

The Development of Basic Emergency Obstetric and Newborn Care (BEmONC) and Maternal Health in the Philippines: A Historical Literature Review

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ABSTRACT

Introduction. Implementation of Basic Emergency Obstetric and Newborn Care (BEmONC) aims to curb maternal mortality. However, the Philippines failed to significantly reduce the maternal mortality rate (MMR) targeted in the Millennium Development Goals (MDGs). Currently, the country is still far from the targeted Sustainable Development Goals (SDGs). This review describes the historical development of BEmONC in the Philippines over the past 13 years and provides insights on its role in decreasing MMR.

Methods. We searched online for journal articles, publications, reports, policies, and other issuances related to BEmONC and maternal health in the Philippines. We accessed updates and data via correspondence with the Department of Health (DOH). Statistics were compiled from public databases. The identified citations were screened, appraised, synthesized, and analyzed in a historical approach.

Results. A direct result of the Emergency Obstetric Care Approach, BEmONC was developed to respond to the high MMR in the Philippines, in line with global efforts to improve maternal health. However, BEmONC functionality generally remained inadequate.

Conclusions. Although the provision of BEmONC services increased facility-based deliveries and skilled birth attendance during childbirth, this failed to decrease MMR and achieve targeted goals substantially. Further capacity-building is needed, especially in rural and resource-poor areas. Government issuances at the national and local levels should be aligned to complement each other. There should be a health systems approach that considers the building blocks of an efficient health care system and the social determinants that impact them.

Keywords: Basic Emergency Obstetric and Newborn Care, Maternal Health Services, Maternal Mortality, MMR, Philippines

INTRODUCTION

Maternal Deaths Around the Globe

Maternal Mortality Ratio (MMR) is a major indicator of a country's general health care status.¹ Attention has been given to maternal health since the 1980s. In 1990,² global MMR was at 385 deaths per 100,000 live births. A gross disparity was notable between developed regions (23 deaths per 100,000 live births) and developing and underdeveloped regions (430 deaths per 100,000 live births). The South-eastern Asian region recorded 320 deaths per 100,000 live births.

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Maternal health remains a challenge in the Philippines despite various interventions. This paper explains how major policies and programs came about in the country and gives a glimpse of their effect on MMR. It provides national historical context to guide policymakers, educators, and healthcare providers in improving maternal health.

MMR in the Philippines varied widely based on different sources. The National Demographic and Health Survey (NDHS) reported 213 deaths per 100,000 live births

in 1986 and 209 in 1993, while the United Nations (UN) and Philippine Statistics Authority (PSA) estimated MMR at 152 and 80.13, respectively, in 1990 (Figure 1).

A 75% reduction in MMR by 2015 was targeted by the Millennium Development Goal 5 (MDG 5).³ Different partnerships, approaches, strategies, programs, activities, and policies surfaced across the globe to improve maternal care (Figure 2). The Philippines committed to reduce MMR from 209 (1993 NDHS) to 52 deaths per 100,000 live births.⁴

