Original Article

Understanding health facility challenges in the implementation of Option B+ guidelines in Ghana: the perspectives of health workers

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Background: Ghana initiated the implementation of the WHO consolidated guidelines for the Option B+ prevention of mother-to-child transmission (PMTCT) of human immunodeficiency virus (HIV) guidelines. This study explored health workers (HWs) views on health system challenges in the implementation of the new guideline at the health facility settings.

Methods: We conducted a facility-based qualitative study in April 2016. In-depth interviews were carried out with healthcare providers (n=17) at the PMTCT clinic at the Greater Accra Regional Hospital (GARH). These participants were purposively selected based on their roles at the PMTCT clinic. Their voluntary participation was assumed after they have provided verbal consent to participate in the study. The interviews were audio-taped and transcribed verbatim. The data was analyzed using thematic framework approach.

Results: The findings of this study revealed that healthcare providers had deep knowledge of the Option B+ guidelines. These reflected in their definitions and the importance of the guideline for the likely health outcomes for the mother and the baby. Despite its benefits, the participants also lamented of the challenges they encounter in their day to day delivery of the services. The main barriers included inadequate counsellors, inadequate working space, limited laboratory capacity and lack of means of transport for monitoring and evaluation activities.

Conclusions: The findings show that Option B+ holds great promise for improving the health outcomes for HIV-infected women and their babies. This study calls for the need to develop strategies to address the health system constraints for the scalability and sustainability of the Option B+ programme by incorporating the findings of this study in policy formulation.

Keywords: Healthcare providers; health system; Option B+ guidelines; human immunodeficiency virus (HIV); Ghana

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Introduction

Sub-Saharan Africa (SSA) bears a greater burden of human immunodeficiency virus (HIV) and remains the region most affected by the HIV epidemic (1) accounting for almost seventy percent (69%) of the global burden of infection (2). An estimated 60% of the people living with HIV-1 in this region are women mostly in their reproductive age (2). Mother-to-child transmission (MTCT) accounts for the vast majority of new infections in children (3) and without treatment, approximately 25–50% of HIV-positive mothers will transmit the virus to their newborns during pregnancy,

childbirth, or breastfeeding (3). Furthermore, without any intervention, 30% of HIV infected children will die in the first year of life and 50% by their second birthday (1,3). Despite high HIV testing rates among pregnant women, global access to anti-retroviral therapy (ART) among HIV positive pregnant women remains unacceptably low, at about 30% (4) MTCT of HIV continues to be a major public health problem globally (5).

In Ghana, the estimated HIV prevalence among pregnant women attending antenatal care is 1.6% (6). MTCT of HIV is the second most common mode of transmission and accounts for approximately 15% of all new infections (7). The culture of breastfeeding is strong in Ghana (8). Breastfeeding is highly recommended to help improve infant health (8), therefore without any intervention the risk of transmission is 40% (7).

Despite the implementation of World Health Organization (WHO) prevention of mother-to-child HIV transmissions (PMTCT) interventions guidelines by Ghana, there still remain high pediatric HIV infections. To help eliminate MTCT by 2030, Ghana implemented PMTCT Option B+ guidelines to efficiently reach the lowest level of the primary care system for maternal and child health. The WHO 2013, ART guidelines (Option B+) for PMTCT recommend two options, including lifelong ART to all pregnant and breastfeeding women living with HIV regardless of CD4 count or clinical stage (9).

The WHO 2013 Consolidated Guidelines also acknowledged the need for additional research to support the recommendations to inform pragmatic decisions and to also promote optimal implementation (9). From the existing literature in Ghana so far, little is known about the implementation of this new PMTCT Option B+ guidelines. This study explored healthcare providers views on its implementation challenges to help inform policy on nation-wide scale and sustainability.

The study was a hospital-based qualitative research design. This design was chosen to allow for an in-depth exploration of health workers (HWs) perspectives on challenges faced in the implementation of the Option B+ guidelines at the Greater Accra Regional Hospital (GARH).

The study was carried out at the GARH of Ghana between April 2016 and May 2016. The hospital is the largest public hospital operating under the Ghana Health Service in the region. The facility serves as a referral point for all district hospitals in the Greater Accra region. It has 240 beds capacity. The GARH provides routine PMTCT services to women and attends to over 100 pregnant women at its antenatal clinic (ANC) daily. ANC is one of the three most essential care given to women during pregnancy (10). The prevalence of HIV among antenatal attendants at the facility was 5%, which is higher than the regional and national prevalence rates of 3.2% (11) and 1.9% (12) respectively. Within the facility, HIV testing is carried out at the ANC and positive cases are later referred to the HIV Clinic for further PMTCT care. The HIV clinic also serves as a referral PMTCT center for pregnant women diagnosed with HIV in other clinics in the Greater Accra Region without PMTCT services.

