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Mobilising faith-based and lay leaders to address antenatal care outcomes in northern Ghana

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ABSTRACT
Despite the benefits of antenatal care, evidence from sub-Saharan Africa suggests that women often initiate these services after the first trimester of pregnancy and do not complete the recommended number of visits. This study examines the impact of mobilising faith-based and lay leaders to address the socio-cultural barriers to antenatal care uptake in northern Ghana in the context of a broader child survival project. A quasi-experimental design was used, and data were analysed using a difference-in-differences approach. The results presented in this article indicate the potential for faith-based and lay leaders to promote uptake of maternal and child health behaviours.

Des informations provenant d’Afrique subsaharienne indiquent que malgré les avantages offerts par les soins prénataux, il est fréquent que les femmes n’aient recours à ces services qu’après le premier trimestre de grossesse et n’ailient pas au terme du calendrier de visites recommandé. Cette étude examine l’impact de la mobilisation des leaders confessionnels et laïcs pour faire face aux obstacles socioculturels au recours aux soins prénataux dans le nord du Ghana, au sein d’un plus large projet sur la survie de l’enfant. Le concept de l’étude était quasiment expérimental et les données ont été analysées selon la méthode de l’observation de l’écart dans les différences. Prisentés dans cet article, les résultats mettent l’accent sur la possibilité pour les leaders confessionnels et laïcs de promouvoir l’adoption de comportements de santé de la mère et de l’enfant.

A pesar de los beneficios comprobados que conlleva el cuidado prenatal, la evidencia disponible correspondiente al África subsahariana sugiere que a menudo las mujeres comienzan a atenderse después del primer trimestre de embarazo y que, además, no realizan la cantidad de visitas sugerida. En el contexto de un proyecto integral destinado a elevar la supervivencia de los niños, el presente estudio examina el impacto logrado por la movilización de líderes religiosos y laicos para hacer frente a los obstáculos socioculturales que impiden una mayor aceptación del cuidado prenatal en el norte de Ghana. Con este fin, se utilizó un diseño cuasiexperimental en el que los datos fueron analizados empleando un enfoque de diferencia en diferencias. Los resultados al respecto, presentados en este artículo, sugieren la posibilidad de que los líderes religiosos y laicos puedan promover una mayor aceptación de aquellas conductas encaminadas a mejorar la salud maternoinfantil.

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Over a third of maternal deaths in sub-Saharan Africa (SSA) are directly related to inadequate antenatal care (ANC) during pregnancy (Lincetto et al. 2006). The 2006 WHO Standards for Maternal and Neonatal Care maintain that to achieve ANC’s life-saving effects for women and new-borns, four visits spaced regularly throughout pregnancy and commencing within the first trimester are necessary. Recently, WHO increased this recommendation to at least eight visits and continued to emphasise the importance of initiation of ANC within the first trimester of pregnancy (WHO 2016). Initiation of ANC in the first trimester allows for early identification of potential underlying conditions that could increase maternal and child morbidity and mortality (e.g. control of anaemia, prevention of malaria complications, and identification and treatment of sexually transmitted infections – see Asundep et al. 2013; Campbell and Graham 2006; Lincetto et al. 2006). Good quality and regularity of ANC visits allow for the provision of a variety of services, including pregnancy-induced hypertension, micronutrient supplementation, and tetanus immunisation, which have been shown to be effective in improving pregnancy and neonatal outcomes (Carroli, Rooney, and Villar 2001). If properly initiated, ANC has the potential to significantly reduce maternal and perinatal mortality, preventing up to 27% of maternal deaths (Asundep et al. 2013).