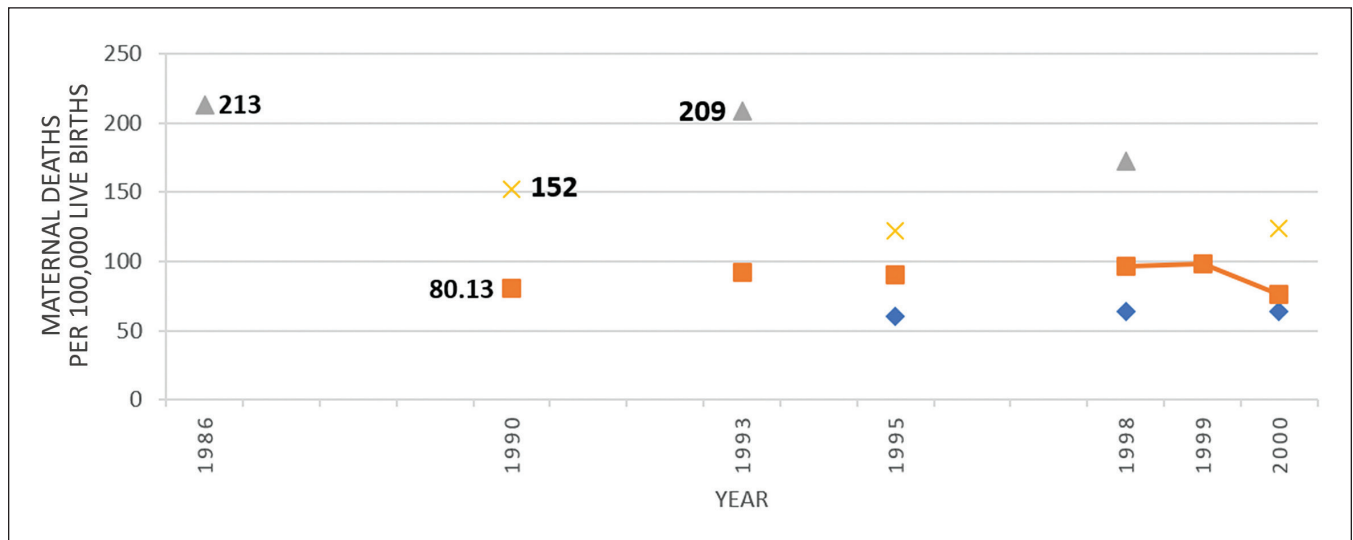


Figure 1. Maternal Mortality Rate (MMR) in the Philippines prior to Millennium Development Goals (MDGs).

Sources: Field Health Services Information System (FHSIS), NDHS, PSA, and UN Estimates

