

Opportunities and Constraints Affecting Service Delivery of Basic Emergency Obstetrics and Neonatal Care (BEmONC) in Resource Constrained Environment: West Pokot Kenya

Sum Jerotich Tecla

Abstract: ***Background:** Approximately 15% of expected births worldwide will result in life-threatening complications during pregnancy, delivery, or the postpartum period. Most maternal and neonatal deaths in low-income countries, including Kenya, are attributable to a handful of preventable causes. Emergency obstetric and newborn care (EmONC) is an integrated strategy that aims to equip health workers with skills, life-saving medicines, and equipment to manage the leading causes of maternal and newborn death. It is on this basis that this study was conducted to find out how the BEmONC training impacted on the reproductive health services that the people of West Pokot are receiving despite the several challenges the county is facing to include a high burden of maternal and newborn mortality. **Objectives:** The specific objective was to establish challenges and opportunities affecting service delivery of BEmONC services, following the training program that was rolled out in the year 2014, in West Pokot County, Kenya. **Methods:** A methodological triangulation design was used as it incorporated elements of both quantitative and qualitative approaches. Informing this decision was the Pragmatic worldview. Quantitative approach adopted a descriptive cross sectional ex post facto design of 49 randomly selected health facilities. The BEmONC observation checklist, guided and in-depth interviews were used to collect qualitative data. The sample size was purposively determined when saturation of the data was reached and data was analyzed thematically. **Results:** Findings indicated that the Basic Emergency Obstetrics and Neonatal training program was effective but the level of its effectiveness varied by facility type, designation, geographical setting and operating agency. The challenges that affected BEmONC service delivery included understaffing (92.6%), lack of supplies and equipment (63%), poor infrastructure (44.4%), ineffective transport and communication (69%), insecurity (42.9%) and insufficient water supply. A new collaborative health insurance program that provided health care coverage for Kenya's poorest was one common opportunity identified. **Conclusion:** The AMPATH sponsored BEmONC training was effective as it led to improved care and better BEmONC outcomes, however, its effectiveness varied by facility type, designation, geographical location of facility and operating agency. Key items lacked in many facilities and relatively few had all the required commodities and equipment to provide BEmONC. Challenges that adversely affected the delivery of high-quality maternal and newborn care services were overwhelmingly higher than the opportunities. **Recommendations:** This study recommends advocating for a complete BEmONC system by: Availing all the essential equipment, drugs and supplies; Improving strategies to sustain knowledge and competencies of the providers as well as maintain equipment and supplies for use to avoid wear and tear; Improving supply chain management for essential commodities at the peripheral facilities.*

Keywords: Emergency obstetric and newborn care, Challenges, Opportunities, Regional Medicine

1. Introduction

Approximately 15% of expected births worldwide will result in life-threatening complications during pregnancy, delivery, or the postpartum period (WHO, UNICEF, UNFPA, & World Bank, 2014). Since the landmark Safe Motherhood Conference was convened in Nairobi in 1987, maternal, newborn, and child health has gained increasing international recognition as a major global health priority. The commitment to end all preventable maternal and child deaths was most recently expressed during the launch of a financing facility by global partners, who committed more than US\$4 billion to scale up and sustain essential services for women and children (WBG, 2015). In spite of these efforts, recent data indicate that progress toward reducing maternal and neonatal mortality is likely to fall short of the targets set by Millennium Development Goals (MDGs) 4 and 5, particularly in sub-Saharan Africa, where two-thirds of the world's maternal deaths and half of the world's child deaths are estimated to occur (Echoko, Kombe, Dubourg, Evjen-Olsen, & Mwangi, 2013)

While remarkable progress has been made toward the reduction of maternal and child mortality in many low-resource countries, critical challenges remain in

provision of high-quality EmONC services, particularly in Sub-Saharan Africa and South-East Asia. The global community must focus on reaching the poorest and most vulnerable populations to address persistent inequities (Souza, Gulmezoghi, Vogel, Carroli, Lumbiganon, & Qureshi, 2013). These inequities include, among other things, a shortage of skilled birth attendants (SBAs) in the most vulnerable communities that is driven by lack of targeted workforce planning strategies, for example matching deployment with the competencies of providers and addressing well-known factors that discourage workforce retention. Issues still persist, however, that adversely affect the delivery of high-quality maternal, newborn, and EmONC services in health facilities. These include stock-outs of essential maternal, newborn, and child health commodities due to poor logistic management systems; limited opportunities for providers to access supportive supervision and engage in continuing professional development activities; difficulties in keeping up-to-date clinical guidelines based on emerging scientific evidence; weak record-keeping and monitoring and evaluation systems that limit opportunities to document both successes and challenges to service delivery; and inadequate financing of country programs, or conversely, excessive donor dependency that stalls sustained progress.

