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A COMMUNITY INTERVENTION PACKAGE OF DEMANDABLE SERVICES FOR IMPROVING CARE PRACTICES IN ANTENATAL, LABOUR AND POST-NATAL CARE

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Abstract

To improve the quality of care, most interventions concentrate on services and systems strengthening, without a major focus to empower clients as owners of health and agents of change. This research was conducted to explore, develop and evaluate a package of services for improving knowledge and demand for care practices from antenatal to postnatal as one of the means to improve service provision. To explore the package, the researchers used eight FGDs with 64 mothers, KIIs with 12 health workers and four psychologists, and 12 vignettes with 26 mothers and 26 health workers. To evaluate impact, 1,040 mothers were interviewed at intervention and a comparison site. The researchers used Interpretative Phenomenological Analysis to generate themes and Stata 16 to estimate statistical significance of changes in knowledge, demand and service provision. The study showed that empowered clients can contribute to improvements in service provision. Women exposed to the package were 50% more likely to demand a service (RR = 1.5, $p<0.001$) and service provision was 16.3% higher (38.5% to 51.7%, $p= 0.04$) at the intervention site. In addition, there were reported positive shifts in individual agency and norms to demand care and increased rapport between women and health workers.

Keywords*:* community intervention, demand, care practices, quality of service, antenatal care, labour and delivery, postnatal care

Background

Care practices are at the core of life-saving interventions. While on the supply side, quality of care is compromised inadequacy of human and materials resources (Mselle, Kohi, Mvungi, et al., 2011, Birhanu, Mathibe-Neke, 2022), on the supply side it is compromised by inadequate knowledge on expected standards of care and low self-efficacy among clients to demand care practices (O'Donnell, Utz, Khonje. et al., 2014, Bhutta, Darmstadt, Haws, et al., 2009).

There is evidence that communication and community engagement have had an impact on influencing positive outcome in health with significant impact has been observed in HIV/AIDS, family planning and malaria programs. Multi-country reviews found that group counselling, interpersonal communication, peer education and reminder tools in health facilities and communities promote care uptake and retention in HIV/AIDS and lower death rates (Tomori et al, 2014, Mwai, et al, 2013, Lamb, El-Sadr, Geng & Nash, 2012). In Uganda, volunteers conducted home visits to support clients on ART with counselling, adherence and identification of adverse effects followed by care seeking. The program contributed to viral suppression among patients. Peer Health Workers conducted psychosocial counselling and patient mapping and tracking, resulting in better adherence among patients and reduced

virological failure. Similar results on adherence were observed in India where group-based treatment and counselling was conducted (Jones et al., 2013). In Malawi, communication and community involvement in home-based treatment of opportunistic infections and adherence counselling was associated with reduced deaths and positive ART outcomes (Zachariah et al., 2007).

In reproductive health communication and social mobilization through theatre and community dialogues, promoted institutional capacity in the provision of youth-friendly services and norms around SRH in the Republic of Georgia, self-efficacy and demand for family planning services (Wegs, Andreea, Galavotti, & Wamalwa, 2016), bednets, and HIV testing among women in Zambia (Pulerwitz, Hui, Arney, & Lisa, 2015). In Uganda, training of community behaviour change agents to educate mothers on health-seeking behaviour resulted in improved compliance to treatment regimes for malaria (Nsungwa-Sabiiti, J., et al., 2007) while in Cambodia village malaria workers contributed to increased bed net use and larvae source management (Yasuoka, et al., 2012) adherence to treatment guidelines (Hasegawa, Yasuoka, Ly, Nguon, & Jimba, 2013).

In Kenya administration of checklists in home visits by health workers was seen to increase the likelihood of health-seeking behaviours among women in postnatal care as women took early action for problems identified for their infants and themselves, including danger signs, feeding and family planning (McConnell, Ettenger, Rothschild, et al., 2016).

The evidence gathered shows that most communication materials and interventions lean towards influencing behaviour change of the client. There is more need for materials and interventions that develop the clients' capacity as a component for improving the quality of care. In addition, evidence on communication is centered around HIV, family planning and malaria, with little emphasis on maternal and neonatal health. This research aimed to develop a community package of demanded services to improve care practices in ANC, labour, delivery and postnatal care.

