

Community Engagement to Improve Maternal and Neonatal Health in East – Central Region, Uganda: A Case of Selected Health Facilities

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Abstract: *This study is about community based maternal/newborn care through included formation of “Local Motorcycle (Boda-boda) Transport System” (LBTS) with the local boda-boda riders, Box saving, and the “Mama – Boda-boda Transport Connect” targeting a set of mothers, community health workers and boda-boda riders with the aim of increasing access to health facility care. Stakeholder analysis was undertaken to assess and map stakeholders’ interests, influence/power and position in relation to the interventions; their views regarding the success and sustainability; and how this research can influence policy formulation in the country. The study used an open 2 arm cluster non-randomized control trial study design; with an intervention and control groups from communities with the selected health facilities as the units of non-randomization. Community engagement was done in eight sub counties. Four sub counties were for intervention arm and other four sub counties for the control arm. Community engagements were in form of dialogue/community meetings and focus group discussions (FGDs). The analysis revealed that most of the stakeholders at the community highly supported the proposed integrated maternal newborn care package. At least 83.4% of the mothers in the intervention arm used boda-boda riders compared to 50.9% in the control arm in the post intervention. The community concluded that the proposed interventions should ensure active involvement of local stakeholders in the implementation of the projects so that they can move from being passive supporters to active drivers of the work in Uganda. Research to policy translation, therefore, is required with mutual trust, continued dialogue and engagement of the researchers, implementers and policy makers to enable scale up.*

Keywords: Maternal and newborn health, Boda-boda riders, Box saving, Mama – Boda-boda Transport Connect.

1. Introduction

Every health unit within the referral system should theoretically be able to deal with basic emergency obstetric complications. The health units range from Health Centre (HC) II to the National Referral Hospital (NRH). The referred cases can be from community to health centre or health centre to health centre (Ssebunya and Matovu, 2016; Namazzi, 2017).

Health system strengthening and maternal newborn care is still a problem globally. Scaling up maternal newborn and child health interventions involves systemic steps to assess local situations and opportunities for the better improvement of services (PATH, 2013). Several issues in the community have existed which include the quality of services to the local members, accessibility,

affordability and acceptability of the services (PATH, 2013; Pembe, 2013).

Interventions including community engagement have been cited in Gambia and other countries to improve on the deliveries in health facilities, though the situation has not drastically improved (Fisseha, 2017). Mothers have continued to deliver at home when attended to by the Traditional Birth Attendants (TBAs) or a relative (Semwanga-Rwashana, 2014). The cost of antennal services has been low and registration done once in the four visits, charges for the normal deliveries and caesarean section reduced and also the distance to the facility short, but deliveries in facilities remain low. It is concluded that the costs involved in service delivery, especially transport, greatly deter mothers from going to the health centres (Fisseha, 2017). This is also narrated by Kananura (2016) that low utilization of health

facilities, limited antenatal attendance in particular and lack of home visits contribute to low deliveries in health centres and high neonatal deaths in Uganda due to the delay in reaching health centre in time.

In Uganda, causes of death of mothers and children are preventable. These causes may include medical staff inefficiencies and absence, distance and referral mechanism, transport, drugs and medical facilities, costs and financing of services, culture, attitude, corruption and bribery, and policy matters amongst others (Madinah, 2016; Allegri, 2016).

Proper coordination of community actions has the potential of bettering maternal and neonatal outcomes; for example the decision of where to take mothers with complications or emergency obstetric conditions, at what point in time to take these mothers and what mode of transport to use, these are very critical in ensuring desired outcomes. Some of the health centres do not provide any maternal care, while some provide only basic services with no functional theatre (MOH, 2017). Community ends up travelling distances and not able to cater for their coordination and transportation to the health centres with services (Nabyonga-Orem, 2008). A woman should visit a certain health centre (HC), for example a HC III, which is accessible to her, in order to reduce on the risks of dying due to pregnancy and other related conditions. However, the means of reaching the facility is still challenging.

Community engagement plays an important role in the improvement of maternal and neonatal outcomes. This study aimed at finding out, if it works or not specifically in the east – central region, Uganda.