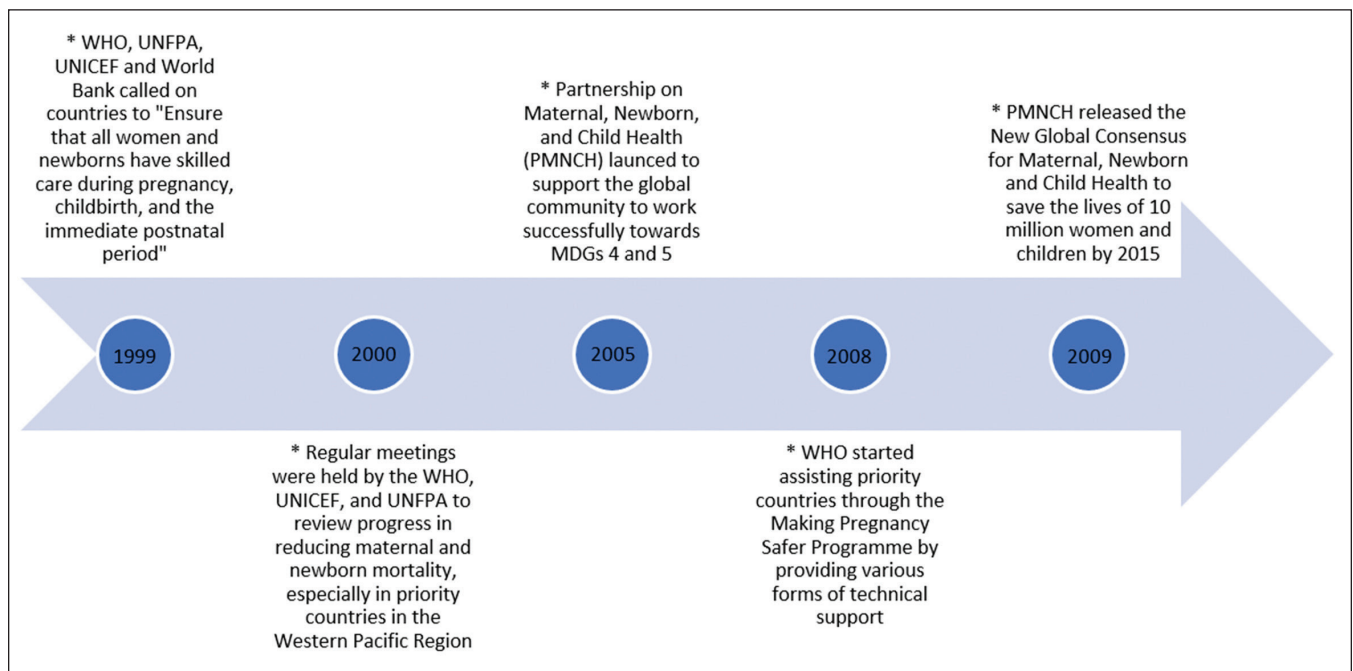


Figure 2. Global Interventions to Address Maternal Mortality.⁵⁻⁸

Interventions Post-MDG

Countries shared learning experiences as they carried out their respective national programs. Those with high MMRs were technically assisted by the World Health Organization (WHO).

Global agencies and funders supported the Philippines in achieving its MDG commitments. The Women's Health and Safe Motherhood Project⁹ (WHMSP) was implemented in selected regions of the country from May 1995 to June 2002. It aimed to improve the health status of women, particularly those of reproductive age. Interventions were made in the areas of service delivery, institutional development, community partnerships, policy, and operations research.

From 2006 to 2012, the Women's Health and Safe Motherhood Project 2 (WHMSP2) was launched and rolled out in other regions based on recognizing that "good maternal health can also strengthen the entire health system."¹⁰

As the national government gave more attention to maternal health, improvements in health financing, resources, service delivery, and policies followed. In 2003, the Philippine Health Insurance Corporation (PhilHealth) started to offer "Maternity Care Packages for Normal Spontaneous Delivery" in hospital and non-hospital facilities.^{11,12}

In June 2005, the Department of Health (DOH) adopted the FOURmula ONE for Health in its effort to take bolder steps in reforming the health system towards the achievement of health goals. These reforms focused on 1) healthcare financing, 2) health regulation, 3) health service delivery, and 4) good governance.^{13,14}

By 2006, DOH also introduced the Health Facilities Enhancement Program (HFEP), which supported the building of smaller health facilities such as barangay health stations, birthing, and lying-in clinics, and infirmaries.¹⁵

MATERIALS AND METHODS

A literature search was done in Medline, Scopus, HERDIN, and Google Scholar from February to March 2021 using the keywords "BEmONC", "EmONC", "BEmOC", "EmOC", "emergency obstetric care", "maternal health", "maternal mortality", "MMR" and "Philippines" for a scoping search on the topic. Snowballing of cited references was done, including grey literature. Policies, publications, reports, and other issuances related to maternal health downloaded from the DOH website and national legislation were reviewed. Annual reports and statistics were retrieved from online databases, including the NDHS, Field Health Services Information System (FHSIS), PSA Vital Statistics, Family Planning Survey (FPS), Family Health Survey (FHS), National Nutrition Survey (NNS), UN, and Responsible Parenthood and Reproductive Health (RPRH) reports. Additional data were also requested from the DOH on BEmONC updates and status via email correspondence.

A historical literature review was carried out. Extracted data did not undergo statistical analysis in this study. Although BEmONC includes obstetric and newborn

care interventions, this study focuses only on maternal health and mortality. This article reviews BEmONC as an intervention and underscores the strengths and challenges in its development and actual practice.

RESULTS

Shift to Emergency Obstetric Care Approach

As different interventions yielded varying results and led to new insights, conclusions, and recommendations, paradigms likewise shifted and changed over time.

Two basic strategies that underpinned efforts to address high maternal mortality from the 1980s to 2000s were the training of traditional birth attendants (TBAs) and applying the risk approach through ante-natal clinics.¹⁶ However, these strategies barely lowered MMR. In 2006, MMR in the Philippines remained high at 162 (FPS) and 104.15 (PSA) deaths per 100,000 live births (Figure 3).

