EDITORIAL

Key challenges in meeting MDG 4: Reduction of child mortality

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Most of the articles in this issue are related to child, infant and neonatal health which are embodied in the Millennium Development Goal (MDG)4 (reducing under -five mortality rate by two-thirds, between 1990 and 2015). MDG₄ is measured using three important indicators: under-five mortality rate, infant mortality rate and proportion of infants immunized The inclusion of the latter against measles (1). indicator shows the strong correlation between immunization coverage and child survival and the fact that vaccinating children through increasing access to services contributes to reductions in infant mortality rate. As this indicator measures measles coverage, it can serve as a proxy indicator of other immunization services as well as of how well primary health care services are available and functioning in developing country set up (2, 3). Strength in this intervention indicates programmatic contributions to reductions in under-five mortality which often is disproportionately high among lower age groups. When an immunization program is not strong and coverage is low, the number of susceptible children under five accumulates favoring conditions for the occurrence of measles outbreak. One of the papers in this issue has reported a high case fatality rate (13.4%) among children under five in a district in Ethiopia due to measles outbreak where the case fatality rate was even higher among infants (33.3%) (4).

The current issue of the Journal also contains an article that analyzed the results of the 2005 Ethiopian DHS. According to this article, most of the infant deaths occurred in the first (47.9%) and second months (58.4%) of life and the determinants were linked to maternal and environmental factors (5). Another article in this issue has reported a neonatal mortality rate of 43.8 per 1000 live births in North Gondar Zone which is higher than the DHS report 2005 and 2011 (6). Most of the factors associated with this high level of neonatal mortality were related to maternal conditions such as number of pregnancies and maternal morbidity (in addition to past history of neonatal illness). Both these articles indicate the relevance of strengthening maternal as well as and neonatal services.

Although there is significant progress in meeting MDG₄, reports from the Sub Saharan Region indicate

existing challenges faced by most countries that include failure in addressing deep rooted and growing inequities that hamper gains in maternal and child health (7, 8). Ethiopia is one of the countries that have made significant progress towards meeting child health MDGs (9). Findings from the three Demographic Health Surveys of Ethiopia (10-12) indicate that there are significant reductions in child health indicators: under five mortality rate, child mortality rate and infant mortality rate (figure 1), even though declines in neonatal mortality have remained slow.

Regarding maternal factors that are important in child health, an analytical model that identified and examined 14 interventions on child mortality in Ethiopia has revealed institutional delivery as one among the few interventions with maximum projected impact in averting child death. This adds to the evidence that identification and focusing of interventions that give higher impact and addressing the MDG goals in an integrated fashion would have better synergetic effect (13, 14). Moreover, addressing both child and maternal health, including minimizing inequities through expansion of services, would enhance the outcome, as these interventions are related to one another and are targeted at the same time in most of the services. Such an integrated and focused approach would also be important in terms of reorganizing and aligning resources to bring about the desired outcome in the remaining countdown years.

With the recent decrease in official development assistance (ODA) to maternal, newborn and child health programs for countries prioritized to receive such support (15), it is very critical that Countdown priority countries like Ethiopia focus on efficiency of interventions in maternal, neonatal and child health in order to sustain gains and meet the MDGs. It is also recommended that attention be given to interventions related to neonatal health as the reductions in neonatal death between 2005 and 2011 has remained slower compared to the gains made earlier (between 2000 and 2005) (10-12).

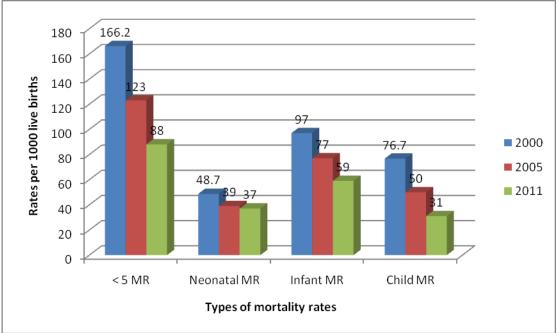


Figure 1: Early childhood mortality rates, data from EDHS (2002, 2005, 2011)

References

- United Nations (UN) Millennium Development Goals Indicators: The Official United Nations Site for the MDG Indicators, Effective 15 January 2008. Unstats.un.org/unsd/mdg/Host.aspx?Content=i ndicators/OfficialList.htm. Accessed 12 November 2012.
- Fantahun M, Berhane Y, Wall S, Byass P, Högberg U. Women's involvement in household decision-making and strengthening social capital – crucial factors for child survival in Ethiopia. Acta Paediatrica 2007; 96: 582-589.
- Shimouchi A, Ozasa K, Hayashi K. Immunization coverage and infant mortality rate in developing countries. Asia Pac J Public Health1994; 7(4):228-32.
- Aragaw M, Tilay T. Measles outbreak in Simada District, South Gondar Zone, Amhara Region, May – June 2009: Immediate need for strengthened routine and supplemental immunization activities (SIAs); Ethiop J Health Dev 2012:26(2):115-118.
- Kebede B, Genbeyehu A, Rai Sahrma H, Yifru S. Prevalence and Associated Factors of neonatal mortality in North Gondar Zone, northwest Ethiopia. Ethiop J Health Dev 2012:26(2):66-71.
- Muluye S, Wencheko E. Determinants of infant mortality in Ethiopia: A study based on the 2005 EDHS data. Ethiop J Health Dev 2012:26(2):72-77.

- Zere E, Kirigia JM, Duale S, Akazili J. Inequities in maternal and child health outcomes and interventions in Ghana. BMC Public Health 2012; 12: 252, <u>http://www.biomedcentral.com/1471-2458/12/252</u>.
- GVictora C, Barros AJD, Axelson H, Bahutta ZA, Chopra M, Franca GVA, Kerber K, Kirkwood PR, Newby H, Ronsmans C, Borema JT. How changes in coverage affect equity in maternal and child health interventions 35 Countdown to 2015 countries: an analysis of national surveys. Lancet 2012; 380:1149-56.
- Ministry of Finance and Economic Development (MoFED), Federal Democratic Republic of Ethiopia. Ethiopia: 2010 MDGs Report, Trends and Prospects for Meeting MDGs by 2015. September 2010, Addis Ababa, Ethiopia.
- Central Statistical Authority (CSA) and ORC MACRO International. Ethiopia Demographic and Health Survey 2000; Pp 97-105. Addis Ababa, Ethiopia and Calverton, Maryland, USA, May 2001.
- 11. Central Statistical Authority (CSA) and ORC MACRO International. Ethiopia Demographic and Health Survey 2005; Pp 103-108. Addis Ababa, Ethiopia and Calverton, Maryland, USA, August 2006.
- 12. Central Statistical Authority (CSA) and ICF International. Ethiopia Demographic and Health Survey 2011; Pp 111-116. Addis Ababa, Ethiopia and Calverton, Maryland, USA, March 2012.

- 13. Onarheim RH, Tessema H., Johnson KA, Eide KT, Norheim FO, Miljeiteig. Prioritizing Child Health Interventions in Ethiopia: Modeling impact on Child Mortality, Life Expectancy and in equality in age at Death. *PLoS ONE* 2012;7(8):1-9.
- 14. Gbesemete KP, Jonsson D. A comparison of empirical models on determinants of infant

mortality: a cross-national study on Africa. Health Policy 1993 May; 24(2):155-74.

15. Hsu J, Pitt C, Greco G, Berman P, Mills A. Countdown to 2015: Changes in official development assistance to maternal, newborn and child health in 2009 -10, and assessment of progress since 2003. Lancet 2012; 380:1157-68.