

Editorial

Working together to reduce maternal and infant mortality in Indonesia: the role of technology

The Indonesian government is making solid progress in achieving the Millennium Development Goals (MDGs). Indonesia has tackled the MDGs targets head on and has served as a model country by being one of the first countries in the world to draft and implement MDG focused national development plans. This includes the Long-Term Development Plan (RPJPN)2005-2025,¹ the National Medium-Term Development Plan (RPJMN) 2004-2009² and the current RPJMN (2010-2014).³The influence that the MDGs extend to the national budgeting processes is evidenced by the annual work plans and state budgets, which all have an MDG centric core. According to Central Bureau of Statistic and the Indonesia Demographic Health Survey,⁴ significant progress has been achieved in Indonesia and most indicators are well on track to be realized. This could be linked to the aggressive approach taken by the government where the MDGs are concerned, including The National Strategic Plan On Making Pregnancy Safer (MPS) 2001 – 2010⁵ but also speaks to the role of the government as described in the preamble to the constitution.⁶However, despite these noteworthy efforts, a few indicators relating to maternal and infant mortality, still need special attention. The current Maternal Mortality Ratio is estimated at 228 per 100,000, with a 2015 target of 102. The Infant Mortality Ratio is estimated at 34 per 1,000 live births, with a 2015 target of 23.⁷

Midwives already play a critical role in the care of pregnant mothers and in delivery. The estimated 120,000 midwives in Indonesia handle about 70% of deliveries, of which, 75% occur in rural areas.⁸ The poorest women have a 3-4 times higher risk of dying during complicated deliveries than upper middle-class women.⁹ The current theory is that poor, pregnant women are being referred to skilled care too late, after serious complications occur. Midwives are an important force in the effort to improve MDGs 4 & 5 for two reasons: they are a strong and trusted source of healthcare in local communities and they can be organized nationally. An area where Indonesia can attain thought leadership and develop best practices is in the design and coordination of programs for midwives.

With a dispersed population over 17,000 islands and a doctor shortage (as a percentage of population) compared to neighboring countries, healthcare IT and affordable technology will be a vital link to improve access to care and to coordinate best practices between

urban and rural settings. A report by The Economist Intelligence Unit titled “*Old problems, fresh solutions: Indonesia’s new health regime*”¹⁰ analyses these challenges and their potential solutions, and puts them in context through interviews with government, medical and academic experts in Indonesia. It also highlights how innovations in developing countries elsewhere may provide solutions to some of Indonesia’s most pressing healthcare challenges. The key findings of the report include:

Healthcare inequality is a key challenge; Healthcare spending is low, and out-of-pocket spending accounts for a high proportion; Meeting Millennium Development Goals means improving healthcare finance and services; More focus on prevention is required; “Frugal innovation” may help.

Healthymagination is GE’s new approach to developing healthcare technology. It reflects our corporate commitment to producing products that solve cost, quality, and access problems for our healthcare stakeholders and marks a shift away from producing high-cost technology that does not address these problems. For Indonesia, this means GE is committed to developing affordable technology, appropriate for the care setting, and user-friendly. GE believes in *Task Shifting*, which means designing products for use by medical paraprofessionals rather than for physician-only use, making technologies more widely available. This would enable physicians to spend more time with patients and focus on providing higher quality and more efficient care. GE’s unique approach to product development is currently being written up as a Harvard Business School case study.

Any technology that enables midwives to conduct new tasks must have full support from the relevant doctors associations and government. Pilot studies, funding, training, and licensing are all components of introducing new technology to midwives. Therefore, a multi-stakeholder approach is required when developing new programs that target MDGs 4 & 5. In addition, these program investments should be evaluated by a committee to determine if the program costs and benefits are reasonable.

In response to increasing demands that healthcare expenditures should be cost-effective, Health Technology Assessment (HTA) committees have begun to form throughout Asia. HTA is a multi-disciplinary field of policy analysis aimed at evaluating the medical, economic, social and ethical implications of healthcare programs and technologies in real-world settings. A great deal of best practice sharing has occurred between Asia, the US, and Europe. If additional investment is

made against UN MDGs related to health, there will be an opportunity to employ HTA to develop an iterative, evidence-based consensus driven process to ensure value for money. While most Asian countries have some level of HTA planning in place, Taiwan and South Korea are considered to have the most advanced HTA processes in the region. Taiwan's Department of Health established an HTA system under the Center for Drug Evaluation in March 2007. This HTA plays an advisory role and provides evidence of technology effectiveness. South Korea instituted regulatory changes in 2008 that created a health economic review process to prioritize medical technology based on therapeutic and economic value.

In summary, Indonesia has a unique opportunity to provide leadership for other countries that employ large numbers of midwives, by developing cost-effective programs that support task-shifting and technology adoption.

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