Community engagement has not been embraced well because maternal concerns, traditionally, have been left to women, since they are the ones who become pregnant with the related risks to them and the children. The only obvious save is to inform the community their roles as key stakeholders in the improvement of maternal outcomes. Different roles include making decisions to reach the health facility in time with the target to improve on obstetric outcomes. A woman must recognize that she is experiencing an obstetric emergency in order to make a decision to move to a health facility. Her family must equally be supportive of her seeking care at a health facility. She must be able to access transportation and successfully get transported to the appropriate health facility. The boda-boda rider also takes the initiative of responding quickly when contacted by the mother or any other person. Upon arrival, she has to receive the care that she needs (PATH, 2013). Therefore, this study aimed at engaging community members to use the locally available commercial boda-boda riders at subsidised cost for pregnant mothers quickly make decisions to go to health centres to deliver.

2. Literature Review

Motorcycle/Boda-boda riders and the role of transporting mothers: Motorcycle/Boda-boda riders are commercial riders with the core value of transporting people (pregnant mothers inclusive) for a financial gain. There was lack of awareness/knowledge for this particular stakeholder in the delivery of maternal and child health services especially in enabling a mother reach a health facility to deliver, yet they were locally at their exposure. Boda-boda riders were engaged to transport mothers from community to a health centre and between different health facilities at the time of experiencing the labour pains and other pregnancy related complications.

In Kabarole district, riders were trained and engaged to transport mothers on receiving motorcycle ambulances. A total of three ambulances were availed to the community to transport needy mothers to health centres during times of emergencies. Two ambulances were provided by the NGO Baylor College of Medicine Children's Foundation – Uganda (referred to as Baylor Uganda), and the third one by Ministry of Health, according to Bukuuku 2 and 3 (2015). This worked well for the inter facility transportation of mothers. If a health worker made a decision to refer a mother, they were to call for the ambulance to pick up the mother and bring her to a higher level facility. Due to the low number of ambulances, it took a long time for the ambulance riders to respond. Sometimes the ambulances were on its way to another place, or stationed somewhere far away from the concerning health centre. This did not work well for the rural communities, and boda-boda riders instead engaged.

Mothers in the community were missing the ambulance service. Ambulances were not enough to take all of them. Only two were transported to Buhinga by an ambulance. The remaining four women all came by boda-boda, Matatu taxi or walking. Two mothers were on a boda-boda for 20 minutes, another mother was on the boda-boda for two hours and the last mother travelled for 4 hours to reach Buhinga. She took a boda-boda to the main road, and then took a Matatu taxi (public transport) to reach Fort Portal and then she walked from the Matatu stage to Buhinga. On probing further, one lady said, *'They just wrote me a referral note and told me to go. No transport arrangement was made'* (Interviewed mother Buhinga 6, 2015).

Being transported by an ambulance is definitely not the expectation of most Ugandan mothers. They assume they have to take care of their own transport, which is also a reason why they wish to prevent a referral. It can cost a lot of money, cause a serious delay and worst of all, death. *'She was referred when the baby was still alive. But due to the distance, the means of transport, by the time she had reached Buhinga the baby had died'* (Interviewed mother Kagote 13, 2015).

In Kenya, it was clearly demonstrated in an early study of linkages between hospital utilization and transport means used by mothers. However, community involvement was not observed for mothers to use the locally available motorcycles. Few motorcycle ambulances were available for mothers to access hospitals (Orcutt, 2013).

Where advanced vehicle ambulances are used for transport, community engagement locally is not easily done. These ambulances are not common in developing countries. The motor vehicle ambulances are well equipped with monitoring tools and used in developed countries. This type of ambulance best works in urban settings and developed countries. In Uganda, this cannot work well because of the limited numbers of motor vehicle ambulances, hard to access the ambulances drivers and inaccessible roads yet the demand is very high. Therefore, others forms of transport like the motorcycle (boda-boda) riders locally available, can be tested by this study when engaged.

Community Health Workers (CHWs)

These should be understood as ones who have direct responsibility in the management of maternal and neonatal health care and transport of mothers from community and health centres to the different levels of care. Community health workers include majorly the health workers at facility and Village Health Teams (VHTs).

A study in the United States of America was conducted on maternal education and health related parenting of the children. The maternal education aimed at enabling health workers and CHEWs transmit information to mothers at the facility and community (Prickett, 2015). Levels of improvement in the provision of care to the children by their parents were noticed. However, this did not test community engagement in terms of transporting mothers to health centres for care. In the developing countries like Uganda and specifically east – central region, community engagement has not also been tested.