Volume 9 Issue 3, March 2020

www.ijsr.net

Licensed Under Creative Commons Attribution CC BY

Jhpiego and MCHIP have worked in alliance with other existing global programs, such as the Global Fund for AIDS, Tuberculosis and Malaria, the President's Emergency Plan for AIDS Relief, the Partnership for Maternal, Newborn and Child Health, and the Child Survival Call to Action, to provide opportunities for addressing issues that overarch the provision of quality health systems, such as the need for health systems strengthening and strategies for management of communicable diseases that affect women and their families. Jhpiego and MCHIP have also worked with initiatives to address community- and facility-level challenges, such as the United Nations Commission for Life-Saving Commodities for Women and Children's Health, which aims to address the problem of stock-outs of key commodities at the community level, and HBB, which focuses on having at least one qualified provider in each delivery setting ready to provide newborn transition services.

KSPA, 2004 demonstrates that many facilities offering obstetric services lack the equipment and basic supplies necessary to support the provision of quality antenatal care (ANC), delivery, and postnatal care (PNC) services. It further shows that the health providers' level of knowledge, competency, and skills are not up to date with the recommended practices. A study done by NCAFD, 2005, revealed that although training of service providers is an important element in the provision of quality maternity care, less than 20 percent of health workers interviewed had received training in focused ANC or PNC in the last 3 years. Among caregivers providing delivery services, only 18 percent had received training in lifesaving skills, and only 37 percent had received training in the prevention of mother-to-child transmission of HIV during the last 3 years. In the year 2014, AMPATH PLUS and its consortia partners embarked on a scale up of EmONC services across the Western region of the country, Kenya that carries a population of about 4.3 million people. The program is the USAID Implementing Partner [IP] for eight counties namely: Busia, Bungoma, Elgeyo Marakwet, West Pokot, Kisumu, Nandi, Trans-Nzoia and UasinGishu. It sought to implement global programs to build provider capacity in providing Basic and comprehensive EmONC services to women and newborns in poor- resource settings. The primary objective of this intervention was to make sure that at least half of the target group of facilities had capacity to offer all the signal functions for BEmONC. BEmONC training program was rolled out for the health care providers in West Pokot County with the overall aim of capacity building the health care facilities and help reduce the ever-increasing maternal and neonatal deaths.

The Turkana-Pokot cross border conflicts is widespread and of increasing concern. A combination of difficult terrain and climate, poor infrastructure, and scant public resources has left the West Pokot County trailing in health and development, with grave consequences for the health of women and children. For nearly all health indicators related to maternal and child survival, the County lags far behind Kenya as a whole. It is estimated that 565 deaths per100, 000 births occur in West Pokot County alone annually (Kavita, Rebekah, & Rozalinetal, 2014). This is a sharp contrast to the reported national rate of 362 deaths per100, 000 live births (KDHS, 2014). One important intervention was the

AMPATH PLUS sponsored BEmONC training program conducted in 2014. This organization and its development partners made substantial investments in training and in increasing the supply of commodities and equipment for maternal and newborn care. However, these efforts have been largely fragmented. The capacity of health facilities across the county to provide the BEmONC signal functions is largely unknown. Remarkably, the extent to which available data are used to set priorities for the allocation of resources is unclear, as well. This study therefore sought to establish challenges and opportunities in service delivery of BEmONC services in West Pokot County, Kenya in order to inform policy.

2. Objectives

2.1 Broad objective

The broad objective of the study was to assess the effectiveness of Basic Emergency Obstetric and Neonatal Care (BEmONC) training program in West Pokot County, Kenya.

2.2 Specific Objectives

The specific objective of the study was to establish challenges and opportunities affecting service delivery of BEmONC services in resource constrained environment, West Pokot County.