In 2009,¹³ the DOH attributed the high maternal mortality mainly to the predominance of home births (61%) and the relatively high proportion (37%) of births assisted by TBAs or "hilots". Based on the 2003 NDHS, while 88% of women saw a health professional for ante-natal care, a significant number eventually gave birth at home. This revealed that even though women were aware of the importance of skilled birth attendants (SBAs), many were either unwilling to seek the same level of care or were unable to access such care. In their paper, Lavado and Lagrada¹⁷ observed that regions with high percentages of births without skilled attendants tend to have high MMR.

Campbell et al.¹⁸ concluded in their study that "the best intrapartum-care strategy is likely to be one in which women routinely choose to deliver in a health center, with midwives as the main providers, but with other attendants working with them in a team." They emphasized the need for back up by "access to referral-level facilities."

Consequently, there was a major paradigm shift in maternal care from the risk approach to the Emergency Obstetric Care (EmOC) approach. The EmOC approach considered all pregnant women at risk of complications at childbirth. Thus, two kinds of facilities for improved maternal health were established: Basic Emergency Obstetric Care (BEmOC) and Comprehensive Emergency Obstetric Care (CEmOC) facilities.¹⁴

The Development of BEmONCs

With the advent of the EmOC approach, emphasis was placed on the importance of facility-based deliveries (FBDs) assisted by SBAs provided within a referral network system.

Implementation of Basic Emergency Obstetric and Newborn Care (BEmONC) has a promising potential to curb maternal mortality. In Ethiopia,¹⁹ a dose-response relationship was noted between BEmONC implementation strength, FBDs and met needs at the primary health care level. They concluded that the BEmONC Initiative

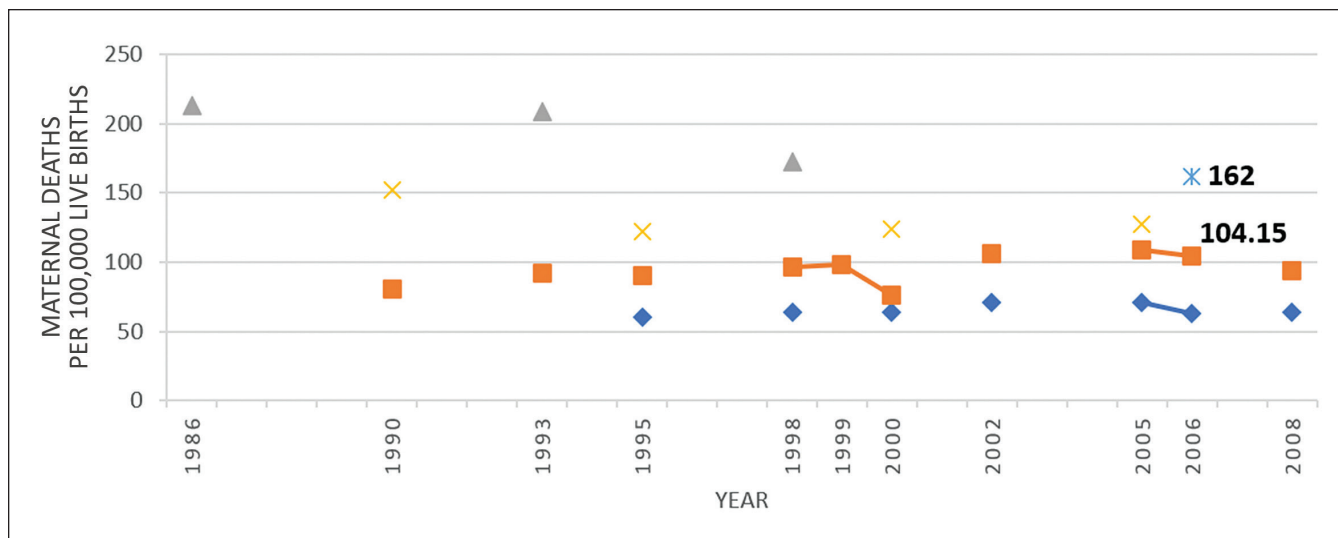


Figure 3. MMR in the Philippines, 1986-2008.

Sources: FHSIS, NDHS, PSA, and UN Estimates

effectively improved institutional deliveries and may have also improved the met need for services.