The Hunger Project (2017) in Ghana in partnership with the Ghana Health Service (GHS) also engaged Community Health Nurses (CHN) as midwife assistants in form of workshops, mentorships and coaching for them to have enough information to give mothers, able to record properly in registers and report in time. This was facility based and other health workers were not involved, contributing to low number of mothers transported to the health centres for care.

Accordingly, some community interventions have yielded results according to Ekirapa-Kiracho (2017). In eastern Uganda, Community Health Workers were selected from the community and trained on MNH and their knowledge improved from 41.3% to 77.4

In India the educational intervention found out that, only 51% women had at least 3 antenatal checkups, only 41% women had institutional deliveries, vaccination

coverage at 44% and 49% deliveries were assisted by health professional (Tiwari, 2014). Community engagement for this case did not involve boda-boda riders to transport mothers to health centres for skilled services.

3. Methodology

3.1 Research Design

The study used an open 2 arm cluster non-randomized control trial study design; with an intervention and control groups from selected communities and health centres as the units of non-randomization.

Community engagement was done in eight sub counties. Four sub counties were for intervention arm and other four sub counties for the control arm. Community engagement included community dialogue meetings and focus group discussions (FGDs) with the intention of forming Mama-Boda-boda Transport groups at different points and train them to get basic information in maternal and child health. However, it was necessary for the health workers and VHTs to be included in the study purposely for experience sharing. Categories of people in the community for engagement included boda-boda riders, community mothers, and community leaders and selected VHTs in the villages as shown in table 1 below. This exercise took place for a period of 6 months.

3.2 Study area

The study was conducted in selected districts and sub counties in East Central region, Uganda. These districts included Iganga and Bugiri. The sub counties in the intervention arm included, Nawandala, Nambale and Nabitende in Iganga district, and Budaya Sub County in Bugiri district. While as, the sub counties in the control arm included Nawaningi, Ibulanku and Makuutu in Iganga district, and Nabukalu in Bugiri district. The health facilities in the intervention arm included Bugono health centre IV, Nawandala health centre III, Nambale health centre III, Kasambika health centre III and Namusiisi health centre II in Iganga district and Mayuge-Bukooli health centre III in Bugiri district. While in the control arm health centres included Busesa health centre IV, Bunyiro health centre III, Makuutu health centre III in Iganga district and Nabukalu health centre III in Bugiri district.

3.3. Study Participants

Study participants who were engaged for this particular study included the mothers in the community, community health workers (facility based and VHTs), community leaders and the boda-boda riders who are involved in transporting the mothers to the health facilities in the intervention, while some participants were consulted in the control areas for purposes of comparison and establishing the impact of the

intervention. Those willing to participate in the study were consented and recruited.

In order to get these participants, the investigator and research assistants identified the different boda-boda stages in the different sub counties. Through their chair persons, and LCI leaders, boda-boda riders were mobilised for the meetings. During the meeting participants registered names on the attendance lists. Riders were encouraged to form local transportation and communication systems known as “Local Motorcycle (Boda-boda) Transport System” (LBTS) and the “Mama – Boda-boda Transport Connect” in their areas of residence to supplement on the less functional motorcycle ambulances and also to ease the communication, especially between mothers and riders.

The most active VHTs in the village and health centre, and mothers who were near the places of meetings were part of these meetings. VHTs were encouraged to identify and report any mothers to the study midwife/research assistant as plans were put in place for the mothers to reach the nearest health facility in time. They agreed to report immediately when a mother delivered.

Community pregnant mothers were among the categories of stakeholders in the study. Mothers were encouraged to deliver babies from health centres. Baseline information was received and they were then followed up for a period of 6 months.

Table 1: Table showing the categories of participants

Categories of respondents	Total number of respondents		Areas of intervention	Areas of control
	Intervention	Control		
Boda-boda riders	100	0	Budaya, Nawandala, Nabitende and Nambale sub counties	Nawanningi, Ibulanku, Makuutu and Nabukalu sub counties
Health workers	18	18		
Mothers	255	248		
Village Health Team Members	103	90		
Total	476	356		

3.4. Sample size determination

Sample size determination is the act of choosing the number of observations or replicates to include in a statistical sample. The sample size is an important feature of any empirical study in which the goal is to make inferences about a population from a sample (Natasha, 2005).