Despite the benefits of ANC, evidence from SSA suggests that women often initiate ANC after the first trimester of pregnancy and do not complete the recommended number of ANC visits. A study of SSA showed that while over 70% of pregnant women ever attend ANC, less than half (44%) reported attending at least four visits (Kinney et al. 2010). In general, Ghana has demonstrated improved ANC statistics relative to other SSA countries, with 92% of rural women ever receiving ANC, 83% receiving at least four ANC visits, and over 60% attending ANC in the first trimester of pregnancy (Ghana Statistical Service, Ghana Health Service, and ICF International 2015). However, wide variability in early and regular ANC attendance exists in Ghana, with the Northern region demonstrating the lowest uptake of these behaviours (Ghana Statistical Service, Ghana Health Service, and ICF International 2015; Pell et al. 2013; Speizer, Story, and Singh 2014). Data from a knowledge, attitudes, and practice survey conducted as part of unpublished formative research in the East Mamprusi district in the Northern region showed that 80% of mothers with children aged 0 to 23 months received four or more ANC visits and only 50% reported that their first visit took place during the first trimester (Tuli, Wilcox, and Catholic Relief Services 2015).

Many factors have been shown to affect the successful uptake of early and regular ANC, including maternal and paternal education levels, maternal employment status, household economic status, distance to health facility, parity and maternal age (Ahmed et al. 2010; Asundep et al. 2013; Pell et al. 2013; Simkhada et al. 2008). Organisational barriers to accessing life-saving maternal, neonatal, and child health (MNCH) services have been documented, including providers’ attitudes and the services offered (Speizer, Story, and Singh 2014). The costs of accessing ANC services, including cost of transportation, services, and equipment, have also been shown to be important barriers to ANC utilisation in SSA, and Ghana in particular (Asundep et al. 2013). Ghana instituted its National Health Insurance Scheme (NHIS) in 2003 – with a primary objective to limit cost as a barrier to accessing MNCH services. A recent study in northern Ghana illustrated that enrolment in the NHIS had a positive association with uptake of institutional delivery; however, there was no effect on women’s attendance of four or more ANC visits (Singh et al. 2015).

Socio-cultural factors have also been shown to be important determinants of MNCH behaviours in SSA, including ANC attendance (Ahmed et al. 2010; Hiarlaithe et al. 2014; Pell et al. 2013; Simkhada et al. 2008; Underwood et al. 2014). A study on facility delivery in northern Ghana, for example, found that traditional power hierarchies in the household and communities influenced the uptake of key health-seeking behaviours, and that often “someone must give the order”, potentially hindering uptake of essential MNCH behaviours (Moyer et al. 2014). Additionally, research in East Mamprusi district indicated that household beliefs and rituals often delayed seeking timely services during pregnancy (Tuli, Wilcox, and Catholic Relief Services 2015). For example, in this area a practice called...
“prisibu” requires first-time pregnant women to formally announce the pregnancy to the community during a ceremony, before it can be acknowledged publicly. This traditional practice was perceived to delay early ANC attendance, which was seen as a public acknowledgement of the pregnancy, until after the announcement ceremony had been held (Tuli, Wilcox, and Catholic Relief Services 2015).

Multiple studies have highlighted the importance of addressing socio-cultural barriers and community norms to improve the uptake of essential MNCH services (Aguiar and Jennings 2015; Campbell et al. 2013; Crissman et al. 2013). A recent systematic review and meta-analysis indicated that interventions to involve male household decision-makers in maternal health activities, including ANC, was associated with improved utilisation of maternal health services and reduced odds of post-partum depression (Yargawa and Leonardi-Bee 2015). Additionally, Speizer, Story, and Singh (2014) demonstrated the positive effects of supportive community norms on institutional delivery in northern Ghana.

Engaging community leaders, including lay leaders (such as chiefs), and faith-based leaders (such as pastors, traditional religious practitioners, and imams) has been promoted to shift social norms and traditional practices and improve health MNCH behaviours (Chand and Patterson 2007; Chi and Stringer 2015; Woelk et al. 2016). The United States Agency for International Development’s (USAID) behaviour change framework for improved MNCH recommends mobilising key opinion leaders to increase uptake of MNCH behaviours (USAID 2015). Community leaders are important to the provision of health information and education, and may influence behavioural and social norms in culturally appropriate ways (Leban 2011; USAID 2015). Mobilising faith leaders, in particular, has been instrumental in addressing the HIV epidemic globally, including the promotion of access to prevention of mother to child transmission services during prenatal care (Chi and Stringer 2015; Ezeanolue et al. 2015; Widmer et al. 2011). Leban (2011) argues that their views on well-being and their stature enable them to influence the supply and demand sides of health services.

