

GE II Ethiopia: Improving Health through an Integrated Technology Package

In Ethiopia, in spite of much progress, neonatal mortality remains high at 37 deaths per 1,000 live births. According to a 2004 World Health Organization report on facility-based deaths, the major causes of neonatal mortality in Ethiopia are infection (32 percent), birth asphyxia (29 percent), prematurity (24 percent), and other causes, including neonatal tetanus (15 percent). While the technologies exist to save neonatal lives, they have not been adapted for low-resources settings. Rural facilities in Ethiopia confront unstable electricity, high temperatures, high humidity, inadequate on-site technical support, limited budgets and fluctuating staff. The WHO reports that three-quarters of medical devices do not function in developing countries and remain unused within one year of installation.

The HANSHEP Health Enterprise Fund, implemented by the SHOPS project, selected GE II Ethiopia, a locally registered entity of General Electric, to equip rural facilities with a Primary Newborn Care Package, a set of technologies designed for the harsh conditions many of these facilities face. The equipment addresses the top causes of neonatal mortality, and includes infant warmers, resuscitation devices, LED phototherapy, and bubble CPAP (used for respiratory distress). GE provides the medical devices and, through a local partner, ensures on-site clinical and routine product trainings as well as monitoring and evaluation for a one-year trial period. A local service and maintenance package ensures that devices do not go unused for long periods of time. This integrated package is intended to result in higher impact on newborn lives, increased patient volume, and high staff capability to service patients' needs. This package will be integrated into the Ministry of Health's broader newborn care standard operating procedures.

The Business Model

The Health Enterprise Fund supported GE II Ethiopia to develop their Primary Newborn Care Package. The Care Package equipment has been engineered to specifically cope with conditions in low-resource environments, such as heat, humidity, dust, and fluctuating electricity. The Lullaby Warmer Prime, for example, can withstand voltage fluctuations, is very durable, requires minimal training, and is extremely affordable. Besides being more locally appropriate, GE II Ethiopia estimates that the total cost is less than one-third that of similar commercially available equipment.

After the equipment package is shipped to facilities, including frequently required spare parts, GE II Ethiopia provides initial and follow-up clinical training, as well as ongoing monitoring



Equipment for the Primary Newborn Care Package arrives at GE II Ethiopia

GE II Ethiopia

Grantee at a Glance

- Vision: Provide low-resource facilities with the necessary tools to sustainably reduce neonatal mortality and morbidity by integrating training and services from the local private sector
- Innovation type: Provision of locally appropriate technologies, coupled with ongoing capacity building and service/maintenance support
- Health focus: Maternal, newborn, and child health
- Target population: Low-weight and pre-term newborns in rural facilities
- Country: Ethiopia

and evaluation of progress to flag and resolve issues along the way. Focusing on complementary investments, like the follow-up training and monitoring, in addition to the equipment itself will lead to a more sustainable health care delivery system by ensuring proper and continued use. By building a direct relationship with the key client base – mid-to-low range providers in public facilities – GE II Ethiopia can determine their value add and ensure that the services meet providers' needs.

Pilot Support at Rural Facilities

Through funding from the Health Enterprise Fund, GE II Ethiopia selected four sites where they are piloting the Primary Newborn Care package and collecting clinical and procedural data. The Assela Hospital, Adama Hospital Medical College, Hawassa University Referral Hospital and Nigist Eleni Mohammed Memorial Hospital are located in rural areas outside Addis Ababa, at least 100 kilometers from the nearest pediatric referral hospital. GE II Ethiopia conducted site assessments on infrastructure, data on newborn patients, such as number of deliveries and cases of neonatal distress, and current equipment. Key mid-level health professionals at these sites were also identified to participate in clinical trainings.

Through the fund, GE II Ethiopia began a partnership with the Ethiopian Pediatric Society (EPS), who will act as the clinical training provider. The Health Enterprise Fund provided technical assistance to EPS to support the development of a clinical training and training evaluation tools. After the equipment is installed and health professionals have been trained, GE II Ethiopia and EPS

will collect daily and monthly data on use of the equipment as well as newborn health outcomes. One tool that has been developed is a quality claims feedback tracker that describes the claim, what is being measured, how it relates to indicators tracked by the facilities, and how it is being addressed. This information will be used for quality improvement purposes. Through the roll-out of the Primary Newborn Care package to health facilities in hard-to-reach, rural areas in Ethiopia, GE II Ethiopia will directly help low-weight and preterm newborns stay healthy and thrive.

The Impact

“ In just 2 months at least 30 newborns have been saved by this equipment. ”
- Dr. Samuel Lulseged, Pediatrician
Adama Hospital NICU

Through the Primary Newborn Care Package, GE II Ethiopia aims to provide quality products at a lower cost to end users, leading to an improved public health delivery system, through: trained health care workers, increased use of and access to appropriate technology. The package will increase confidence in the public health service system, and ultimately increase the number of babies born at the facility. By investing in the human resources aspect of the system, GE II Ethiopia also builds health provider capacity, thereby expanding the use of and demand for the equipment. In the future, GE II Ethiopia aims to create a long-term commercial opportunity for their clinical diagnostic solution with the Ethiopia Ministry of Health worth over \$45 million.

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For more information about the SHOPS project, visit: www.shopsproject.org



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