Considering the phenomenological aspect for the categories of respondents, 36 health workers (18 in the intervention arm, that is, 3 health workers from each of the 4 HCIII, 1 from HCII and 5 health workers from the only HCIV) participated in the community meetings. Another 18 health workers were in the control arm, of which 4 were from each of the 3 HCIII and 6 from HC IV. However, in the control arms health workers did not participate in community meetings.

About 100 motorcycle (boda-boda) riders were involved in the community meetings. In the intervention arm 25 boda-boda riders in each sub county participated in the community meetings. In the control arm boda-boda riders were not involved in this study. Each village has an active VHT for MCH services. Only 103 VHTs from the 103 villages in the intervention arm were expected to participate in the meetings.

Community mothers participated in this study right from the time of meetings/inception to the time they were transported to the health facilities to deliver. Information was obtained from mothers to assess the impact of community engagement. The sample size calculation for the pregnant mothers was determined by the formula:

$$n = \frac{2(Z\alpha + Z\beta)^2 P(1 - P)}{(P1 - P2)^2}$$

$$\text{From the formula } n = \frac{2 \times (1.96 + 1.28)^2 \times 0.476 (1 - 0.524)}{(0.406 - 0.546)^2} = 267$$

3.4.1. Inclusion and exclusion of participants

This involved brainstorming amongst the research team members to identify categories of stakeholders in the study, how they may be affected, who were likely to be direct beneficiaries, the potential impact of the project upon stakeholders, and their numbers. A list of categories of stakeholders was then prioritized based on: potential to benefit, weaken or strengthen the intervention; at district, Sub County and community level (Table 1).

1. Inclusion criteria for participants:

- The key stakeholders must be willing to participate in the community trial.
- Motorcycle (boda-boda) riders belonging to one of the selected stages and willing to participate in the community trial were recruited.
- Health workers willing to participate in the study and working in antenatal, postnatal and delivery departments at the selected health centre for at least 6 months prior to the commencement of the study were also recruited.
- Community pregnant mothers in their 3rd trimester were considered for participation in the study.
- VHTs believed to very active and recommended by the community members were recruited for this study.

2. Exclusion Criteria for participants:

- A woman who was not in her 3rd trimester and was not a member of a village within the study areas did not participate in the study.
- A motorcycle (boda-boda) riders who did not work in the selected stages and were not willing to participate in the trial were also not recruited.
- All health facility staff not working in ANC, maternity and PNC departments and had worked for less than 6 months prior to the study commencement in the selected health facilities was left out.

3.5 Data collection methods

Data were collected from the respondents as identified in Table 1 above. Data collection techniques involved mainly qualitative methods and these included: health facility based surveys with mothers and their spouses, and transporters; focus group discussions (FGDs); In-depth interviews (IDIs); and Key informant interviews with riders, mothers, VHTs and health workers.

3.6 Data collection tools

3.6.1 Health facility based surveys (use of questionnaires)

Data from 255 selected expectant mothers and their consent to participate in the intervention was collected for the study by administering questionnaires during the period starting August 2018 to the March 2019. Consent and data from 248 mothers in the control arm was also obtained for the study by administering questionnaires. The data was checked for completeness. The target study variables were use of boda-boda riders for transport to the health facilities and communication means. This was done to assess the impact of engaging community in the transportation of mothers to the health centres.

3.6.2 Key informant interviews

Key informants were purposively selected and key informant interview guides were used to collect data from 18 health workers from different health facilities in the intervention arm and 20 community level representatives as shown in Table 1. Questions and discussions focused on topics such as factors affecting utilization of maternal and child health services, strengths and weaknesses of the proposed study, how integration into existing health and community services can be accomplished, challenges, potential solutions, and sustainability strategies.

3.6.3 Focus group discussions

The participants in all the FGDs were purposively selected. The groups were homogenous in composition (men aged 18–35 years, and transporters aged 18 – 50 years), pregnant women and those in their reproductive ages, community leaders, the VHTs and motorcycle (boda-boda) riders were to discuss and provide information concerning how to improve maternal and child health outcomes among rural communities.

Categorically, they discussed the socio-demographic factors, attitude of mothers and the communication systems that influence maternal referrals from community to health centres. Each focus group discussion consisted of non-uniform number of participants.