This study examines the impact of the Council of Champions (CoC) intervention to mobilise and train faith-based and lay leaders to actively address the socio-cultural barriers that limit the uptake of MNCH behaviours among mothers of children aged 0 to 23 months in the East Mamprusi district of Ghana. The study’s objective was to determine whether the addition of the CoC intervention to a broader community and facility-based MNCH programme would improve the early initiation and regular attendance of ANC.

**Methods**

This study was conducted in two sub-districts of East Mamprusi district, located in Ghana’s Northern region. As of November 2016, the total projected population of East Mamprusi was estimated at 132,000. The district is divided into five sub-districts that include approximately 300 rural settlements of about 200–500 inhabitants each. East Mamprusi district has 13 health facilities, including one hospital and three health centres.

The CoC intervention was integrated into a broader child survival programme, the Encouraging Positive Practices for Child Survival Project (EPPICS). EPPICS was implemented by Catholic Relief Services (CRS) and the Ghana Health Service (GHS) throughout the East Mamprusi district from 2011 to 2015. Through a multi-level social and behaviour change (SBC) strategy, the overall EPPICS project aimed to address factors contributing to preventable maternal and new-born morbidity and mortality. The design of the SBC strategy was informed by extensive formative research, including a household survey with mothers of children under 23 months old, focus group discussions with pregnant women, mothers, fathers, and mothers-in-law, and key informant interviews with community leaders and Ghana Health Service officials. The standard package of EPPICS activities included interventions at household, community, and facility levels.

A standard community-level intervention implemented in all project villages involved the formation of Healthy Mothers and Newborn Care Committees. These committees mobilised community members to develop community birth plans, manage community-led monitoring of project
indicators, and engage men to support critical MNCH behaviours. The committees also coordinated emergency transport committees to facilitate timely referrals to health facilities. Throughout the EPPICS project area, traditional birth attendants (TBAs) were repositioned as link providers. TBAs were identified and trained to refer pregnant women to health facilities for ANC, to accompany them for institutional deliveries, and to refer all new-born and maternal emergencies to trained healthcare providers. Community pregnancy surveillance and targeted education sessions were also organised. These sessions brought pregnant and lactating mothers together on a bi-weekly basis to discuss MNCH and nutrition topics. Mothers who practiced key MNCH behaviours previously facilitated the sessions and conducted monthly follow-up home visits.

Throughout the project area, EPPICS and GHS provided health facilities with maternal and new-born care protocols and guidelines. In-service training on emergency obstetric care, essential new-born care, and essential nutrition actions was conducted among health facility staff, including midwives, medical assistants, and nurses. EPPICS also provided essential supplies and improved access to clean water for labour and delivery wards. Facility-level quality improvement teams were also formed to supervise and address issues that negatively affected the quality of MNCH services.

The CoC intervention included the formation of village-level councils, comprising faith-based leaders (Protestant ministers, traditional African religious leaders, and Islamic imams), village chiefs, traditional medical practitioners, and female leaders known as "queen mothers" or "magazia". These leaders were selected because they were highly influential and respected in their communities and considered as custodians of traditional practices, rituals, attitudes, and beliefs related to MNCH and other areas. The formation of the CoC assumed that the modification of the deeply held norms and traditional practices would be achieved if influential religious and lay leaders actively initiated and promoted the changes throughout the community.

Forty-two CoC were formed at the village level, each with five to seven members. Two hundred CoC members received an initial 36-hour training and subsequent support by the project. CoC training used the “triple A” approach – assessing the problem, analysing the causes, and taking appropriate and timely action to address them. In general, CoC members assessed poor MNCH outcomes and related behaviours, including limited use of ANC during the first trimester of pregnancy. They analysed the causes of the problem, identifying and prioritising barriers to uptake of the behaviours, including relevant community norms and traditional practices. Upon completing the training, the project and Ghana Health Service staff supported the CoCs to develop action plans and to implement activities to address harmful traditional norms and practices and other barriers, such as provision of low-quality health services and lack of knowledge.