The processes, materials and lessons shared in this paper are hoped to provide adaptable resources for MNH specialists to delve into interventions that improve client knowledge and demand for care practices in MNH as an inevitable component for improving quality of care.

Conceptual Framework

The P-Process and ACADA models guided the development of the materials. Similar to the P-Process developed by the JHU-CCP (Health Communication Capacity Collaborative (2013), UNICEF developed the ACADA model (UNICEF, 2008) for ensuring the systemic and evidence-based process of developing communication materials and interventions. The first step of ACADA is assessment (situation analysis) of the problems and behaviours, which is followed by communication analysis where potential and preferred sources of information are analysed. This is followed by development of strategies and interventions and materials, which are informed by the assessment and communication analysis. Finally, action is taken to implement, monitor and evaluate the strategies. Refer to Fig.1 for the UNICEF ACADA Process.

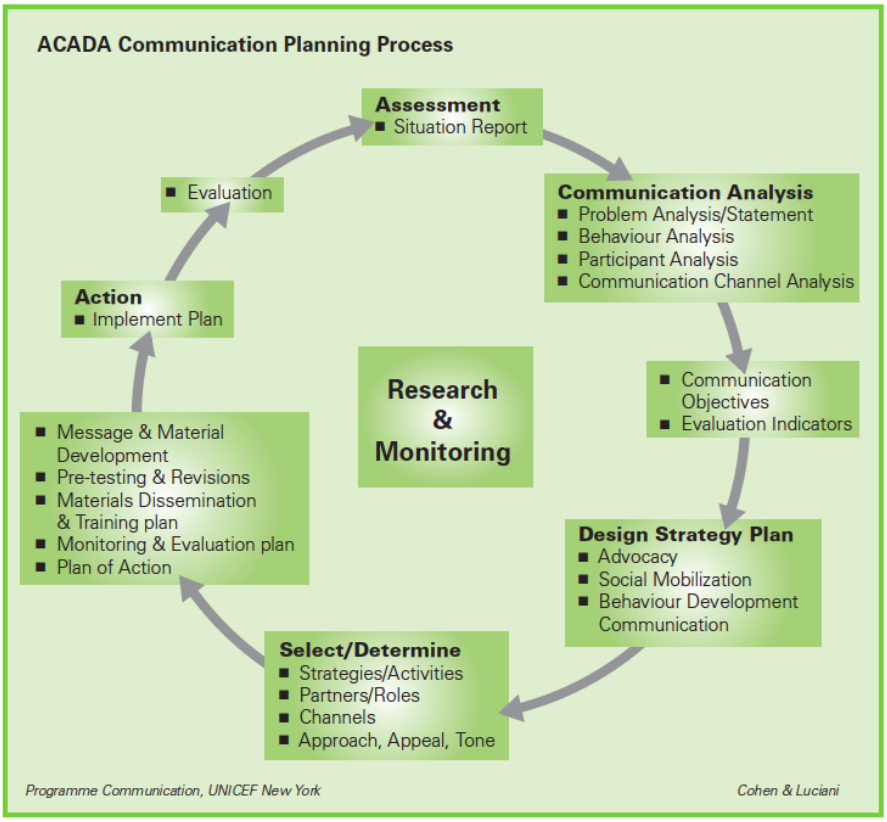

Figure 1: ACADA Communication Planning and Implementation Process

Methodology

Study Design

This was an implementation science research that involved the creation, implementation and evaluation of a package of communication materials to observe results on mothers' knowledge of care practices, demand for the care practices and results on service provision by health workers.

Before developing the package of communication materials, the researchers conducted mixed method research using qualitative and quantitative methods to understand what services would be demandable by clients at the point of care as well as get suggestions on preferred channels of empowerment to ensure mothers were aware of service standards and were able to demand them. After implementation, a study was conducted to measure the impact of the package on knowledge, service demand and service provision.

