GE’s Commitment to Addressing Maternal and Infant Health
Since the year 2000, 192 UN member states and 23 international organizations have committed to achieving eight Millennium Development Goals (MDGs) aimed at reducing poverty, promoting economic growth, and improving health and education. Two of these MDGs (4 and 5) are focused on improving maternal and infant health (MIH). MDG 4 calls for reducing the under-five child mortality rate by two-thirds from 1990 levels by 2015 and MDG 5 calls for reducing the maternal mortality rate by three-fourths for the same time period. In the intervening years, progress has been made in achieving these goals with a 41% reduction in child mortality and 47% reduction in maternal mortality between 1990 and 2011. Despite this progress, several dozen countries are in danger of not meeting MDGs 4 and 5 by 2015. To meet this challenge, international organizations, national governments and Non-Governmental Organizations (NGOs) have been ramping up efforts to help countries in the developing world meet these goals. The private sector can also play an important role in addressing this health challenge by providing technologies to support efforts in reducing child and maternal mortality. GE is committed to being a partner in helping to address this global challenge. To address this issue GE aims to deliver technologies designed specifically for the needs of local markets through strong partnerships with countries and communities. To assist GE and other private sector partners in contributing meaningfully to this issue, GE encourages governments and international organizations to:

- Meet MIH Spending Commitments
- Look for Ways to Partner with the Private Sector
- Develop Post-2015 Plans for MIH
- Train and Support Healthcare Workers for MIH

**MDG OVERVIEW AND STATUS**

The gaps that exist between MDG 4 and 5 targets and current maternal and infant mortality rates show why MDGs should be a focus for the international community. Since 2000, improvements have been made in these areas with under-five infant mortality declining from 87 deaths per 1,000 live births in 1990 to 51 deaths per 1,000 live births in 2011, and maternal mortality decreasing from 400 maternal deaths per 100,000 live births to 210 maternal deaths per 100,000 live births. However, these numbers are well short of the goal of achieving MDGs 4 and 5, which aim to lower under-five mortality to 30 deaths per 1,000 live births and maternal mortality to 100 deaths per 100,000 live births by 2015. In order to achieve these goals by 2015, child mortality will need to decrease by 4.4% annually even though it has only declined by 2.2% annually between 1990 and 2011. Similarly to achieve MDG 5, maternal mortality will need to decrease by a rate of 5.5% annually although the rate of decline has been only 1.9% annually since 1990. Given the gap between the current MIH statistics and the goals for MDG 4 and 5, GE has selected MIH as a priority issue for which to develop relevant solutions.

Developing countries are at particular risk of not meeting their MDG 4 and 5 goals. A 2012 report by the WHO and UNICEF, “Countdown to 2015: Maternal, Newborn & Child Survival” focused on 75 high-burden countries that account for 95% of maternal and infant deaths. Of these 75 countries, 52 countries are not on track to meet MDG 4 and 66 are not on track to meet MDG 5 by 2015. These countries are primarily located in Sub-Saharan Africa and South Asia. Sub-Saharan Africa particularly struggles with these challenges with 44 of these 75 high-burden countries. In this region, 1 in 8 children die before the age of five and an African woman’s lifetime risk of dying from pregnancy-related causes is 100 times higher than that of a woman in a developed country. The leading causes of infant mortality in these high-burden countries include pre-term birth complications, pneumonia, intrapartum-related events, sepsis, and meningitis. 64% of these deaths are caused by infectious diseases in newborns and children 40% of overall deaths occur in the neonatal period. A majority of maternal deaths in these countries are caused by problems such as hemorrhage, obstructed labor, and hypertension. Many of these women and children are dying from preventable causes because they lack access to healthcare professionals, technologies and solutions. Furthermore, in some cases the problems are identified too late. While developing countries in particular struggle with these challenges, they are an issue for developed countries as well. For example, the United States has recently launched goals to improve maternal and infant health indicators by 2020 to deal with issues such a rise in pre-term births.