To address barriers to MNCH behaviours, including the modification of harmful norms and practices, CoC members organised and led community dialogues to engage influential household members, discuss the practices and identify alternatives that would not limit uptake of ANC and other MNCH behaviours. For example, in the case of “prisibu”, alternative practices identified and promoted by the CoCs included conducting the ceremony as soon as the woman missed her period, allowing pregnant women to seek ANC prior to the ceremony, or abolishing the practice altogether. CoC members also conducted home visits to engage directly with household heads – who often made the final decisions about a pregnant woman’s ability to seek ANC. Additionally, faith-based leaders promoted alternatives practices in their religious services. CoC members also engaged with the wider community to establish and enforce the alternative practices.

To test the impact of the CoC intervention, this study employed a pre-test-post-test quasi-experimental design. Two sub-districts were purposefully selected as the intervention (42 communities) and comparison (40 communities) areas because they shared similar socio-demographic and health profiles and were separated geographically to avoid contamination. The comparison area received the standard package of EPPICS activities, including healthy mothers and new-born care committees, the repositioning of TBAs as link providers, community pregnancy surveillance and targeted education sessions, health facility capacity strengthening, and the formation of facility-level
quality improvement teams. The intervention area received both the standard package of EPPICS activities described above and the CoC intervention. Approval was obtained from the Research Ethics Board of the University of Development Studies of Ghana. Written informed consent was obtained from all study participants.

Data were collected in both comparison and intervention areas at baseline (December 2013) and follow-up (June 2015) rounds. At each round, a structured questionnaire that was applied to separate samples of mothers of children age 0 to 23 months. A sample size of 510 mothers of children age 0 to 23 months in both the intervention and comparison areas was estimated to detect a 15% difference between the intervention and comparison areas for each indicator under consideration (beta 90%, alpha 0.05, design effect 2). Multi-stage cluster sampling was used to select 30 communities in both the comparison and intervention areas with probability proportionate to size. Compounds within each selected community were then listed by enumerators with the support of project-affiliated community health workers from the respective villages. The field team selected 17 compounds at random from the list. Eligible women in selected compounds were listed and one was randomly selected for an interview. CoC programme activities began in January 2014 upon completion of baseline data collection. The CoC intervention was implemented for approximately 18 months prior to follow-up data collection activities.

The dependent variables of interest for this study included early ANC, or initiation of ANC visits during the first trimester of the last pregnancy. Based on the Ghana Demographic and Health Survey (DHS) tools (Ghana Statistical Service, Ghana Health Service, and ICF International 2015), mothers of children age 0 to 23 months were asked if they received ANC at a health facility for their youngest child. Respondents replying affirmatively were prompted to estimate the number of months they had been pregnant when they first received ANC. The study also assessed attendance at four or more ANC visits during the last pregnancy, the minimum number of visits recommended by the WHO at the time of the study (Lincetto et al. 2006). To determine the frequency of ANC visits, women who received any ANC were asked how many times they attended these services.

Analyses were completed using Stata 13.0 (Stata Corporation, College Station, Texas, USA). Pearson $\chi^2$ tests were used to assess differences in socio-demographic characteristics between programme areas at baseline and for differences in exposure to the promotion of ANC services by select community leaders. The impact of the CoC on early ANC and attendance of at least four ANC visits was assessed using two separate multivariate logit models and applying a difference-in-differences approach. The interaction term, programme area*round of data collection, indicated the effect of the CoC in the context of the EPPICS standard activities. Covariates, including maternal age, education, parity, employment status, ethnicity, and distance from nearest health facility, were selected based on the literature (Ahmed et al. 2010; Amoah et al. 2016; Asundep et al. 2013; Pell et al. 2013; Simkhada et al. 2008), and were included in all models. To examine the relationship between programme area and round of data collection, the interaction was plotted using the margins command in Stata 13.0. All analyses adjusted for the clustered survey design. Collinearity was assessed for both multivariate models.