Initiatives in 2007 focused on upgrading BEmOCs and CEmOCs. A training center was established in each of the main islands of Luzon, Visayas, and Mindanao to ensure the improved quality of EmOC services.¹⁴

The DOH Administrative Order (AO) 2008-0029 "Implementing Health Reforms for Rapid Reduction of Maternal and Neonatal Mortality" officially gave birth to the integrated Maternal, Newborn and Child Health and Nutrition (MNCHN) Strategy.²⁰ This approach highlighted the importance of having committed skilled health professionals in appropriate health facilities and a well-coordinated referral system. It also recognized the province- or city-wide health system as the basic unit for planning, organizing, and implementation.¹³

The MNCHN strategy added newborn care services to EmOC facilities. Thus, BEmOCs and CEmOCs became BEmONCs and CEmONCs. These facilities were expected to provide specific signal obstetric functions and neonatal emergency interventions.¹⁴ The MNCHN strategy was founded on the three pillars of reducing maternal mortality:²¹

1. Emergency obstetric care
2. Skilled birth attendants
3. Family planning

The MNCHN Service Delivery Network²² (SDN) had three levels of care: (1) Community-level service providers; (2) BEmONC-capable networks of facilities and providers; and (3) CEmONC-capable facilities or networks. These three levels of care covered the entire range of MNCHN services and functions. Over the years, the DOH strived to address the gaps in MNCHN service delivery and utilization.¹³

Health Infrastructure

Under DOH AO 2008-0029, local government units (LGUs) were tasked to invest in the development of facilities.²³ This pushed LGUs to increase the local budget for facilities or actively source funds from grants and private-public partnerships.

Improved access to quality hospitals and health care facilities was one of the three major thrusts of Universal Health Care, the Aquino Health Agenda²⁴ from 2010 to 2016. Through the HFEP, government-owned facilities were upgraded. In 2010, BEmONCs and CEmONCs in regions with the highest MMR and blood facilities for emergency obstetric care were included in the priorities for HFEP funding.²⁵

The DOH continuously gave technical support to barangay health stations, birthing centers, rural health units (RHUs), and hospitals to increase their respective capacities and make them eligible for accreditation as EmONC-capable facilities.

The highest number of BeMONC-capable facilities was achieved in 2016 (3102 facilities). However, the latest data in 2020 showed a decrease in this number by more than 30% (1929 facilities).

Health Human Resource

The DOH launched various deployment programs to address the lack of health human resources, including SBAs. By 2015, the DOH deployed 398 physicians under the Doctor to the Barrios program, 13,500 nurses through the Nurses Deployment Program, 2,700 midwives, and 40,851 community health teams.²⁶

Continuous training was given to health professionals to staff EmONC facilities. In 2020, 8,705 health professionals were BEmONC-trained. From 359 BEmONC teams trained

Historical Development of BEmONC in the Philippines

in 2011, there were 2429 teams by 2020. To date, there are 31 training centers nationwide for BEmONC teams.

In 2016, 1636 BEmONCs had trained teams. In the 2018 RPRH Annual Report, 1758 public birthing centers had trained teams.²⁰ In 2020, 1854 facilities, representing 96% of all BEmONCs in the country, had trained teams.

Health Financing

The National Health Insurance Act of 2013 provided that PhilHealth would cover even unenrolled women about to give birth. Coverage and case rates for ante-natal care, maternity care, normal spontaneous deliveries, other methods of deliveries, and payments for cases referred to hospitals were covered by PhilHealth circulars.^{27,28}

Health Policy

SBA and FBDs were promoted, while TBAs were prohibited from performing deliveries at home. This resulted in several LGUs creating local legislation to sanction home births, commonly tagged as the "No Home Birthing Policy." These controversial ordinances with varying degrees of penalties were passed in Marikina City, Pasig City, Nueva Ecija, Pampanga, Sorsogon, Palawan, Oriental Mindoro, Negros Occidental, Iloilo, Capiz, Bohol, Samar, Leyte, Agusan del Sur, Davao, General Santos City, and Sultan Kudarat.²⁹

Health Service Delivery

The MNCHN strategy was also expanded by the DOH to create the Reproductive Health, Maternal, Newborn, Child and Adolescent Health and Nutrition (RMNCAHN) strategy.²⁰ Emphasis was placed on the importance of access to reproductive health services for women of the reproductive ages. Significant milestones are illustrated in Figure 4.