Focus group discussions (FGDs) were conducted also to explore opinions, attitudes and perceptions on the feasibility of implementation. Participants included boda-boda riders in the interventions only during the pre-intervention. However, during post intervention boda-boda riders in the control arm were also involved. FGDs were dominated mostly by men in the intervention areas of Bugiri and Iganga in the sub counties of Nawandala, Nambale, Nabitende and Budaya with a total of 6 health centre catchment and 103 villages and in the control sub counties included Ibulanku, Nawangi, Makuutu and Nabukalu with a total of 90 villages and 4 health centres.

Transporters (motorcycle riders) commonly known as boda-boda riders were also interviewed to seek their views, the challenges they face and possible solutions for the use of transport vouchers for maternal and newborn services. Four focus group discussions were held with transporters in the intervention area and four focus group discussions with those in the comparison area.

The discussions were guided by a FGD guide and focused on challenges in transporting mothers, information the transporters would like to share, means of communication and possible community contributions for sustaining the scheme while improving the maternal outcomes.

3.6.4 The in-depth interviews (IDIs)

The IDIs were conducted to the selected few mothers, boda-boda riders, and health workers in both the control and intervention arms. The IDI tool was used for the different key respondents.

3.7 Data analysis

The quantitative data obtained from mothers when given the questionnaires was computed using SPSS *version 22*. Descriptive statistics (frequencies, means and standard deviations) was considered.

In addition FGDs and in-depth qualitative data was analysed using a computer based qualitative data analysis software atlas Ti *version 7*, and at this stage, the process of analysing was focused on in-depth analysis of each of the main categories obtained during the key informant interviews and FGDs. At first, thematic analysis was done for the qualitative data generated by a master sheet analysis tool. Also sub themes based on the study objectives were formed to ease cleaning and coding of statements of respondents. Relevant quotations were identified and used to support each theme/sub theme during the reporting process.

Verifying of the qualitative data is required which involves checking the credibility of the information gathered using a method called triangulation. Triangulation involves using multiple perspectives to interpret a single set of information. This study used triangulation to examine the social and cultural perspectives of uptake of the boda-boda riders as a means of transport to the health facilities for pregnant mothers and its implications on health seeking. It required the researcher to interview at least three groups of participants: pregnant mothers, health workers and the boda-boda riders. When each participant said the same thing in the interviews, then the information that resulted was considered valid.

3.8 Ethical clearances

Ethical approval to conduct the study was provided by the Institutional Review Board (IRB) at Uganda Martyrs University - Nsanbya hospital and Uganda National Council for Science and Technology (UNCST). Under

number (SS 4813) Voluntary informed consent was then individually obtained from all the study participants.

4. Results and Discussions

During sensitisation of the stakeholders, majority of them were males (62.3%) in the intervention arm and 52.9% in the control arm according to the attendance lists. Notably in the meetings and FGDs, discussions rotated on who makes decisions at home and payment of the fares for transport and communication when a mother is transported to health centre. The answers were overwhelming that the husband is doing everything. A reasonable numbers of respondents said that the commonest means of transport to reach a health facility was boda-boda and walking in the intervention arm. Similarly, in the control arm majority of respondents used motorcycles. This was in correspondence with the distance to the health facilities which they estimated to be between 2 – 5 kilometres. This was equally not a walking distance. Still, the 5 km is not a walking distance by a mother especially when in labour. In the FGDs conducted, *“the distance between the health centres and householders is not walkable”*, one of the mothers said. At that same boda-boda stage of Kiwanyi, one of the riders said... *“There is a long distance between Kiwanyi village and Nawandala HCIII, a mother cannot walk that distance, and more so when in labour”*.

Additionally, in the assessment and mapping of stakeholders' interest, influence/power and position in relation to the proposed community based maternal/newborn interventions, revealed that almost all the stakeholders supported the proposed intervention. This is an important factor in determining the success of the intervention, which could make mobilization and buy-in easier. The high level of support and agreement could be linked to the potential benefits of the intervention. This was appreciated by the direct beneficiaries and also indirect beneficiaries such as local and district leaders who were glad to see their community benefit. Another possible reason is related to the fact that the stakeholders were consulted during the design phase of the pilot projects and their suggestions were incorporated into the programs.