Methods

The study employed a qualitative approach using in-depth interviews with care providers and key informants. The participants of this study were HWs and staff of the PMTCT clinic. These participants were purposively selected based on their roles and knowledge of the subject under study to participate. HWs outside the clinic but within the same health facility were excluded from this study. The qualitative research approach was chosen for this study because it provides more in-depth and comprehensive information as data is gathered through open-ended questions. The method also helps address why and how questions to understand the critical context under study (13). Qualitative description involves exploring the meanings and the experiences of people with the goal of obtaining a holistic and interconnected understanding of the subject matter been studied (14) and strategies for facilitating implementation and scale up of new intervention (15,16).

Each eligible individual participant was given sufficient information about the study and also given ample opportunity to ask questions they may have prior to participation in the study. In addition, their rights to voluntarily participate or otherwise was explained to them as well as their right to withdraw at any time of the study. Their voluntary participation was assumed after they have provided verbal consent to participate in the study. Also, measures were taken to ensure participants' privacy. Names were not collected on the study instrument nor could the survey be linked to the name. The interviews were audio-taped. These were transcribed verbatim and manually analyzed using the thematic framework approach.

Data collection methods

In all, 17 healthcare providers at the PMTCT clinic

participated in this study. Data was collected, using semi-structured open-ended interview guide among participants. Data was collected on participants' views, knowledge and understanding of the Option B+ guidelines and barriers to its implementation. We obtained informed consent verbally at the start of each interview.

HWs who consented to take part in the study were approached and included in the study. All the interviews were conducted in English and recorded with the permission of participants. To ensure confidentiality, the interviews were done in secured rooms at the PMTCT clinic at the hospital. Each interview lasted between 15 and 35 minutes. The facilitator used probes and prompts to ensure that issues of interest were clearly explained to address the study objectives. Data saturation was achieved when participants could not provide any new information upon probes from the facilitator. In addition, field notes were taken in order to ensure that no relevant information was left out.

Data analysis

Data was analyzed using thematic framework approach. Several measures were taken to ensure and strengthen the trustworthiness and the credibility of the data. The transcripts were shared and read through thoroughly and independently by all study team members. The study team read the interview scripts multiple times and came out with themes and sub-themes and assigned codes. The codes were then copied into a separately labeled word file with their subsequent quotes and similar codes were put together or categorized to form the themes based on constructs. A matrix table with different colours was used to mark similar codes as well as codes that can be linked to each other to form the themes. The common themes were grouped from which sub-themes were identified. The codes were then copied into a separately labelled word file with their subsequent quotes and similar codes were put together or categorized to form the themes based on constructs and salient quotes from the themes were presented as results for the study.

Ethical statement

This study obtained a scientific review from the Navrongo Health Research Centre Institutional Review Board. Oral informed consent was obtained from each participant prior to participation.

Results

Knowledge about Option B+ guidelines

For knowledge of the Option B+ guidelines, all participants said it is an approach in which, all pregnant women who are tested HIV positive immediately initiate ART for life irrespective of their CD4 count or clinical stage. Responses from all the participants show that they understood the Option B+ PMTCT new guideline as aligned with the objective of this study and that of the WHO's definition.

For their views about the Option B+ guidelines with regards to virtual elimination" of pediatric HIV infection, is reflected in the following statements (IDIs-Health providers):

"*With the Option B+ approach*; *there is hope that we can completely eliminate MTCT of HIV for the generations to come*."

"*Because we start treatment as early as possible and it is also for life*, *the chance of us getting a zero infection in the future is possible*."

Despite the benefits the guidelines hold for mothers and their unborn babies, health providers were skeptical about certain aspects of the guidelines as expressed in the following statement (IDIs-Health providers):

"*The only aspect of the guideline some of us are not comfortable with is testing and starting medication or treatment the same day for the patients*. *We have also observed that from the complaints by some of the clients*, *they are not comfortable with that aspect of the same day testing and treatment*."

To support the above statement, this is what some of the health providers said with regards to immediacy of treatment on same day of testing (IDIs-Key Informants):

"*This is always seen in the way some of the clients react when told to start medication immediately after been diagnosed positive……I think that there is the need to always counsel them for some time for them to prepare their mind*."

The study sought HWs views on health system barriers they encounter on their day to day work. Inadequate experienced counselors, inadequate working space, limited laboratory capacity and lack of means of transport as the major obstacles they face in the implementing the new guidelines at the health facility setting.