Study Site and Population

To explore the package, the researchers used 8 Focus Group Discussions with 64 mothers, Key Informant Interviews with 12 health workers and 4 psychologists, and 12 vignettes with 26 mothers and 26 health workers. To evaluate impact, 1,040 mothers participated in individual interviews during baseline and endline surveys at an intervention and a comparison site. The researchers used Interpretative Phenomenological Analysis (IPA) to generate themes and Stata 16 to estimate the statistical significance of changes. During the vignettes, situations were simulated where health workers simulated services provision to mothers and observations were made on care practices provided, after which there were discussions on services that could be demanded by the mother,

proposed skills, and challenges that would be faced. For the quantitative assessment and evaluation, a total of 1040 mothers participated in individual interviews i.e. 260 from the intervention site and 260 from the comparison site during both baseline and endline surveys.

During implementation, the Parent and Child Heath Initiate (PACHI), a UNICEF implementing partner, conducted bimonthly review meetings and individual interviews with mothers to understand issues around usability of the materials, challenges and suggestions for improvements. Informal interviews were also conducted with health workers to understand their perceptive about women's conduct with regard to demanding care practices.

Ethical Approval and Consent to Participate

This study was approved by the College of Medicine Research and Ethics Committee (COMREC); certificate of approval No.: P.07/20/3087. All methods were carried out in accordance with guidelines and regulations of COMREC.

Informed consent was obtained from all subjects. Researchers read a consent form to the participants to explain the purpose and procedure of the research, potential benefits for the community, assurance of confidentiality and voluntary participation. Upon agreement to participate, the subjects signed the consent form.

Data Analysis

Qualitative data was analysed using Interpretative Phenomenological Analysis (IPA) where identified themes were identified and categorised. Quantitative data was analysed using Stata16 to where binomial regression and two-sample proportion tests were conducted to estimated statistical significance of changes in knowledge, demand and provision of care practices.

Results

Demandable Services

The formative research established that during ANC and PNC mothers can demand all recommended services presented to them. Some services that were seen as demandable during labour and delivery included 4-hourly assessments of vital signs and blood pressure, emptying of the bladder, swabbing, delivery counselling, administration of oxytocin, post-delivery palpation, and vaginal examination. For the child mothers can demand head to assessments, assessment of vital signs, weighing, cord stamp and eye antiseptics, and vaccines. Women observed that they could demand birth registration even though it was not among the recommended services.

Mothers, health workers and psychologists proposed empowerment of women with cognitive, behavioural and interpersonal skills to demand services e.g. knowledge of service standards and health benefits and improved self-confidence and assertiveness. In addition, efforts have to be made to address perceived or real health worker attitudes, mental health for the client and the service provider, service provider workload, and availability of supplies.

The study found that if a mother is informed in simple language about a service she is supposed to receive, she can demand numerous services in the continuum of care from ANC to PNC. All respondents suggested trainings for mothers, community dialogues, and print materials as necessary interventions for improving knowledge and demand for care practices.

The Package

Following the assessment, the researchers developed a package of materials for improving demandable services at the point of care. These included checklists for mothers, health facility posters and a Radio Distance Learning Program.

The checklist for mothers included care practices that can be demanded during ANC, labour and delivery and PNC. Lead mothers were trained at the village level to identify and mentor pregnant mothers on care practices they were expected to receive from pregnancy to PNC. Mothers were advised to keep the checklist at home and regularly check what their entitled services, especially when going to the health centre so that they had fresh memory about care practices to enable them demand.

Radio Distance Learning programs were produced to facilitate discussion on demandable services between lead mothers and pregnant mothers. The programs featured a community health worker (lead mothers), a pregnant woman and her family, and a nurse at a health centre. The story walks the woman from pregnancy to delivery, unleashing some of the challenges and excitements about pregnancy. Through her interactions with a trained volunteer, friends, and the nurse, the woman learns about demandable services, which she starts to demand. The radio programs have interludes where the host asks some questions to mothers about some of the care practices expected. Lead mother (facilitators) encourage mothers to answer the questions and discuss different ways of demanding care practices.

To reinforce the messages, posters were pasted at the heath center. Some, these covered key messages of demandable services from ANC o PNC.

