76 days of activity decreased to 15 participants and 87 messages (an 84% decrease in activity from the first 51 days) – perhaps related to many participants' action plans concluding implementation.

Facilitators sent 29% of all messages in Cohort One and 45% of all messages in Cohort Two, despite being a very small proportion of the overall participants. However, it is important to note that this participation rate includes all messages sent by facilitators, not just Active Facilitation – meaning that not all of the 29% or 45% of messaging was directed to create or guide conversations. These exchanges also included messages in the following categories: Data Exchange/MER Feedback, General Facility Updates, Service Delivery Improvement Strategies/Feedback, and others.

V. Key Findings

The Role of Facilitation

Reflecting on the technical quality of conversations held between each Cohort, the degree of facilitation emerges as a key factor into the balance and type of conversations held. However, Active Facilitation (by MSH and Amref facilitators) represented a relatively small proportion of each Cohort's messages, suggesting that participants themselves were responsible for guiding much of the conversations. For instance, the participant identified as Tanzania One sent 17% of the total messages for Cohort One. This participant proved to be a great facilitator in many of the discussions, in collaboration with the participant identified as Tanzania Three and Uganda Two. The top participants in each Cohort were able to encourage participation among their peers and serve as champions within their WhatsApp groups. This indicates that while structured facilitation by a program manager (such as the MSH and Amref facilitators) is a crucial role in guiding the direction of the group conversation, a respected participant may be able to fulfill this responsibility and elicit meaningful contributions from their peers. This would be especially useful in attempts to sustain active participation beyond the completion of participants' action plans.

Message Content – Technical v. General Pleasantry

The message content data indicates that many conversations began with General Pleasantry and remained within this category until Active Facilitation or a participant raised a question or provided a general update. However, General Pleasantry still seemed to play a significant role within both WhatsApp groups; simple conversations about birthdays, pictures, or "happy Friday" or "good morning" greetings seemed to boost group morale and create a sense of peer support.

VI. Conclusion

The use of mobile technology is gaining ground in healthcare systems around the world. With suitable resources, mobile technology can boost participation, build confidence, foster peer support and learning, and create personal and professional networks that can increase the capacity of midwives and other frontline health workers. Specifically, through the use of WhatsApp during the implementation phase of the Leadership, Management & Governance for Midwifery Managers course, participants were able to share how they used their L+M+G skills to engage in problem solving discussions with their peers. Participants were able to reach out to like-minded professionals to ask questions about

strengthening their monitoring and evaluation skills, midwifery service provision, and community outreach. Midwife participants were also able to network and receive feedback on how to improve their implementation plans to improve specific service delivery outcomes.

By being able to share updates, personal accomplishments, and project achievements, WhatsApp allowed LMG midwife participants to expand their support networks and continually build upon their existing knowledge. While midwives are sometimes an isolated group working within challenging health care systems, WhatsApp has been able to connect participants in professional relationships across borders. This has helped to transform their sense of agency, empowerment, and confidence to lead change within their workplaces and their communities.

The key question moving forward will be how to monitor whether groups remain active after the end of the formal implementation phase and the use of established facilitators (MSH and Amref, in this instance). Preliminary evidence shows that motivated participants can naturally take upon this role to continue building the relationships which have formed throughout the implementation phase. We hope other implementing partners will be able to use our results to inform future programming efforts.

VII. References

Baidya, Amartya (2015). "The Growth of WhatsApp to 900 Million Active Users and Effect on Mobile Messaging Industry!" DazeInfo. N.p. Web. 23 Sept. 2015.

Green, A. (2006). "Nursing and Midwifery: Millennium Development Goals and the Global Human Resource Crisis". International Nursing Review, 53(1), 13-15. DOI: 10.1111/j.1466-7657.2006.00482.x

Pimmer, C., Brysiewicz, P., Linxen, S., Walters, F., Chipps, J., & Gröhbiel, U. (2014). "Informal mobile learning in nurse education and practice in remote areas. A case study from rural South Africa". Nurse Education Today, 34(11), 1398-1404. doi: 10.1016/j.nedt.2014.03.013

Traxler, J. (2005, June). Defining mobile learning. In IADIS International Conference Mobile Learning (pp. 261-266).

*Annexes showing the transcript of categorized messages and raw data analysis provided upon email request to smckee@msh.org.

www.LMGforHealth.org