Inadequate counselors

Lack of experienced counselors was a factor which featured prominently throughout this study by health providers. Some of the sentiments with regards to this issue are expressed in the following statements (IDIs-Key

Informants):

"*One of the major issues for now is that the counselors we have now, most of them are inexperienced. Majority are learning on the job……the few experienced ones are overburdened.*"

"*Currently we have less staff with the requisite skills and experience in counseling. The staffs we are getting are newly recruited who have just completed school without counseling experience. There is too much workload on the few experienced ones around thus resulting in long waiting time for our clients.*"

This is what some of the health providers said with regards to counselling experience: (IDIs-Health providers):

"*Some of us do not have the required skills to counsel the patients when they come to the clinic. We are now learning to acquire the practical skills of counseling and we believe that may not be enough to empower the participants.*"

The skills in compassionate care were also identified as a critical area of skills needed for handling patients but most of the HWs are deficient regarding this skill set (IDIs-Key Informants):

"*The skill of compassionate care is a very critical area in counseling; most of us do not have that skill. Workshops on compassionate care trainings are needed from time to time for our staff to acquire skills in empathy to be able to handle and relate well with patients they deal with.*"

Inadequate work space

The HWs mentioned inadequate space for provision of counseling and care services:

"*Our space for delivering PMTCT services is woefully inadequate for us. Due to inadequate space we are compelled to convert our corridors to increase the working space.*" (IDIs-Key Informants).

"*Look at clients' hanging all over the place, they have no space to sit and wait for their turn. Sometimes it is difficult to move around during clinic days because of the big crowds around.*" (IDIs-Health provider).

"*Privacy and confidentiality are sometimes being compromised due to lack of space.*" (IDIs-Health providers).

Limited laboratory capacity

The laboratory is unable to perform certain tests, for instance test confirmation of rapid diagnostic tests results of HIV-positive clients. This is a major constraint to the facility because patients are put on treatment without their rapid diagnostic test results not been confirmed.

"*Currently our laboratory lacks the capacity to confirm rapid diagnostic test results status of HIV clients. We rely on the rapid test results for making decisions. Confirming a client's HIV status is very important to avoid making a wrong decision.*" (IDIs-Health providers/Key Informants).

"*You know this HIV issue is life and death affair and also putting people on ARVs also come with its own side effects. We need to get things right from the beginning before putting people on ARVs.*" (IDIs-Health provider).

Lack of transport

Monitoring and evaluation was mentioned as not regularly done as expected due to inadequate means of transport. The participants were concerned that their inability to trace defaulters on the programme is likely to increase the number of people resistant to ART rate:

"*The hospital has only one bus and there is always competing demands for it from other units of the hospital. Transportation issue is affecting our follow-ups on clients who default in coming for their drugs. We are afraid that this is likely to increase the number of those who are lost to follow up and resistant to the drug.*" (IDIs-Key Informants).

"*Some of us* have *now resorted to do the follow-ups on our clients using our own phones and airtime to be contacting them but it is not as effective as tracing them.*" (IDIs-Health providers).

For the question as to whether the challenges mentioned could be attributable to a weak health system, participants' responses were in a negative.

"*We can say the current challenges are the result of a weak health system since each health worker has a role to play to ensure that the system works.*" (IDIs-Health providers/Key informants).

Discussion

This study sought to explore and understand health systems barriers related to implementation of Option B+ guidelines in Ghana. The results of this study suggest that offering the Option B+ therapy regimen to HIV+ pregnant women in Ghana improves both maternal and child outcomes. Health facility and system-related factors found in the implementation of the Option B+ guidelines by participants included inadequate counselors, inadequate work space, limited laboratory capacity and lack of means of transport. Achieving universal access to PMTCT services rests on the capacity of national and local health systems to deliver these services (17) and that addressing these barriers to

strengthen the health system requires technical support to countries (17) and political will and leadership. It is suggested that it is essential to look beyond policies and structures in addressing health systems factors (18).

Apart from the health system challenges, our study also highlighted health providers concern about same-day testing and initiation of ART treatment. These findings are consistent with previous studies (19,20), where HIV patients feeling overwhelmed with having to initiate lifelong ART immediately after diagnoses. The majority of HIV patients remain undiagnosed and many do not access HIV care and treatment despite a positive test (21), HIV patients are lost at every step along the continuum of care, particularly in the period between HIV diagnosis and initiation of ART (21).

According to (20) the likelihood that a patient who is diagnosed with HIV will follow the preventative guidelines for reducing HIV transmission, requires quality counseling. Therefore, strategies strengthening counseling services at initiation of treatment needed to be developed to improve same-day ART initiation and retention (22). Retention is critical to reduce HIV-related morbidity and mortality, reduce the incidence of new infections in children and adults, and reduce development of ART resistance (21). Historically, strategies to address retention have focused on the ART period (23).

The skills in compassionate care were identified as a critical area of skills needed for handling patients but most of the HWs are deficient regarding this skill set. This finding is affirmed in a study (24) that compassionate care is important in nursing and that care provided by nurses should base on individual patients' needs. Knowing and involving patients and careers in their care is crucial to improve quality of care for patients and hence need not to be undervalued (25).