See Fig. 2 for a sample of ANC Wall Chart and follow this link to access the package: https://drive.google.com/drive/folders/1oD8erswPhUw6QM8nHZsc2fY07tX_z2Ru?usp=sharing

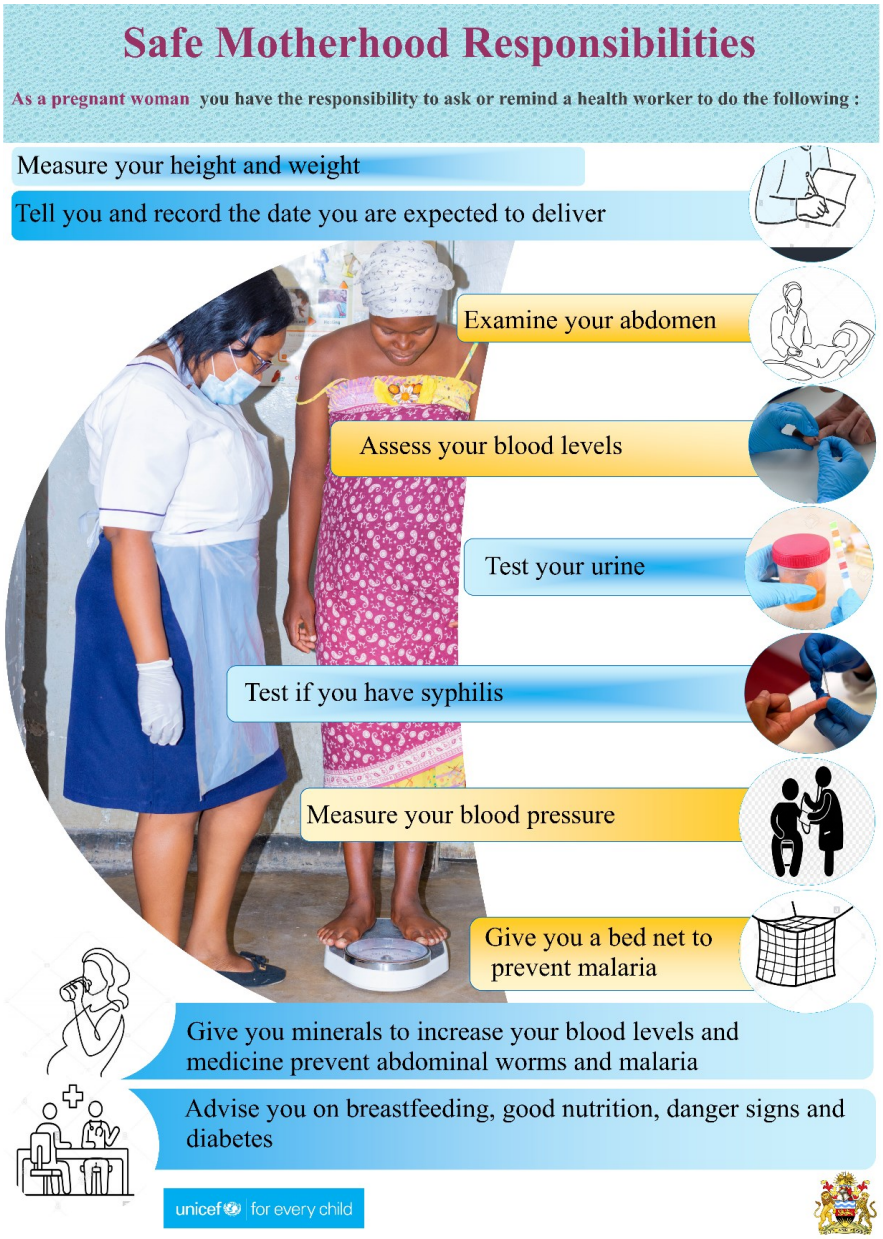

Figure 2: ANC Wall Chart on Demandable Services

The package was pretested to understand if the messages were clear, attractive, relevant and culturally appropriate. 24 mothers and 7 health workers participated in pretesting excises, which involved listening to the programs under the guidance of trained lead-mothers, viewing the posters and emulating usage of the checklists.