3. Methods

A methodological triangulation design was used as it incorporated elements of both quantitative and qualitative approaches. Informing this decision was the Pragmatic worldview. Quantitative approach adopted a descriptive cross sectional ex post facto design of 49 randomly selected health facilities. The customized Averting Maternal Death and Disability (AMDD) tool adopted from Columbia University was used to collect quantitative data. Completed questionnaires were coded and data entry was done in Microsoft Excel dashboards (Spreadsheet). It was later exported to STATA V.13 for analysis. Descriptive statistics (frequencies, means and standard deviation) were used to summarize the data. The BEmONC observation checklist, guided and in-depth interviews were used to collect qualitative data. The sample size was purposively determined when saturation of the data was reached and data was analyzed thematically. An Ethical approval was sought from Institutional Research and Ethics Committee (IREC) of Moi University was obtained prior to the commencement of the research to ensure that the risks faced by human participants in this research were minimal. Clearance letter to conduct the study was obtained from the Minister of Health, and Medical Officer of Health (MOH), West Pokot County. The respondents' privacy was respected. Anonymity and confidentiality was assured in that under no circumstances would the researcher identify the informants or make it public. In the study pseudo- names were used to describe respondents thus avoid chances of respondent identification.

4. Results

4.1 Demographics

There was a total of 33(78.57%) facilities that had conducted deliveries within the last 12 months with 9 (21.43) facilities having not attended to any delivery. Figure 1 illustrates the above information.

4.2 Designation of Facilities

Majority 37(88.1%) of the facilities are situated in the rural set up while only 4 (9.52%) care found in the urban environment. It was however not known where the designation of 1 (2.38%) facility belonged to.

4.3 Level of Facilities

Dispensaries carried the larger 29 (69.05%) representation of the health facilities in West Pokot County followed by the health centers 7(16.67), the Sub-county facilities comprised 4(9.52) and the least 1(2.38%) made up the County/District hospital. See Figure 2.

4.4 Challenges and Opportunities

Health providers identified: Inadequate Health Facilities, ineffective transport and communication, culture pertaining rustling which brings about insecurity in the region, poor infrastructure, inadequate & poor retention of staff, inadequate supplies & life-saving drugs, inadequate mechanisms put in place to sustain the program, lack of supportive supervision, insufficient pre-service and in-service training in obstetric emergencies, inadequate mechanisms to sustain program and transfer of skilled staff between facilities leaving facilities with no trained staff as major challenges in the provision of timely, quality emergency obstetric care. These themes were generated from the in-depth interviews conducted in all the forty two facilities selected in West Pokot. Figure 3 summarizes these challenges.

Issues still persist, however, that adversely affect the delivery of high-quality maternal, newborn, and EmONC services in health facilities. These include stock-outs of essential maternal, newborn, and child health commodities due to poor logistic management systems; limited opportunities for providers to access supportive supervision and engage in continuing professional development activities; difficulties in keeping up-to-date clinical guidelines based on emerging scientific evidence; weak record-keeping and monitoring and evaluation systems that limit opportunities to document both successes and challenges to service delivery; and inadequate financing of country programs, or conversely, excessive donor dependency that stalls sustained progress.

4.5 Transportation and communication are barriers to referral network functioning

Universally, all the health providers reported limited availability of transportation and lack of communication and coordination between the dispensaries, health centers and the

hospital before and after referrals. They were identified as hindering the efficiency of the referral system.

Challenges in securing transportation complicate referrals and contribute to delays in providing emergency obstetric services. Most of the health centers said that the average travel time to the hospital was more than three hours, but noted that the ambulance system was unreliable due to driver shortages and vehicle breakdowns. "In the day time, there is no ambulance available from the sub city. It may be due to driver shortages, or the fact that the ambulance is not working."(Female, Health Center, Nurse). Accessing majority of these facilities was the most challenging and very risky task. Plate 1. below is one swinging bridge in Tamkal District, Central Pokot, Where patients have to cross as they are carried using a human stretcher to arrive at the nearest Health facility. The above river trans-passes West and North Pokot and patients have to cross it in order to access Kongelaiand Kacheliba health facilities which poses a challenge coupled with difficult terrain especially when trying to cross the flooded Swam River that borders Alale and many others.