DISCUSSION

Maternal Mortality Post-BEmONC Implementation

By 2015, the Philippines failed to achieve the MDG 5 target of decreasing MMR to 52 deaths per 100,000 live births. Numbers varied across different sources: 73.63 (FHSIS), 98.64 (PSA), 114 (UN Estimates), and 204 (NNS) (Figure 5). This implied the lack of precision and questionable accuracy of data collection. Nonetheless, all available sources were way above the target. The rate of decline in maternal deaths also notably slowed in the Philippines compared to other Southeast Asian countries.³¹

Based on FHSIS data and the National Objectives for Health¹ (NOH) 2011–2016 Performance Indicators and Scorecards, there was no significant improvement in access to family planning services, prenatal consults, and post-partum visits despite the presence of BEmONCs. There was, however, a percentage increase in live births by SBAs (74% to 86.13%) and more FBDs²⁰ (38.14% to 85.96%) between 2008 and 2015.

FBDs and SBAs were promoted as major strategies to reduce maternal deaths. However, despite increases in FBDs and SBAs, there was no direct progress observed in terms of MMR.¹⁵

Failure to achieve global MDG targets led to creating the Sustainable Development Goals (SDGs) to "finish what was started."² Under the Sustainable Development Goal³² 3 (SDG 3), MMR should be less than 70 deaths per 100,000 live births by 2030 globally. However, the latest data showed that the Philippines was still way off from achieving this new target.

BEmONC Functionality and Challenges to Performing Signal Functions

BEmONC facilities should be capable of performing the following signal obstetric functions:²³

1. Parenteral administration of initial dose of antibiotics
2. Parenteral administration of oxytocin in the third stage of labor