**Results**

A total of 484 mothers of children aged 0 to 23 months old were sampled and agreed to participate at baseline in the intervention area, and 510 were sampled at follow-up. In the comparison area, 466 mothers of children age 0 to 23 months were sampled and agreed to participate in the study at baseline and 510 at follow-up. The sample characteristics of mothers of children age 0 to 23 months at baseline are summarised in Table 1. The distribution of mothers living in intervention and comparison areas was similar in terms of age, education level, parity, and time needed to travel (one way) to a health facility ($p > 0.05$). Women in both areas were an average age of 28 years old and nearly 80% reported no formal education. Mean travel time to the nearest health facility was over an hour in both the intervention and comparison areas. Age of the youngest child at the time of the baseline interview was different between the intervention and comparison areas. Mean age in the
intervention area was 10.7 months compared to 9.7 months in the comparison area ($p < 0.05$). Ethnic group also differed between the intervention and comparison area. The intervention area had more Moar (18.4% vs 10.7%) and Likpapka (16.9% vs 0.4%) than the comparison area. The intervention area had fewer Mampruli (48.1% vs 55.6%) and ‘Other’ groups (16.5% vs 33.3%) than the comparison area.

Early ANC and attendance of at least four ANC visits did not differ at baseline ($p > 0.05$). Nearly 60% of women reported attending ANC in the first trimester of their last pregnancy. Almost 80% of women reported attending four or more ANC visits during their last pregnancy. Notably, the comparison area had four functioning health facilities compared to only one in the intervention area.

Table 2 illustrates any exposure to the promotion of ANC by different community leaders in the three months prior to the follow-up survey round. These data serve as a proxy for exposure to the CoC intervention. Exposure to the promotion of ANC by community leaders was greater among women in the intervention areas versus women in the comparison areas at the time of the follow-up survey. Nearly 86% of women in intervention areas were exposed to faith-based leaders who encouraged use of ANC services, versus 76.3% in the comparison area ($p < 0.01$). Similarly, more mothers in the intervention area (86.5%) were exposed to messages about ANC from village chiefs than in the comparison area (69.6%). Over 90% of mothers were exposed to ANC promotion from the magazia in the intervention areas, while over 75% were exposed in the comparison area. Finally, 56.5% of women indicated they heard traditional medical practitioners promote ANC, versus 44.4% of women in the comparison areas.

Table 3 presents the unadjusted differences in ANC outcomes by data collection round (baseline versus follow-up data collection round) and programme area (comparison area versus intervention area). Early ANC was lower in the follow-up (35.9%) compared to the baseline (57.4%, $p < 0.01$) in the comparison area. However, more women at follow-up reported attending ANC during the first trimester of their pregnancy (85.1%) compared to women at the baseline (60.7%, $p < 0.001$) in the
intervention villages. Overall, early ANC changed by 45.9 percentage points in the intervention area versus the comparison area between the baseline and follow-up data collection rounds. Similarly, fewer women in the comparison area reported attending at least four ANC visits at the follow-up (31.0%) compared to baseline round (79.6%, \( p < 0.001 \)). In the intervention area, more women reported attending at least four ANC visits at follow-up (94.5%) compared to women at the baseline (81.8%, \( p < 0.001 \)). Overall, attendance of four or more ANC visits changed by 61.3 percentage points in the intervention area versus the comparison areas between baseline and follow-up data collection rounds.

Results from two multivariate logit analyses, which controlled for maternal age, education, ethnicity, parity, employment status, and time to the nearest facility, indicate that improvement in both early ANC and attendance of at least four ANC visits were significantly related to the CoC intervention. The adjusted difference in differences analyses (programme area by round interaction, results not shown) show strong positive effects for both early ANC (\( \beta = 2.30, p < 0.001 \)) and attendance of four or more ANC visits (\( \beta = 2.24, p < 0.001 \)). These results indicate that in the CoC villages, both ANC indicators improved more between baseline and follow-up relative to the comparison areas (without CoCs) after controlling for potential confounders. Separately, the main effects show no difference in either of the ANC outcomes for the programme area variable. Without taking data collection round into account, there was no difference in either ANC indicator between intervention and comparison area. There were significant negative main effects for both early ANC (\( \beta = −0.59, p < 0.001 \)) and at least four ANC visits (\( \beta = −1.54, p < 0.001 \)) in terms of round (follow-up versus baseline). These results suggest that overall, without taking programme area into account, both indicators decreased between baseline and follow-up data collection round.