When ambulances are not available, referred women have to make their own way to the hospital. Several respondents noted occasions when women in labor had to walk, take a taxi or find another means of transportation to the hospital. The chart below gives summary of how transport and communication was a challenge in the region.

Additionally, when women are referred in an ambulance, referring facilities are mandated to send a provider to accompany the woman. While respondents agreed with this requirement in principle, they noted that it strained facility capacity, particularly in the evening when only one or two providers are on duty at the health center level. "One of our staff members must accompany the mother during referral and this brings about shortage of staff in the maternity."(Midwife, County Hospital).

4.6 Lack of Supportive Supervision Efforts

During in-depth interviews, 50 % of the healthcare providers stated that their institutions lacked sufficient supervisory mechanisms and support. The analysis of the interviews suggested that routine supervision tends to be traditional rather than supportive. Key characteristics that differentiate supportive supervision from traditional supervision included: involvement of staff members and a wider range of colleagues in evaluation; continuous supervision occurring in a variety of contexts rather than only periodic visits by external supervisors; provision of on-site technical support/training and joint problem solving instead of limited to reactive problem solving or directions from the supervisor; actions and decisions are recorded and followed-up as compared to no or irregular follow-up. Respondents' descriptions of irregular or unscheduled visits by external supervisors that were focused on record-keeping, attendance, and "fault finding" indicates that a traditional supervisory model persists in these health facilities. Some health care providers opined:

“Supervision visits are more of a fault finding rather than supportive. It is not supportive and discourages us due to the actions of the supervision teams.”(Female nurse, Health Center)

“Existing programs only review the quality of your documentation, or whether you are present or absent. I don't see anything that they are doing in order to facilitate my work. They are only interested in whether or not we are present.” (Midwife, Dispensary)

“Most of the time, no one asks us about our problems during supervision, no one hears about our problems. What they want to do is copy already written and available data for the sake of reporting.” (Clinical officer, Sub county Hospital)

“In the future, it would be better to give support rather than supervising all the time. Feedback should be given to the health center about the problems and issues identified during the supervision, so that the health center can intervene. If the problem is beyond the health center, the gap should be filled by the supervising body.” (Nurse, Sub county Hospital)

At some facilities, respondents viewed supervisory visits as an opportunity for the health center to highlight shortages of medical supplies, and to solicit the procurement of necessary goods. Some respondents expressed frustration that supervisory visits did not result in provision of needed supplies.

“They come to supervise us every three months. We do not have a vacuum, or suction machine. I commented on this when they came for supervision, but they did not fill our gap.”(Nurse, Health Center) Some respondents had experienced supportive supervision; however, their descriptions suggest that many of these programs, like many of the trainings, are donor and project specific. Overall, respondents expressed strong interest in supportive supervision and hope that such a supervisory system would provide constructive feedback, actionable quality improvement work plans and improvements in availability of needed medical supplies. Although the provision of supportive supervision falls under the mandate of the County, there are currently no formal guidelines for the implementation of supportive supervision at the facilities.

4.7 Communication gaps between facilities

Guidelines state that “Obstetric referrals will be mediated by communication between referring health facility and receiving health facility through the liaison officer/referral coordinator of both facilities”.

Respondents knew that they should call the hospital before referring a woman and recognized the importance of doing so, particularly in order to assess whether the hospital could receive the woman. For instance a health center health officer stated that “It is very difficult to communicate with the referral hospital because we do not have network in our facility, unless you climb uphill or a tree is when you can access network.”(Nurse, Dispensary).

However, lack of dedicated phone lines hampered pre-referral communication. Providers explained that “the phone is not always accessible, and women are sometimes referred without a call” (Clinical officer, Health Center). Despite awareness, lack of dedicated communication infrastructure was a barrier to implementing the referral protocol.

“In theory, we are supposed to call Kapenguria Referral Hospital to check on the availability of beds, but this is not applied practically. We are not provided with phones for communication. (Nurse, Sub county Hospital).

Respondents recognized the consequent delay in the provision of appropriate emergency obstetric care as a threat to women's health, and described cases in which on-referral resulted in women giving birth at home or in transit.