A few changes were suggested to improve the materials e.g., optional vernacular terms to make it simpler for the mother, removal of some pictures to make the wallcharts more culturally appropriate and inclusion of additional columns on the ANC checklist to reflect all 8 visits. Other messages were also suggested to be removed as they would not be appropriate, e.g., demand for urinalysis for the mother during the first PNC contact, and there were other additions made to the messages e.g., 2 hourly checks to be demanded by the mother after delivery.

The package was rolled out in the catchment area of Kaluluma where 89.9% of mothers in ANC, labour and PNC reported having been exposed to the messages on demandable services. Apart from hearing the messages from lead mothers, radio programs and seeing them on posters, mothers said they also heard about demandable services from peers during informal discussions e.g., at communal boreholes where they go to collet water.

Evaluating the Package

The general impression was that the materials had an impact on influencing memory of care practices by mothers and adherence by health workers, shifting norms on demand for care, enhancing individual agency among mothers, and creating rapport between mothers and health workers. There was increased knowledge and demand for care practices as well as actual provision of care. Another important aspect pointed out as important by mothers and health workers was the media mix, which helped to reinforce messages.

Memory and Adherence

Mothers and health workers said the materials were helpful as aide-memoirs for the services offered at the heath centre. This was seen to enhance adherence to standards.

> *They (the checklists) remind us of the services we are supposed to receive and we tick against those that that we have received [Mother, Kaluluma Review Meeting]*

> *Posters really help because when we see them and hear on the radio we are encouraged to demand for a service that the doctor has missed and we are able to know our responsibility on hospital services [Mother, Kaluluma FGD]*

> *Posters do not only help mothers. They are also a job aid for the health worker. When you see it you get reminded of routine practices to be undertaken [Health Worker, KII]*

Shifting Norms

The radio programs were commended by mothers as having helped them share experiences and see demand as a norm in their community.

> *I like the discussion and the questions that are in the radio programs. They help us to share ways in which we can demand care at the health center [Mother, Review Meeting]*

> *When we discuss we know that some women are also doing it, then you say, why can't I do it [Mother Review Meeting]*

Agency to Demand

Mothers indicated that they were more confident to demand care practices because they had knowledge about services standards:

> *It is now easy to ask for a service because the program is enlighting and teaching us to ask for a service that we have not received from a doctor [Mother, Kauluma FGD]*

> *Now it is less hard to ask because of the coming in of this programme but previously it was very hard because we were shy, we did not know the specific services that we were supposed to demand, we were afraid to ask [Mother, Kaluluma Review Meeting]*

> *It is very easy because we are no longer afraid and we are able to ask the doctor in case he or she has forgotten [Mother, Kaluluma FGD]*

Creating Rapport

The package was reported to have increased the relationship between health workers and mothers.

It is easy because there is already a growing relationship between from the antinatal clinic, labour and delivery up to this moment [Health Worker, Kaluluma, KII]

When you come with a happy face you are able to ask the doctors what you really want [Mother, Kaluluma FGD]
Doctors are now less hesitant to help us because the program has given us awareness and power which makes them to help us with joy and in right time [Mother, Kaluluma Review Meeting]

Doctors here are now more friendly than those at XXX (name withheld). When you go to XXX hospital and ask for a service, they retort aggressively, reprimanding you for getting into their business [Mother, Kaluluma Review Meeting]

Knowledge, Demand and Care Practices

At the intervention site results showed a 21.9% mean increase in knowledge of demandable services in ANC (43.3% to 56.1%, $p<0.001$), intrapartum services for the mother (20.6%, 41.8% to 62.6%, $p=0.003$) and the neonatal services before discharge (17.5%, 47% to 64.5%, $p=0.0039$). Overall, women at the intervention site were 50% more likely than women at the comparison site to demand a service in the continuum of care (RR = 1.5, $p<0.001$).

Compared to the non-intervention site, on average, service provision was 16.3% higher (38.5% to 51.7%, $p= 0.04$) at the intervention site for all services from ANC to PNC. Improvements included laboratory testing, clinical examination of mothers and newborns and provision of essential interventions such as oxytocin for prevention of postpartum haemorrhage, chlorhexidine for umbilical cord care and vitamin K.