Figures 1 and 2 depict the adjusted predicted probabilities for both early ANC and attendance of at least four ANC visits based on the multivariate analysis described above. The difference in differences analysis depicted in Figure 1 demonstrates that the predicted probability for early ANC attendance increased by 0.25 in the intervention areas and decreased by 0.22 in the comparison areas after adjusting for potential confounders. Similarly, Figure 2 illustrates that the adjusted predicted probability for attendance of four or more ANC visits increased by 0.13 in the intervention area and fell by 0.49 in the comparison area after controlling for background characteristics. These figures confirm that CoC villages had increases in the ANC indicators relative to the comparison villages.

### Discussion

This study examined the additive impact of an intervention to mobilise and train faith-based leaders and lay leaders to encourage early and frequent ANC attendance in the context of a broader social and behaviour change strategy to improve MNCH behaviours. The study found that the addition of CoC to the standard EPPICS package of interventions resulted in improvements in early ANC and attendance of at least four ANC visits.

Both outcome measures decreased between baseline and follow-up in the comparison area and increased in the intervention area. In the intervention areas, baseline values for both outcome measures were similar to the national DHS estimates for 2014. Rural Ghana reported early ANC at 60.7% and attendance of at least four ANC visits at 82.9% (Ghana Statistical Service, Ghana Health Service, and ICF International 2015). Follow-up values in the intervention area for both measures
were greater than the 2014 DHS estimates. In the comparison areas, the 2015 mid-year routine health facility monitoring data showed a decline in use of ANC similar to the decline described in this study (Tuli, Wilcox, and Catholic Relief Services 2015). Supply shortages or other perceived barriers to delivery of quality ANC may have limited demand for ANC services throughout the district. However, in intervention areas, coordinated engagement of community leaders through the CoC appeared to mitigate these potential barriers.

These findings support studies that have identified the importance of addressing community norms, including involvement of faith-based and lay leaders, to address negative community attitudes and norms regarding critical MNCH behaviours (Campbell et al. 2013; Crissman et al. 2013; Pell et al. 2013; Pharr et al. 2016; Skovdal and Campbell 2010; Yargawa and Leonardi-Bee 2015). In particular, in Ghana’s Northern region, Moyer et al. (2014) concluded that community-based solutions, including working with community leaders, were needed in order to address challenges
facing maternal and child health. Similarly, Speizer, Story, and Singh (2014) found a strong positive association between facility deliveries and supportive community attitudes for the behaviour in the same region.

The study’s results should be interpreted in light of important limitations. Both ethical and feasibility considerations resulted in the lack of a true control group unexposed to the CoC and other EPPICS interventions. Communities were not randomly assigned to intervention or comparison areas. There were differences between the intervention and comparison areas at baseline in terms of ethnicity, which studies have shown to be associated with uptake of ANC services (Abor et al. 2011; Nketiah-Amponsah, Senadza, and Arthur 2013; Pell et al. 2013). Additionally, this study did not follow a cohort of mothers, but rather selected separate pre-post samples at baseline and follow-up in both programme areas. The potential bias from these factors was reduced through the use of multivariate models to control for observable factors across sites and respondents, including ethnicity. The dramatic decline in early ANC and attendance of at least four ANC visits in the comparison area also suggests there may have been limited service provision to residents in those villages, potentially contributing to the changes observed in the study.

Table 3 indicates that mothers in the comparison area may have been exposed to faith-based and lay leaders who encouraged use of ANC and other MNCH services. This proxy measure may have captured exposure to community leaders who participated in other standard project activities, such as the Healthy Mothers and Newborn Care Committees where they may have mobilised community members to develop community birth plans or supported participatory monitoring of project indicators. These standard activities did not specifically engage, train, and support these leaders to identify, modify, and promote harmful traditional practices, such as prisibu. Importantly, while formal CoC were not established by the project in these communities, other EPPICS activities, such as project-wide meetings with village chiefs, may have facilitated interaction and communication between community leaders across programme areas (intervention and comparison). This interaction may have resulted in contamination of the comparison areas. The study only measured exposure to messages from community leaders and the frequency and intensity of ANC promotion in the comparison area is unknown. Finally, outcome data are based on self-report and subject to social desirability and recall biases, potentially limiting their validity.

