

EDITORIAL

Addressing Gaps in Maternal, Neonatal, and Child Health for Achieving SDG 2030 in West Africa

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In this issue, Bjegovic-Mikanovic and her colleagues present an important new analysis of maternal, neonatal, and child health progress towards the Sustainable Development Goals (SDGs) in West Africa¹. Evaluating progress is a challenge for many reasons, including the reliance on estimated indicators. Only 46 countries in the world have vital statistics registration data of high enough quality for research purposes; only one of these countries is in Africa (Mauritius), and none are in West Africa. The Vital Statistics Performance Index (VSPI), a typology of the quality of vital statistics registration systems, rated only Ghana in the “very low” group (VSPI <0.25); the others were too weak to be included in the index². There are other challenges to measuring indicators in West Africa (and throughout the developing world), including measurement of indicators in separate states and sub-regions, cities, and rural versus urban areas – all of which contribute to variability across the region. Recently, however, Golding and associates³ used Bayesian methods to estimate and map household survey and census data sources of under-5 and neonatal mortality to national and sub-national levels in small area geospatial format, thereby contributing to our understanding of the wide variability within countries.

Bjegovic-Mikanovic *et al.*, report on maternal, neonatal, and under-5 mortality and health system indicators in the 15-member nations of the Economic Community of West African States (ECOWAS). Starting with 2010 and 2015 maternal mortality ratios (MMRs), neonatal mortality rates (NMRs), and under-5 mortality rates (<5MRs), including 2000 <5MRs from WHO, and UNICEF data for NMRs and <5MRs. These baseline indicators are all developed using established algorithms for estimating rates in countries without developed civil registration systems, such as Wilmoth and colleagues’ parametric method of estimating maternal mortality⁴, and Bayesian models for neonatal and child mortality rates developed by the United

Nations Inter-Agency Group for Child Mortality Estimation (UN IGME)⁵.

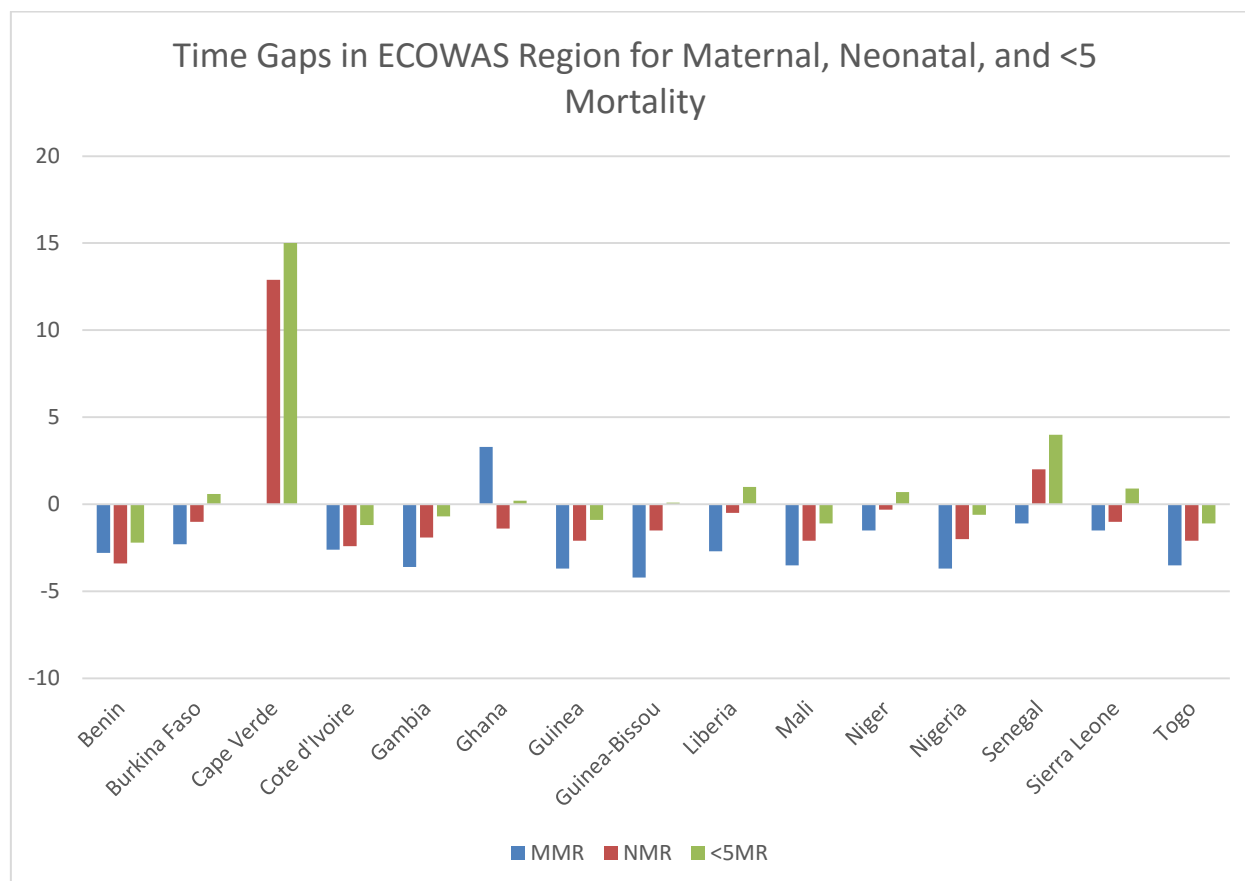
With these baseline data along with 2030 SDGs, Bjegovic-Mikanovic and colleagues used a novel formula originally created by the UN Development Program (UNDP) to assess Millennium Development Goal (MDG) progress and thereby determine the gap between current progress and progress needed to meet SDGs. The formula incorporates time between baseline and target year; and baseline, observed, and target values of each indicator, assuming a linear progression towards results. The indicator created shows the rate of positive or negative progress towards attaining the SDGs⁶.