In order to address these maternal and infant health challenges, the UN announced the “Every Woman, Every Child” campaign and “Global Strategy on Maternal and Infant Health” in 2010 to help developing countries meet MDGs by 2015. This campaign brought high-level attention to the issue and made it a priority for developed and developing countries. As a result of this effort, donor countries, international organizations and developing countries pledged to spend $40 billion on maternal and infant health by 2015. According to a 2013 independent assessment, approximately $18-20 billion new money has been spent on MIH. In addition to the UN, organizations that have made significant contributions to the MIH effort include Save the Children, Bill and Melinda Gates Foundation, and the Partnership for Maternal, Newborn, and Child Health (PMNCH). The UN and other international organizations are beginning to focus on how to address MIH after 2015 so that the high-level focus, which has led to increased attention and spending on this issue, is not lost. This renewed focus on improving maternal and infant health is welcomed.

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by GE and should continue to be a priority for governments, international organizations and the private sector.

HOW GE CAN SUPPORT MIH

Technologies for MIH

GE provides innovative technologies which may help countries achieve MDGs 4 and 5. GE’s suite of maternal and infant health products aligns closely with areas where there is the most need for support in providing maternal and infant care in the developing and developed world. GE’s products which support health workers in providing maternal and infant care include maternal and fetal monitors, infant warmers, ultrasound systems, neonatal monitors and phototherapy systems. These products can help healthcare workers address causes of maternal and infant mortality. GE’s technology solutions are needed to support clinical efforts to help save the lives of women and children throughout the globe.

Cost-Effective and Innovative Solutions

Not only does GE manufacture products which meet MIH needs but GE’s focus on reverse innovation means these products are designed to meet the needs of developing markets while also being of value for developed countries. A particular challenge for developing countries is providing healthcare in rural areas with little access to electricity and qualified healthcare workers. GE’s Vscan*, a hand-held and battery powered ultrasound is one example of a GE product that helps address these challenges. This pocket-sized device provides a quick view into the body as well as the mobility that health providers desire when traveling to the remote community clinics.

The development of the Lullaby LED Phototherapy system (LED PT), which treats neo-natal jaundice, also demonstrates how GE has successfully achieved reverse innovation. Initially designed for the Indian market by GE’s R&D Center in Bangalore, the LED PT was made to withstand power outages, voltage fluctuations, high levels of dust and pollution, and intensive equipment use that are common there. In recognition of its innovative contribution to addressing MIH, Wipro GE Healthcare, GE Healthcare’s business arm in India, was awarded the Federation of Indian Chambers of Commerce (FICCI) Healthcare Excellence Award for the Lullaby Phototherapy system in 2012.

The Lullaby Warmer offers another successful example of reverse innovation at work. By being priced 70% lower than traditional models, including pictorial warnings so illiterate, rural healthcare workers can understand how to operate the machine and using less power than most warmers, the warmer has been very successful in the Indian market, especially in less developed, rural areas. The success of the Lullaby Warmer was highlighted in a recent report by the BBC. In addition to proving successful in India and other developing markets, the Lullaby LED PT and Lullaby Warmer have proven successful in developed countries. The Lullaby LED PT is sold in over 62 countries, while the Lullaby Warmer is sold in over 80. These countries include Belgium, United Arab Emirates, Italy, and Switzerland. GE’s specialized products designed through reverse innovation can play an important role in addressing the MIH challenge in developing and developed countries.

Partnerships with Communities and Governments

GE is committed to continuing to support countries and communities in the area of maternal and infant care. Ultrasound systems, including Vscan, have been made available to researchers conducting studies in Tanzania, Bangladesh and Indonesia focused on impacting MIH. The studies were designed to test technological innovations and the adoption of these technologies by local healthcare workers that will help speed up governmental efforts to meet MDGs.

GE has also partnered with the East Meets West Foundation (EMW) to develop solutions for MIH. Through its Breath of Life program, EMW deeply understands the needs of customers in low-resource settings. Some hospitals in which EMW has deployed the Breath of Life program have seen decreases of up to 70% in in-hospital deaths. EMW and GE Healthcare are working together to create a suite of neonatal solutions that are durable, require few consumables, are easy to use and specifically designed for sustainability in low-resource settings. As a global leader in the design and manufacture of advanced neonatal intensive care equipment, GE Healthcare can deliver and service these neonatal devices virtually anywhere in the world. The success of the relationship between GE and EMW was highlighted in a 2012 report on pre-term births, “Born Too Soon.”