Drivers with high influence at the district and community level are important for ensuring sustainability of programs. At national level, drivers who have high influence can be instrumental in increasing policy influence and scale up. Stakeholders especially male riders, local community leaders and the district health team need to be shifted from being supporters to drivers. This could be done through a combination of methods that involve community sensitization, empowerment and integration into existing district systems during program implementation. Men wield a lot of power in Ugandan households, since they are often the family heads, custodians of family finances and the key decision

makers (Ssebunya and Matovu, 2016; Namazzi, 2017). However, male involvement in maternal and newborn health care is still limited (Namazzi, 2016). Further engagement by the study team is important to ensure that men remain aligned and interested in the scheme, since they play a key role in deciding whether or not their households will contribute to the scheme. There is therefore need to sensitize and mobilize them to actively provide financial contributions and participate in birth preparedness.

The local leaders can also play a key role in raising awareness about maternal and neonatal health and encouraging the community to participate in the program. The existing community resource identified from the analysis that can contribute effectively towards the mobilization and the sensitization is the local council structure. All the local council (LC) representatives who were interviewed were willing to support the project. The study team should therefore equip them with the appropriate knowledge, engage and involve LCs further to mobilize the community.

Pregnant and newly delivered mothers were found to be highly in agreement of the proposed study project. In general, mothers applauded the intervention given that it offered them an opportunity to deliver at health facilities at the hands of skilled birth attendants. These thoughts are captured in one of the quotations below from one of the participants of a focus group discussion.

“...long ago we used to deliver from banana plantations and on the way, which made us get problems while giving birth. So it saved us from all those problems, we are now very happy, let the project continue...” Mother stated during the FGD.

However, due to the limited resources mothers were found to have low control, power and influence, hence they were characterized as supporters.

During the FGDs, men revealed that they support the programme strongly and would love to see it continue for a longer time... *“I accept that the burden of paying for transport costs, buying the supplies and other requirements for the mother and the newborn baby usually rests on me as household head”*. Men were also characterized as supporters due to their high level of agreement with the intervention but rather limited influence.

Questionnaires were administered to mothers at the health centres in both the intervention and control arm to assess the impact of engaging the community members (boda-boda riders and community health workers). Mothers were asked whether they used boda-boda for transport to the health centres. This was before the intervention process and implementation. Responses were 48% of the mothers in the intervention arm and 53% in the control arm who used the boda-boda riders for transport to the health centres as highlighted below in table 2. Much as there were no meetings and FGDs with the boda-boda riders in the control arm they used to transport women from the community to the health centres to deliver and even those who had complications according to the administered questionnaires and interviews conducted.

In addition to lack of sensitisation of community members and mothers, the other reason for the low numbers of mothers using the boda-boda riders in pre intervention was that no reason was in place for mothers to go to health centres since the pregnancy was at its early stage. In this case most mothers were recruited at 29 weeks of foetus development (7 months).

“There is no reason for me to spend money for transport going to the health centre when not having any problem with my pregnancy”... a mother said during the in-depth interview in the pre intervention.

Table 2: Mothers who used boda-boda riders for transport (pre and post interventions)

Mothers who used boda-boda riders for transport	Pre intervention				Post intervention			
	Frequency		Percent		Frequency		Percent	
	Interv.	Control	Interv.	Control	Interv.	Control	Interv.	Control
Yes	122	131	48	53	213	126	83.4	50.9
No	133	117	52	47	42	122	16.6	49.1
Total	255	248	100.0	100.0	255	248	100.0	100

More mothers were registered in the intervention arm that used the boda-boda riders for transport to the health centres than in the control arm, according to the post intervention results. About 83.4% of the mothers in the

intervention arm and 50.9% in the control arm used the boda-boda riders for transport to the health centres. See table 2 above. Much as in the USA, community engagement was on parenting of the children, results

were achieved (Prickett, 2015) similarly to the mothers using boda-boda riders for transport to health centres. The difference in the results was attributed to the sensitisation of mothers during the entry meetings, FGDs in the community and health education during ANC and some of mothers and boda-boda riders given incentives in form of bonus airtime and recruited in the closed caller group in the intervention arm. Boda-boda riders were also trained and knew the importance of transporting mothers to the health centres.

In the control arm, the use of boda-boda riders to transport mothers to the health centres was still a challenge as reflected by the results in tables 2 above and 3 below. Same happened to Kenya according to Orcutt (2013) due to failure of engaging the community using dialogue meetings for sensitisation. During the FGD in the control arm, one of the VHTs at Nkaiza in Nabukalu Sub County lamented that nothing has been done to improve on the maternal and child health over the past years. Community engagement and other related activities were not implemented in the control arm.