“When mothers are referred to the hospital, the hospital fails to accept the referrals. The mothers spend the whole night searching for a hospital that is willing to accept or admit her. She carries the referral paper from hospital to hospital. Nobody knows what happens to those mothers, whether they are alive or dead.” (Nurse, Sub- county Hospital)

“One of our mothers was sent to three hospitals and got exhausted at the fourth hospital. She gave birth to her child on the way home. Women go everywhere searching for a hospital, and end up having a home delivery.” (Nurse, Dispensary)

The scenario of women being referred from hospital to hospital because of lack of beds and inadequate communication between the different levels of the health system was mentioned by respondents across facilities, and among all cadres of provider.

Some of the opportunities identified from the study that accelerate BEmONC included; Government & NGO support, locals trained & willingness to embrace change, presence of medical training school, stable economy, a learned County, anew collaborative health insurance program that provides health care coverage for Kenya's poorest. AMPATH PLUS and AMREF have worked in alliance with other existing global programs, such as the Global Fund for AIDS, Tuberculosis and Malaria, the President's Emergency Plan for AIDS Relief, the Partnership for Maternal, Newborn and Child Health, and the Child Survival Call to Action, to provide opportunities for addressing issues that overarch the provision of quality health systems, such as the need for health systems strengthening and strategies for management of communicable diseases that affect women and their families.

5. Discussion

Existing literature identifies various determinants for the three delays for preventive and emergency obstetric care. Major barriers to care identified in similar low and middle-income settings include socio cultural factors, perceived benefit/need, economic accessibility and physical accessibility of services (Jhpiego, 2004) and (Islam, Haque,

Waxman, & Bhuiyan, 2006). Socio cultural factors, such as maternal age and education, and perceived need for care, are determinants for the 'first delay,' which influence the decision-making process regarding whether the mother seeks care. Findings from this study contrast the above because the major challenges health providers identified in the provision of timely, quality emergency obstetric and neonatal care included; inadequate Health Facilities, ineffective transport and communication, culture pertaining rustling which brings about insecurity in the region, poor infrastructure, inadequate & poor retention of staff, inadequate supplies & lifesaving drugs, inadequate mechanisms put in place to sustain the program, lack of supportive supervision, insufficient pre-service and in-service training in obstetric emergencies, inadequate mechanisms to sustain program and transfer of skilled staff between facilities leaving facilities with no trained staff

Studies have noted that the engagement of providers in the identification and evaluation of interventions to improve the quality of emergency obstetric care are invaluable (Dogba & Frontier, 2009) and (Gabrysch, et al., 2012). Provider perspectives are also needed to identify high-impact interventions that address poor quality emergency obstetric services (WHO, Everybody's Business: Strengthening health systems to improve health outcomes. WHO's framework for action, 2007). A recent study in rural Ethiopia found that providers had relevant insights into the factors that lead women to seek facility based births (Gabrysch, et al., 2012). As urban care seeking profiles in Addis Ababa are markedly different from rural care seeking profiles, the knowledge and perceptions of urban maternal health providers can contribute to identifying barriers to quality emergency obstetric care in Addis Ababa. The above information is indeed relevant to this study but no information was found during the study regarding the same.

Some of the opportunities identified from the study that accelerate BEmONC included; Government & NGO support, locals trained & willingness to embrace change, presence of medical training school in the region (Kapenguria County Referral Hospital), stable economy, a learned county and a new collaborative health insurance program that provides health care coverage for Kenya's poorest.

Another great opportunity is that AMPATH PLUS and AMREF have worked in alliance with other existing global programs, such as the Global Fund for AIDS, Tuberculosis and Malaria, the President's Emergency Plan for AIDS Relief, the Partnership for Maternal, Newborn and Child Health, and the Child Survival Call to Action, to provide opportunities for addressing issues that overarch the provision of quality health systems, such as the need for health systems strengthening and strategies for management of communicable diseases that affect women and their families.