Generally, the package was acclaimed by both women and health workers and they recommended that it be extended to other parts of the district in addition to expanding its life span (implementation period) to benefit other women in other parts and other women in the same area who would be pregnant in future.

The program should not end here. The message should be spread to areas that it is yet reaching [Health Worker, Kasungu District Hospital]

There are other women who are not pregnant yet. They will miss the chance if the program comes to an end. It has to go on and on [Mother, Kaluluma FGD]

However, there were areas that were suggested by mothers and health workers for improving the package. These include pro-literate biasness, male involvement and its centeredness on pregnancy.

Pro-literate Bias

Checklists were seen to be a pro-literate approach since they were text-based. Mothers who do not read needed to have pictorial illustrations.

It takes a woman to be able to read what's within the papers so that they are able to tick across what has been listed [Lead Mother, Kaluluma Review Meeting]

Pro-pregnancy Bias

While the intervention targeted pregnant mothers as primary participants, mothers observed that all women needed to be part of the program.

There are some women who are not part of the programme but they really want to be part of it [Mother, Kauluma FGD]

Low Completion Rate of Checklists

Some checklists were not completed. Reasons for non-completion included malfunctioning of markers that were distributed to mothers as park of the checklist package and laxity/procrastination.

Lack of Male Involvement

Women observed that the program was mother-centered. The discussions facilitated by lead mothers mainly engaged women, with sporadic reports of male engagement by some lead mothers. Such approach was seen to alienate males from the initiative.

In addition, the content needed to be more sensitive about male engagement. There is a moment in the radio program where a husband is refusing to go to the clinic with a wife but finally agrees. Though he finally agrees, the dramatic approach seemed not to have worked well as some mothers observed that the initial refusal still gave a bad example.

> *In the programme, there is a part where a man refuses to escort his wife to the hospital which is giving a bad example to listeners hence forcing men to decline escorting their wives to the hospital [Mother, Kaluluma FGD]*

Discussion

Historically, Radio Distance Learning (RDL) has promoted language learning and social action among nomadic migrant farmers, pastoralists and fishermen (Ekwe, 2012), as well as for mathematics and languages among pupils (Andrea Bosch,1997), and was thought to be important in improving knowledge and communication skills among frontline health workers promoting HPV vaccination (UNICEF, 2021), RDL, on the other hand, has demonstrated that mass communication and interpersonal communication can be combined. In this project mothers valued the interaction created by the RDL under the facilitation of lead mothers, galvanising the importance of interpersonal communication through peers as has been witnessed in various HIV projects (Hatcher, et al., 2012, Wanyenze, et al., 2013, Nyamathi et al., 2012), RDL promises to be a cost-effective high impact intervention that can be scaled up at national level to improve demand for provision of care practices. A rotating radio can be used by various groups of women under the facilitation of a trained animator. Upon delivery, women can graduate from the program and other women can join the program. For sustainability, government staff would need to be custodians of such a program. An additional component that can be fused into the RDL tools is the component of role-plays, which have shown results in improving negotiation skills before encountering real life scenarios (Taylor, et al., 2012).

According to Sen, when people share information and perspectives, their values and priorities change and eventually they develop a form of joint agency (Sen A.K., 1999). The discussions generated by Radio Distance Learning contributed to this form of joint agency as mothers were encouraged to demand as they heard from experiences of one another.

Entertainment education drama learns from Bandura's Social Learning Theory where positive role model are rewarded and negative ones suffer results or transition to positive characters. In other cases, without character transition, the negative sentiments are discussed. Though such transition happens in the drama it is missed by some mothers. Adaption of the materials will need to consider making explicit the transition process and creating in-drama and off-drama dialogue around male involvement in maternal health. However, it should be noted that while male involvement has demonstrated results in maternal and neonatal health (Stern, Pascoe, Shand & Richmond, 2015), and while in this project there was a call for involvement men, male involvement is a behavioural change intervention separate from the Demandable Services (DS) initiative. Engaging men in DS interventions requires a prerequisite step of motivating men to first participate in MNH before a call is made for them to engage in MNH demandable services.