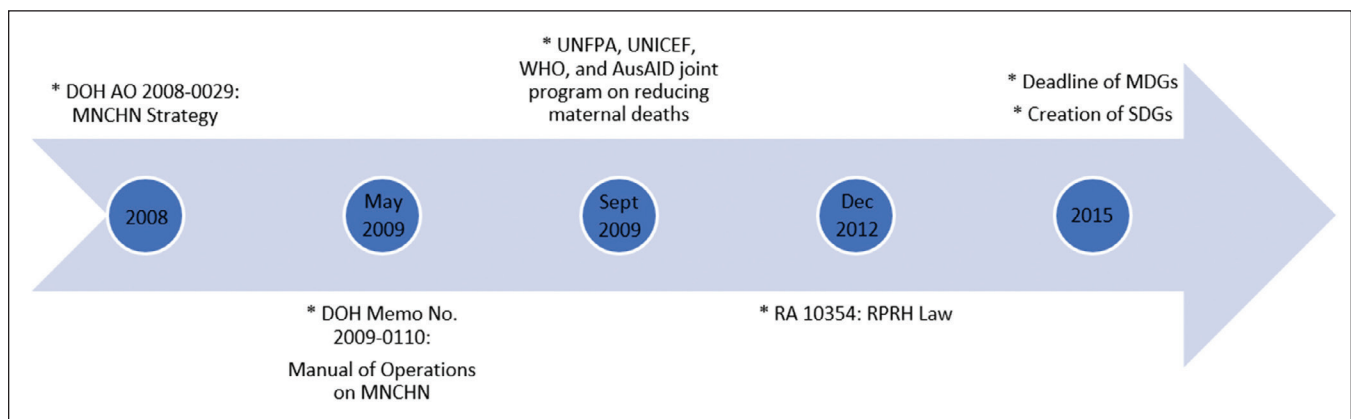


Figure 4. Milestones in Maternal Health Care in the Philippines.^{13,21,30}

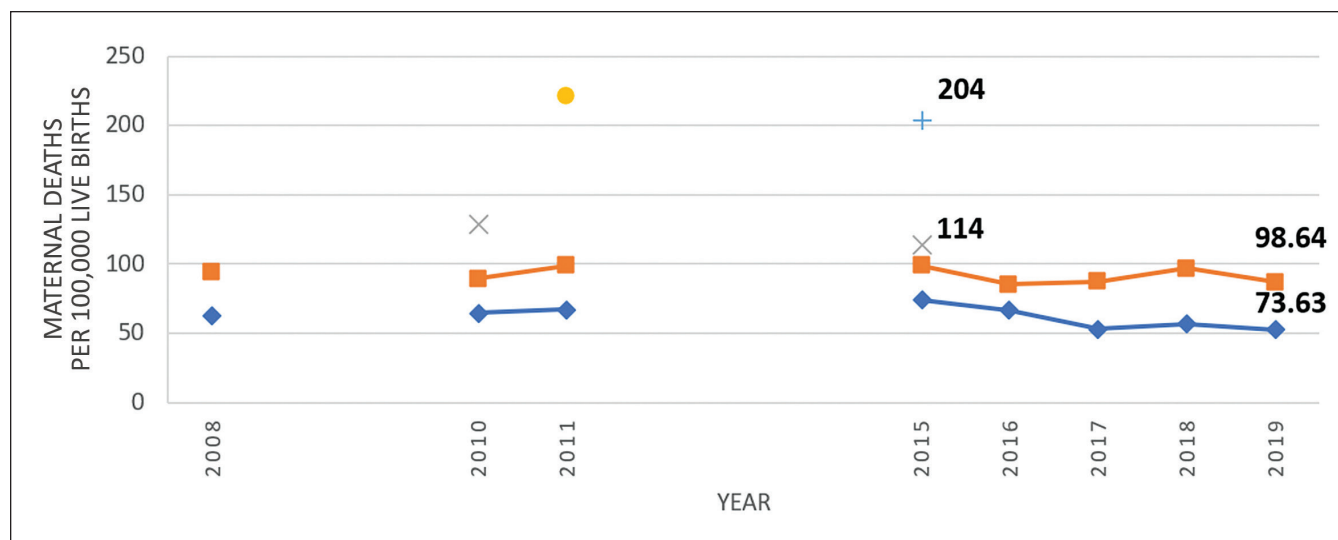


Figure 5. MMR in the Philippines, Post-BEmONC Implementation.

Sources: FHSIS, NDHS, PSA, and UN Estimates

3. Parenteral administration of loading dose of anticonvulsants
4. Manual removal of retained placenta
5. Removal of retained products of conception
6. Performance of assisted deliveries
7. Neonatal resuscitation

However, a study commissioned by the United Nations Population Fund (UNFPA) in 2014³³ reported that only four percent of BEmONCs (21 were hospitals) could provide all the expected signal functions. The study discussed several issues regarding the reasons for the failure to perform signal functions in BEmONC facilities:

- BEmONC facilities referred emergency and complicated cases directly to CEmONC facilities or hospitals.
- Most of the signal functions were regarded as specialized functions that should be performed with various special requisites and in a hospital setting only.
- PhilHealth rules reinforced the practice of BEmONC facilities attending to normal spontaneous delivery cases only.
- Some local policies hindered contractual and deployed health personnel from being BEmONC-trained.
- BEmONC training provided limited opportunities for performing certain procedures, and follow-up and monitoring after training were minimally done.
- Training programs gave inconsistent instructions as to the functions of BEmONCs.
- Purchasing supplies and equipment depended on the availability of LGU funds and local priorities.

Midwives remained hesitant to administer life-saving drugs due to legal liability. Patients had to be referred to other facilities because only physicians were allowed to manually

remove the placenta and retained placental fragments.³⁴ The Implementing Rules and Regulations of Republic Act 7392³⁵ only mentioned dispensing oxytocics and giving intravenous fluids as part of the midwives' professional practice.