.....*“For safety we allow God to direct our footsteps. Otherwise the boda-boda riders in this place are a menace. They do not know that they have a role to play in saving mothers and babies from dying”*. One of the VHTs said.

Mothers were also able to contact the boda-boda riders using their phones for transport to the health centres. During the pre-intervention only 67.6% in the intervention arm contacted the boda-boda riders compared to 35.4% in the control arm. However, there was an improvement in the post intervention, were 86.3% of mothers contacted the boda-boda riders in the intervention arm compared to 28.6% in the control arm. See table 3 below. This was attributed to the free calls for mothers and boda-boda riders in the closed caller user group and the bonus airtime in addition to the sensitisation of mothers and boda-boda riders. See table 3 below.

Table 3: Mothers who used phones to contact boda-boda riders for transport health centres (pre and post interventions)

Mothers who contact boda-boda riders	Pre intervention				Post intervention			
	Frequency		Percent		Frequency		Percent	
	Interv.	Control	Interv.	Control	Interv.	Control	Interv.	Control
Yes	81	24	67.6	35.4	104	20	86.3	28.6
No	39	45	32.3	64.6	16	49	13.7	71.4
Total	120	69	100.0	100.0	120	69	100.0	100.0

4.1 A case from one of the boda-boda riders

One of the most active boda-boda riders when contacted stated that . *“Am a boda-boda rider basing at Bugono stage, I was recruited, trained on the mother – boda-boda transport connect services. The intention was majorly to transport mother quickly from the community to health centres. I accepted to work as a boda-boda rider in this project called mother – boda-boda transport connect. For the last three months I have managed to transport 21 mothers from their home to Bugono health centre IV. Three out of the 21 were as well referred to Iganga hospital for further management. I am happy to be among those saving lives of mothers and the babies. I am also excited that I have used my boda-boda to save lives and now am so appreciated and celebrated at the village than before”*.

4.2 A case from one of the mothers

It is also amazing to hear from the mother who was transported by the most active boda-boda rider above. She is a resident of Nabitende village and gave birth to baby boy. It was a normal delivery. Her contacts are withheld. She states... *I started labouring at 2am in the night. It was little pain initially that I could not even inform my husband. The labour pain intensified at 11am when the husband had gone away. I had to tell my friends “next house” and organized my supplies, (baby cloth, mama kit, basin, jerry can, soap and others) at 2pm. The husband had saved 150,000 Ush for the supplies. I called the boda-boda rider using my phone since I had gotten his number from the health centre during antenatal care. He quickly responded and asked me to sit on the boda-boda with my supplies and off to Bugono health centre IV. It took us 18 minutes to be at the facility. In the process he called the health worker at the facility informing her on my being in labour and*

getting prepared to receive us. He waited from outside. Luckily enough I only spent 30 minutes and delivered a baby boy. The boda-boda man together with the health workers helped me to move from labour room to the ward. The boda-boda rider helped to buy soda and food from the trading centre. Afterwards, I asked him to help and call my husband to be informed of my delivering a baby boy safely. My husband came and they talked from outside. I don't know what they talked about. My husband was so happy and thanked the rider. He left but came back at night and checked on me when brought another mother. We called him in the morning to pick us back home. I don't know how much my husband paid him.

5. Conclusion and Recommendations

5.1 Conclusions

This stakeholder analysis has revealed that most of the stakeholders at district/community level are high-level supporters of the proposed integrated maternal newborn care package. The proposed intervention should ensure active involvement of local stakeholders in the implementation of the projects so that they can move from being passive supporters to active drivers of the

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work in Uganda. It was noted that pregnant mothers were able to use the boda-boda riders for transport to the health centres. They even contacted riders using their phone for transport, and riders responded positively. Research to policy translation, therefore, will require mutual trust, continued dialogue and engagement of the researchers, implementers and policy makers to enable scale up. The study findings generated add to global knowledge particularly for countries with similar settings that are planning to set up maternal and newborn interventions or any other intervention aimed at increasing access to health services.

5.2 Recommendations

Routine community engagement/dialogue meetings should be encouraged in order to transform information and knowledge to stakeholders.

1. Savings (money) should be emphasized to mothers during ANC and community meetings such that boda-boda riders are paid on arrival at the health centre.
2. Continuous training of the locally available boda-boda riders on the offer of services to pregnant mothers is required.

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