Media mix operates under the premise that, the more people are exposed to communication materials in various forms, the more they are expected to adopt the recommended behaviours. The package for demandable services is an example of how multimedia products (radio, wallcharts and checklists)

creates an arsenal of tools that increase exposure and enhance one another for better results. Women saw the same messages on checklists and wallcharts and listened to the same on radio. Apart from increasing exposure for all women through message repetition, the multimedia approach helped to resolve the pro-literate bias, which according to Melkote is the tendency of developing materials that target the literate community (Melkote, 2021). In this project, the illiterate and semi-literate women who would not be comfortable with checklists and reading wallcharts would listen to programs and participate in discussions.

Even though the wallcharts were designed and pasted at the health centres as cues of information for women, they became functional for health workers as job aids to regularly remind them of the recommended care practices. Such phenomenon galvanises the recommendations that interventions for improving care practices need not only target mothers. Social and Behaviour Change interventions equally need to target health workers.

Regular feedback meetings between health workers and mothers are functional for establishing rapport, which averts fears mong mothers and eases perceived tension created by demand for care practices. This was demonstrated by the fact that mothers reported tensions with health workers in other facilities where the project was not implemented.

It was reported that other women who were not pregnant wanted to be part of the program. Future project can consider partial implementation for such women. For instance, they may be part of Radio Listening Clubs but may not be using the checklists prepared for pregnancy, labour/delivery and postnatal visits.

Limitations

This project was implemented as part of an implementation science research. As a community intervention, it was not practical to use a blinded approach where health workers would not know about community interventions to gauge the sole impact of the intervention. By knowing that there was an intervention, health workers might have changed their conduct in the provision of care practices and interaction with mothers. Therefore, the results of improvements in care practices cannot solely be alluded to the empowerment of mothers.

Mothers indicated that in some cases services were not offered due to stock outs. As part of reprogramming the project introduced a component of social accountability, where community movements demanded service standards, including products, from duty bearers. However, the social accountability component did not demonstrate tangible results during the life span of the project but remains a major recommendation for future interventions.

Implementation science hinges on the premise that research improves practice through reprogramming. However, increasing levels of interventions would on the other hand compromise the objectivity of observations. There were recommendations from health workers for the project to include training for nurses on respectful maternity. To minimise contamination of results, the recommendations were implemented at the end of the project, which might not have been very impactful programmatically. It is hoped that through sustainability and follow-on projects, the additional intervention will yield future results.

Conclusion

This study aimed to develop a package of tools for improving knowledge, demand and provision of care practices in ANC, labour and delivery and PNC though a systematic conceptual framework of assessment, creation, implementation and evaluation. Formative research established that during ANC and PNC mothers can demand all recommended services presented to them. In addition, respondents proposed empowerment of mothers with cognitive, behavioural and interpersonal skills to demand services.

The study found that if a mother is informed in simple language about a service she is supposed to receive, she can demand numerous services in the continuum of care from ANC to PNC. Among the suggested interventions were trainings for mothers, community dialogues, and print materials. Such

findings were utilised to develop a package of interventions that included checklists for mothers, health facility posters and a Radio Distance Learning Program.

The package had results in improving knowledge of care practices among mothers and adherence to standards by health workers. In addition, there was an observed shift of norms to demand care practices owing to increased conversation in the community on care practices. Exposed mothers demonstrated increased agency to demand care and their interaction with health workers was seen to be functional in creating rapport between clients and service providers. The intervention was highly acclaimed by women and health workers and there was a call to roll it out to other areas and to include all interested women, regardless of pregnancy status.

However, scaling up such a package needs to consider some areas to improve. These include reviewing the checklist to ensure they are more biased towards semiliterate clients e.g., having picture codes for each care practice. In addition, there has to be more emphasis on male involvement e.g., the content has to demonstrate men taking part and they have to be involved in discussions facilitated by community mobilisers.

Disclaimer

The information in the document expresses the views and opinions of the authors and do not represent UNICEF's position.

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