**Conclusion**

The study’s results suggest important programmatic implications. Addressing social norms that may serve as barriers to timely care-seeking behaviours is crucial to decreasing maternal and new-born morbidity and mortality. This study has demonstrated that training and mobilising faith-based and lay leaders may result in positive changes to the timing and frequency of ANC behaviours for pregnant women in rural underserved communities. The CoC went beyond providing pregnant and lactating women with information about MNCH behaviours and challenged common traditional beliefs and practices which were perceived to delay timely and frequent use of ANC services. Pregnant women may have been exposed to community leaders promoting appropriate ANC during other project activities. However, it appears that a high level of engagement, dialogue, and coordination through the CoC influenced their ability to impact early and frequent ANC. This study provides insights for development agencies regarding the design of social and behaviour change communication strategies for other technical areas to address barriers to health-seeking behaviours. Ministries of Health (MoH) and development agencies may adapt this approach when implementing community-led interventions in areas of maternal, child health, nutrition, gender, HIV and AIDS, and tuberculosis in rural settings.

Importantly, the CoC intervention was implemented in the context of a multi-level SBC strategy to improve the uptake and quality of MNCH services. Investments in engaging faith-based and lay leaders as partners to lead MNCH activities at the community level will only pay off if other levels of the continuum of care are also strengthened, such as referral systems and the technical capacity...
of health workers. Promotion of ANC by changing community norms and practices would have a limited effect if the services did not exist or were of poor quality. The increase in coverage of ANC attendance, especially in the first trimester of pregnancy, should allow health care providers the opportunity to improve on the package of ANC services provided to pregnant women.

Additionally, CoC were implemented after conducting essential formative research activities. Formative research was essential to understanding the key social norms and traditional practices, rituals, attitudes, and beliefs that acted as barriers to the uptake of MNCH behaviours in East Mamprusi district. The EPPICS project underwent both quantitative and qualitative data collection prior to project implementation to identify and target these barriers (Tuli, Wilcox, and Catholic Relief Services 2015). Faith-based and lay leaders served as key informants throughout the formative research process. Faith-based and lay leaders became the best source to understand social and cultural barriers to early and frequent ANC attendance, how the CoC could be involved in addressing the uptake of MNCH behaviours, and the potential impact of the proposed CoC intervention.

To ensure ownership and sustainability, development agencies may also consider EPPICS’ strategy of partnering directly with the MoH from the project design stage. The EPPICS project took on a mentoring role throughout the project implementation, acting to transfer knowledge and skills to the MoH rather than implementing the services directly. The results of this study provided evidence to influence MoH in Ghana. As a result of this strategy, the CoC has been scaled up to six neighbouring districts in the Northern and Upper East regions of Ghana. At this time, MoH is seeking funds to replicate it in five to 10 regions of Ghana.

Despite the limitations of the study, the results point to the potential of mobilising faith-based and lay leaders in promoting early ANC. This is an important finding, and this research demonstrates the potential of faith leaders’ engagement to have an impact on a very specific health systems issue – which is a step beyond the common arguments that faith leaders are “generally potentially influential” in development. The study confirmed the hypothesis that repositioning and engaging faith-based and lay leaders as MNCH champions resulted in the modification of harmful norms and practices that limited uptake of ANC services. CoC has demonstrated to be a highly effective intervention for increasing the utilisation of ANC in East Mamprusi. The CoC strategy may be applicable to other community-based interventions with similar contexts, where socio-cultural barriers limit uptake of targeted health behaviours. In light of the outcome of the study, development agencies may adapt the CoC strategy to address household and community related practices as part of improving maternal and new-born health in similar contexts. To assess the potential for the CoC intervention more fully, its effects should be tested on additional outcome measures, such developing a birth plan and delivering in a health facility, utilising an experimental design, and including a true control group unexposed to any project interventions.

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