They have also worked with initiatives to address community- and facility-level challenges, such as the United Nations Commission for Life-Saving Commodities for Women and Children's Health, which aims to address the problem of stock-outs of key commodities at the community

level, and HBB, which focuses on having at least one qualified provider in each delivery setting ready to provide newborn transition services. New opportunities are emerging in the post Millennium Development Goal era, such as: the Beyond Zero Campaign, Every Woman, Every Child; Every Newborn Action Plan; the Commission on Information and Accountability for Women's and Children's Health; A Promise Renewed-Call to Action; Ending Preventable Maternal and Child Deaths and Ending Preventable Maternal Mortality. Kenya needs to take advantage of these global initiatives to leverage resources for their efforts to achieve reductions in maternal and neonatal mortality.

6. Conclusion and Recommendations

The AMPATH sponsored BEmONC training was effective as it led to improved care and better BEmONC outcomes, however, its effectiveness varied by facility type, designation, geographical location of facility and operating agency. Key items lacked in many facilities and relatively few had all the required commodities and equipment to provide BEmONC. Challenges that adversely affected the delivery of high-quality maternal and newborn care services were overwhelmingly higher than the opportunities. The study recommends the need to improve supply chain management for essential commodities at the peripheral facilities. This may require innovations such as the use of mobile phones to track and replenish the same. The Beyond Zero Campaign Program is a major opportunity for the study. This program and other key stakeholders in the region should take lead in championing and advocating for the implementation of the suggested recommendations.

References

- [1] Dogba M, Fournier P. Human resources and the quality of emergency obstetric care in developing countries: a systematic review of the literature. *Hum Resour Health* 2009; 7: 7
- [2] Echoka E, Kombe Y, Dubourg D, Makokha A, Evjen-Olsen B, Mwangi M. Existence and Functionality of Emergency Obstetric Care Services at District Level in Kenya: Theoretical Coverage Versus Reality. *BMC Health Services Research* 2013;13:113.
- [3] Gabrysch S, Civitelli G, Edmond KM, Mathai M, Ali M, Bhutta Z. New signal functions to measure the ability of health facilities to provide routine and emergency newborn care. *PLoS Med.* 2012; 9: e1001340.
- [4] Government of Kenya, Ministry of Health. . Kenya Service Availability and Readiness Assessment Mapping (SARAM) Report, 2013. Available at: http://www.who.int/healthinfo/systems/sara_reports/en/. Accessed April 3, 2014
- [5] Islam MT, Haque YA, Waxman R, Bhuiyan A. Implementation of emergency obstetric care training in Bangladesh: lessons learned. *ReprodHealth Matters* 2006; 14: 61-72.
- [6] Jhpiego. Site assessment and strengthening for maternal and newborn health programs. Available at: <http://www.jhpiego.org/files/SiteAssessMNH.pdf>. JHPieGO, Baltimore, USA (Accessed: July 13, 2014)

- [7] Kavita B, Rebekah W. Rozalinetal D. Partnership for Maternal and Neonatal Health West 2014. 8) National Coordinating Agency for Population and Development (NCAPD) [Kenya], Ministry of Health (MOH), Central Bureau of Statistics (CBS), ORC Macro. Kenya Service 2005.
- [8] Provision Assessment Survey. Nairobi, Kenya: National Coordinating Agency for Population and Development, Ministry of Health, Central Bureau of Statistics, and ORC Macro. Reproductive health during conflict and displacement: A guide for programme managers 2004.
- [9] Souza J. Gulmezoqlu AM, Vogel J, Carroli G, Lumbiganon T. Qureshi Z. Moving beyond essential interventions for reduction of maternal mortality (the WHO multi-country survey on maternal and newborn health): a cross-sectional study. Lancet 2013; 381: 1747-1755.
- [10] The World Bank Group. Development Partners Support the Creation of Global Financing Facility to Advance Women's and Children's Health. Press release, January 6, 2015. Available at: <http://www.worldbank.org/en/news/pressrelease/2014/09/25/development-partners-support-creation-global-financing-facility-women-children-health>. (Accessed April 3, 2014)
- [11] WHO, UNICEF, UNFPA, World Bank. Trends in maternal mortality: 1990 to 2010. WHO, Geneva, 2012. Available at: <http://www.unfpa.org/public/home/publications/pid/10728>. (Accessed April 3, 2014)
- [12] World Health Organization. Eeverybody's Business: Strengthening health systems to improve health outcomes. WHO's framework for action. WHO, Geneva 2007; Available at: http://www.who.int/healthsystems/strategy/everybodys_business.pdf. (Accessed April 3, 2014)