Based on these data, the only significant positive progress being made is toward <5MRs, where only seven of the 15 ECOWAS nations are not making positive progress (Benin, Cote d’Ivoire, The Gambia, Guinea, Mali, Nigeria, and Togo). The only countries showing positive progress towards a 75% reduction in maternal mortality by 2030 are Cape Verde (which leads on all indicators) and Ghana, which shows a time gap estimate of +3.3 years. Indeed, MMRs for the ECOWAS region are among the highest in the world, with an average of 592 deaths per 100,000 live births (excluding Cape Verde as an outlier with 42 maternal deaths per 100,000 live births). The NMR gap is negative with the exceptions of Cape Verde and Senegal, which show positive time gaps of 12.9 and 2.0, respectively.

Unfortunately, this article does not include infant mortality data. While it is understood that the primary driver of <5 mortality is neonatal death and that <5 mortality includes infant mortality, it is also true that post-neonatal deaths have different causes (e.g., injury, infectious disease) that may require separate interventions. Infant mortality rates (IMRs) remain very high across the region, as do tuberculosis, HIV, and vector-borne diseases, all of which are

indicators of health and associated with poor maternal and child health outcomes. The average IMR across the ECOWAS region, based on UNICEF data, is 53.8 per 1000 live births, with a range of 18 in Cape Verde to 83 in Sierra Leone. The average IMR increases to 56.1 if

Cape Verde is removed as an outlier. The chart below (Figure 1) illustrates positive and negative time gaps towards SDGs with positive gaps appearing above the x-axis and negative gaps below the x-axis.



An important observation from these data is that maternal mortality improvements lag behind neonatal and child mortality in all but two countries (i.e., Burkina Faso and Cape Verde). Historically, the world has paid more attention to infant and child mortality and morbidity than to the health of women. It is clear that efforts to improve women's health – through the life cycle – must be given priority for maternal mortality reductions to be met by 2030. Region-wide, governments must commit to improving the upstream predictors of poor maternal health – poverty, inequality, and access to quality healthcare – through policies that emphasize equal distribution of resources. New research and implementation of evidence-based interventions must address the diseases that are directly related to maternal mortality and morbidity, including HIV/AIDS, tuberculosis, and malaria. Finally, governments must reduce the delays in access, transportation, and hospital services that drive poor maternal outcomes.

Overall, it is evident that efforts coordinated by international, regional, and national institutions must document other health indicators that may be associated with or interact with the key maternal, neonatal, and child mortality indicators, including life expectancy (60.0 years for the ECOWAS region, with Cape Verde as an upper outlier at 73.3 years), incidence of malaria (which is associated with overall mortality, as well as neonatal, maternal, and child mortality), road traffic deaths, and adolescent birth rates.

Unfortunately, there is little consensus and scattered evidence about which approaches work to improve child and maternal outcomes. A critical first step must be to establish sound national vital registration systems so that countries can enumerate and document all births and count, track, and discover clusters of mortality. At present, most birth registration systems in the ECOWAS region only require births to be registered by age 5; by that time, many have died, particularly of neonatal causes and are, therefore, never

included in either the numerator or denominator. In addition, rigorous evaluations of interventions must be conducted to see what interventions really work, are fully sustainable, and what components contribute to success.

While it is tempting to view Cape Verde as a possible model of success in the ECOWAS region, it is more likely that Cape Verde is an outlier for independent reasons – it is an island archipelago with an entirely different social, political, and economic structure than the other 14 countries.

Moreover, this study assumes strictly linear trends, which belies the likely reality of climate-related disasters (e.g., drought), civil unrest, and/or disease outbreaks. One need only consider the case of the recent Ebola virus disease (EVD) outbreak between 2013 and 2016, which disrupted health systems, expended vital resources, and likely resulted in gaps in maternal and infant health because of distrust and perceived risk of hospital contagion. Liberia, for example, has suffered the double jeopardy of civil war and EVD.

It is well understood that the vast majority of the causes of neonatal deaths are preventable, including complications related to preterm birth and low birthweight, sepsis, pneumonia, diarrhea, asphyxia during labor; and similarly, the causes of maternal death, such as sepsis, hemorrhage, obstructed labor, and preeclampsia are either preventable or treatable with basic public health interventions. Availability of skilled birth attendants, improved hygiene at birth, and access to clean water would reduce these rates significantly. Unfortunately, in the most remote regions and in urban slums, pregnant women face the costs of healthcare, transportation problems, and lack of clean facilities. Worst of all, too many mothers and infants die in isolated conditions, untreated and undocumented.

Finally, as Bjegovic-Mikanovic and her colleagues show through their data, health systems and policy must converge through governments and ministries of health to ensure the even distribution of health services. At present, there are too many gaps in systems across the region, where governments have not effectively distributed resources and have under-funded MCNH activities (especially in rural areas), and divested in the infrastructure that would ensure access to such basics as clean water and continuous electricity in health clinics. International funders should continue to work closely with ECOWAS governments to

develop and sustain certifiable vital registration systems that accurately record all births and deaths, including pregnancy-related deaths. These agencies should join with regional, national, and local governments to train physicians, public health officers, epidemiologists, nurses, midwives, and health policy experts. While there are some existing regional training programs, more are needed to fully train local medical and public health workers. While national health policies related to the SDGs exist on paper, they must be fully implemented, with specific targets, to achieve true success. NGOs can contribute effectively with external funding, training TBAs/midwives, and conducting rigorous process and outcome evaluations to develop a strong evidence base for future practice.

Disclosure of Interest

None

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