Deployment of health human resource did not translate to having BEmONC-trained personnel in facilities. Some local policies excluded temporary staff from receiving training. The retention of deployed health professionals after their contracts should be considered.

In some localities, the reluctance of private clinics and practitioners to refer high-risk patients or complicated cases to avoid losing their PhilHealth reimbursements has led to maternal deaths.³⁶

On the other hand, PhilHealth policies required facilities to refer high-risk mothers to higher facilities for patients to avail of the Maternity Care Package. This was anathema to the expectation that BEmONCs should be able to perform all signal functions, which included administering parenteral life-saving drugs, performing manual evacuation of the placenta, removing retained products of conception, and doing assisted vaginal delivery.

Other contributory factors were the inadequacy of family planning services, the lack of quality services during prenatal visits, the low importance given to post-natal check-ups, and the reluctance of pregnant women to visit health facilities due to opportunity costs such as foregone income and prolonged waiting time in the clinic.³⁶

Although 96% of BEmONC facilities had trained teams and 85% passed the licensing and accreditation requirements in 2020, BEmONC functionality generally remained inadequate to address existing challenges in maternal health care, much less decrease MMR. It is important to investigate why there are fewer BEmONC facilities in 2020 (1929) compared to 2016 (3102).

CONCLUSION

With BEmONCs, the Philippines increased the percentage of facility-based deliveries and skilled birth attendance during childbirth (91.41% and 93.91% in 2019). However, these are not enough to significantly decrease MMR. Further capacity-building is needed, especially since BEmONC functionality has not been fully achieved.

Providing emergency obstetric care can potentially avert half of the maternal deaths. However, this is only possible by expanding care coverage to low-income, resource-poor communities. Improving access to services through more equitable financing schemes is needed alongside substantial challenges in geographic and cultural access.³¹ Further reduction in maternal and neonatal mortality will require more advanced and effective interventions in the continuum of care, especially to the poor.³⁷

In the Philippines, there is a great disparity between rural and urban areas, and between higher and lower socioeconomic classes. This is reflected by the stark difference in access to health care services between these areas and groups.

At present, BEmONCs are more utilized and needed in geographically isolated and disadvantaged areas and in poor communities, as hospitals and specialized facilities are more accessible to financially capable populations in urban areas. Thus, the national government must ensure the strategic geographic distribution of BEmONC facilities with adequately trained and well-compensated staff, as well as a secure supply chain to ensure the availability of services.

Issuances from various government agencies and levels should be reviewed to ensure they are aligned and not contradictory. Similarly, programs and benefits, like the PhilHealth packages, must be consistent with the services provided in the three-tier SDNs, as contained in the MNCHN Framework. This will ensure broader coverage, fewer out-of-pocket expenses for patients, and better participation from health workers and facility managers.

Policies pertaining to maternal health care, such as the unpopular "No Home Birthing Policies," should be inclusive rather than punitive. In the Philippine setting, cultural and ethnic concerns should be considered in creating health programs. TBAs should not be sanctioned and instead be integrated into the current health care system. This will encourage healthy community practices among mothers and women of reproductive age.

Laws on professional practice, particularly the Philippine Midwifery Act, should be revisited and revised to expand the competencies of health professionals and promote inter-professional cooperation rather than the traditional hierarchical organization. Interventions should not be doctor-centric but focus on building the capacities of the whole health team.

Lastly, interventions to decrease maternal mortality should be done simultaneously on various fronts and at differing levels of governance. There should be a health systems

approach, considering all the building blocks of an efficient health care system and the social determinants of health.

Former DOH Secretary Esperanza Cabral concluded in 2016 that "we were unable to meet the MDG targets because our health systems are inadequate to meet the needs of public health campaigns and everyday health care." She described the Philippine health care system as "characterized by fragmentation, duplication, competition, and disorder."²⁶

The ability to sustain gains made by discrete interventions like BEmONC will only be realized as related functions in other health system building blocks are addressed.¹⁰

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Statement of Authorship

All authors contributed in the conceptualization of work, acquisition and analysis of data, drafting and revising and approved the final version submitted.

Author Disclosure

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