GE has established similar partnerships in developing countries. In 2009, the company donated high-tech incubators, fetal monitors, ultrasound scanners and other healthcare equipment valued at $8 million to a new neonatal ward that was being built by the Homerton University Hospital in Hackney. Although a developed country, approximately one in nine newborn babies requires some form of specialist hospital care in the UK, equating to around one every six minutes. Hackney particularly struggled with these issues, with an infant mortality rate above the national average and one baby born every day weighing less than 5.5lbs. GE’s donation helped to meet this challenge by nearly doubling the size of the hospital’s maternity and newborn center. Specifically, the donation included a range of equipment to help reduce maternal and infant mortality and help improve the general standard and efficiency of care including: tools for workflow planning, maternal and neonatal MR scans, obstetric ultrasound, patient and fetal monitoring, anesthesia delivery, a recovery suite, neonatal monitors, material infant care IT solutions, incubators with an integrated MR capability, ventilators and infection control equipment. GE’s partnership with Homerton shows that challenges and opportunities exist for MIH and partnerships in developed as well as developing countries.

CHALLENGES

While there has been renewed commitment and focus on addressing maternal and infant health, it should be recognized that there are several challenges which may limit such commitments from coming to fruition. Although $40 billion was pledged by countries as part of the Every Woman, Every Child Campaign, only about half of committed money has been delivered.12 As many countries with maternal and infant health problems are in the developing world, they do not always have strong enough health systems to ensure the money dedicated to maternal and infant health is properly allocated. In addition, international donors have not always met their commitments to support developing countries on MIH. Given continued budget constraints in many developed countries, development spending has become a target for reducing deficits and may continue to be so in the future. While there is renewed focus and spending on maternal and infant health in the developing world, it must be recognized that there are constraints which may limit spending on MIH from meeting its stated goals. This reality means continued high-level attentions on MIH from

governments, international organizations, and the private sector will be needed to achieve MDGs 4 and 5.

**RECOMMENDATIONS**

GE is committed to helping address the MIH in the ways discussed in this paper. We also recommend that governments and international organizations take the following steps to ensure all stakeholders can effectively work on MIH challenges.

- **Meet MIH Spending Commitments**
  There have been significant commitments to spending on MIH over the past several years. However, thus far these spending commitments are still short of being met. In addition, some developed countries are looking to cut their spending on MIH and many countries in the developing world still have not been able to deliver all funding to MIH needs. Countries and organizations should meet their spending commitments on MIH and leaders in the public, private, and nonprofit sectors should continue to highlight the importance of this issue to encourage governments to fulfill these promises. To make this spending effective, it should be targeted at proven solutions that incorporate equipment designed specifically for local needs.

- **Look for Ways to Partner with the Private Sector**
  While governments, international organizations, and NGOs have a key role to play in addressing MIH, the role of the private sector is also vital on this issue. Companies like GE can provide current medical technologies to support MIH and continue to innovate to create better products which meet the needs of local communities. Governments, international organizations and NGOs should welcome and seek opportunities to work with the private sector on issues like training and capacity building. GE has demonstrated its commitment to working with these organizations through a variety of partnerships on MIH in countries ranging from Tanzania to India to Ghana and is looking to continue to expand these efforts.

- **Develop Post-2015 Plans for MIH**
  While the fast approaching deadline of 2015 is pushing countries to meet MDG goals, attention must be paid to plans for addressing MIH post-2015. Some governments and international organizations have already begun to pay attention to this issue and it should remain a focus. GE wants to help advance this process by continuing to develop MIH solutions and continuing to highlight the importance of MIH to our international partners.

- **Train and Support Healthcare Workers for MIH**
  The delivery of MIH service requires healthcare workers skilled at providing healthcare and capable of using MIH technologies. One of the biggest gaps in achieving improved health outcomes for maternal and infant health is the lack of skilled health staff. Therefore, training healthcare workers should be a critical priority in countries lacking enough qualified health professionals. GE has helped in this process by forming the partnerships discussed in this paper. In addition to these partnerships GE has also developed similar partnerships in other countries, including Indonesia, India, Saudi Arabia, Ghana, Bangladesh and Nigeria. Governments, international organizations and NGOs should also ensure that this area remains a focus. GE is committed to continuing to partner with a variety of organizations on these issues.

GE believes that by taking these steps all stakeholders can better support the goal of addressing MIH and work towards solving one of the world’s biggest challenges.

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