The benefits of compassion to the patient calls for compassion care at all levels in nurse education and training. It is based on this that, (25) assert that compassion from nursing staff is broadly aligned with actions of care, which can often take time to be established. That despite recent calls for the increased focus on compassion at all levels in nurse education and training; there are two schools of thought as to whether it can be taught or remains a moral virtue. It is based on this that (24) think that introducing vignettes of real-life situations from the lens of the patient to engage practitioners in collaborative learning in the context of compassionate nursing could offer opportunities to staff for valuable and legitimate professional development. Support for professional growth and development of the entire health care workforce will require nursing education to develop nurses' knowledge and skills that will help nurses to provide compassionate care (26).

Our study documented inadequate counsellors as one of the major health system barrier affecting the implementation of the Option B+ programme. This finding is consistent with other studies in Africa (27,28). Given the relevance of counseling, more HWs are to be trained to acquire or update their knowledge and skills in counselling in PMTCT clinics. The participants called for basic training in counselling and compassionate care for all PMTCT staff members; including administrative staff and lay counsellors (29). Compassionate care training has gained some popularity over recent years. This is because its significance has become increasingly recognized in enhancing quality patient care, wellbeing, and overall quality of life. Compassionate care is emerging as a competency that healthcare providers are expected to provide (30). While the importance of compassion has been extolled in fields such as psychology, social work, and theology, it is now being recognized for its positive impact on healthcare (31). This point to the urgent need for educational interventions for PMTCT staff to strengthen the health system for PMTCT programmes. It should also be noted that whereas capital intensive may be required in the case of major changes in such programmes, innovative interventions such as mentoring of more HWs from within to assist with counselling may help to bridge some of the existing knowledge gaps among HWs.

The study also revealed that the lack of transport hampered follow-up on clients in the communities. Several studies across SSA have shown a disturbing pattern of loss to follow-up emerging at each stage of the PMTCT treatment cascade (32-34) between first antenatal presentation and delivery (35) and 6 weeks postpartum (36) and after linkage to postnatal HIV care (37). In order to approach the goal of "virtual elimination" of pediatric HIV MTCT risk of less than 5%, a national program based on Option B+ will need to include strategies to improve PMTCT uptake to nearly 100% throughout pregnancy and breastfeeding, to safely reduce the duration of breastfeeding, and to support medication adherence during both pregnancy and breastfeeding (38).

Work space for PMTCT services was a challenge that HWs have to grapple with on daily basis in the delivery of HIV counselling and care for patients, resulting in long

waiting time and also sometimes compromising privacy and confidentiality. This finding is concurred with a study conducted in Ghana (39) and other developing countries (15) where space was a barrier in providing quality and patient-friendly services. Clients' perceptions of level of privacy and confidentiality influence their willingness to undergo HIV testing and counselling (39). Lack of privacy at counselling centers has militated against effort to improve utilization of HIV testing and counselling. Some previous studies indicate that confidentiality is often compromised by established practices in health services (39) with poor women at a distinct disadvantage (40). Privacy and confidentiality is critical in settings like Ghana where stigmatization still remains predominant. HIV positives patients are very much stigmatized, and people do not want others to know of their status. This confirms that privacy and confidentiality are pivotal in the improvement of HIV testing and counselling at the health facility level (41).

Another barrier that emerged in this study was limited laboratory capacity to confirm HIV rapid diagnostic test results as compared to lab-based testing (42,43). Rapid HIV testing or diagnostic point-of care has the potential to become a valuable and reliable tool in limited resource settings. However, the allocation of resources to diagnostic laboratory testing has not been a priority for limited resource settings like Ghana.

Study limitations and strengths

A limitation of our study is that, it cannot be generalized since it was carried out in a single site regional hospital and might not reflect what pertains in other hospital settings in Ghana. However, our study has documented health system constraints encountered by healthcare providers in the implementation of the Option B+ programme in Ghana. This is critical for policy issues on scalability and sustainability of PMTCT Programmes especially, Option B+ guidelines in resource poor settings like Ghana. There is the need for a further research to explore patients' views on acceptability issues regarding provision of Option B+ services to inform programmatic decisions and policy implementation.

Conclusions

The findings show that Option B+ holds great promise for improving the health outcomes for HIV-infected women and their babies. However, there is the need to develop strategies to address the health system constraints for the scalability and sustainability of the Option B+ programme by incorporating the findings of this study in policy formulation.

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Footnote

Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at http://dx.doi.org/10.21037/jhmhp.2018.05.05). The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. The study was conducted in accordance with the Declaration of Helsinki (as revised in 2013). This study was approved by the Navrongo Health Research Centre Institutional Review Board and oral consent was obtained from all patients.

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