

# STRENGTHENING MATERNAL AND CHILD HEALTH IN THE DEMOCRATIC REPUBLIC OF CONGO

The SEMI project aimed to improve maternal and child health outcomes in the Democratic Republic of Congo (DRC) by enhancing healthcare provider training, equipping maternity wards, and implementing digital health solutions. Between 2022 and 2024, health zones implementing SEMI interventions reported a **30% decline in maternal deaths** compared to non-intervention areas.

Maternal mortality is one of the best indicators of health system development and social inequalities in health care access. DRC ranks in the 'top ten worst' countries for maternal mortality, estimated at 547 maternal deaths per 100,000 live births in 2023. Under-five mortality in DRC is also among the highest at 85 per 1,000 live births, of which 31% are neonatal deaths. These statistics underscore the challenges that DRC continues to face at a very basic level.

The UK's Foreign, Commonwealth and Development Office (FCDO) has been working with IMA World Health since 2013 to bring positive change for women and girls in the Democratic Republic of Congo. The SEMI project was FCDO's most recent commitment to health systems strengthening in DRC, moving away from direct infrastructure provision and service delivery to focus on tackling preventable deaths of mothers and babies as the linchpin to developing the health system and addressing social inequalities in access to health care in Kasai province.

The SEMI approach was aligned with the National Health Development Plan (PNDS) which is guided by three strategic axes:

- Axis 1: Improve the delivery of health services and continuity of quality care at the various levels of the health system.
- Axis 2: Support the pillars of the health system to improve the availability of and accessibility to quality care.
- Axis 3: Support governance, leadership and management of the health system.

IMA worked closely with the provincial health authorities or *division provinciale de la santé* (DPS) to ensure that SEMI activities aligned with their strategies. As seventy-five percent of maternal deaths occur from preventable obstetric complications, the SEMI team focused on labor and delivery, and post-natal care as key areas for lifesaving activities.

To address under-5 mortality, SEMI implemented a three-fold approach: 1) immediate care of the newborn; 2) accurate diagnosis and treatment of common childhood illnesses; and 3) early detection and treatment of child malnutrition. IMA's innovative work in nutrition was supported for 14 years by FCDO through ASSP, ASSR and SEMI projects, which introduced intensive systematic screening of children between 6 months and 5 years of age using low-cost middle upper-arm circumference (MUAC) tapes. SEMI achieved a 70% recovery rate of children with acute malnutrition, and successfully decreased the prevalence of children with acute malnutrition from 9.7% to 4.7% over 2 years. By promoting locally available foods and plants, the SEMI approach was sustainable and resilient to shocks that might interrupt supply of commercial food supplements.

## Objectives

- Reduce maternal and neonatal mortality rates.
- Strengthen the skills of midwives and maternity service providers to deliver emergency obstetric care.
- Improve healthcare infrastructure and equip maternity wards.
- Integrate innovative digital health solutions for improved maternal care.



Baby Sanse, pictured here with her mother, Ikopo Nsimba, was delivered by SEMI-trained Nurse Eugene Basa-Mbongo at the Dekese General Reference Hospital.

## Key Interventions

### 1. Capacity Building for Healthcare Providers

- **Training Programmes:** SEMI supported continuous professional development for midwives in essential obstetric and neonatal care.

Building upon progress and investment made under the ASSP and ASSR projects, the SEMI project focused on targeted technical assistance in all public health facilities to improve the quality of essential obstetric and neonatal care. The IMA-led consortium worked to improve the readiness of health facilities to offer quality Emergency Obstetric and Neonatal Care (EmONC) services. Under ASSP and ASSR, IMA integrated Comprehensive EmONC (C-EmONC) services into 9 health facilities per HZ, including the general referral hospital (HGR). Under SEMI, IMA integrated basic obstetric and neonatal care (B-EmONC) into the remaining 243 health centres, for a total of 405 facilities offering B-EmONC and 18 hospitals providing C-EmONC.

- **Clinical Mentorship:** On-the-job training was provided to reinforce practical skills in managing maternal health complications.

The SEMI project supported the goals of the National Reproductive Health Program, who identified provider skill deficiencies as a contributing factor to poor maternal health outcomes. Clinical mentoring by providers from the zone and provincial offices, supported by the use of training equipment like mannequins, was offered to help providers better apply knowledge and skills and improve the quality of EmONC. The SEMI project supported clinical mentoring missions on a regular basis, starting with monthly visits, then visits every two months. This allowed providers to be regularly supported and identify persistent challenges unique to their communities.

- **Blood Transfusion Training:** Postpartum haemorrhage accounted for 55% of maternal deaths recorded over the course of the SEMI project.

SEMI worked address the issue of safe blood availability for transfusion in Kasai by supporting the transport of materials and equipment from the National Blood Bank of Kinshasa to Kasai, repairing 17 blood bank refrigerators in the general referral hospitals, and training healthcare providers on safe blood transfusions. The SEMI project aimed to build provider capacity and standardize procedures for transfusion safety.

- **Impact: 429 healthcare providers trained in emergency obstetric care,** promoting enhanced maternal care delivery.

The healthcare provider training implemented by the SEMI project built upon trainings at the zone and province levels rolled out under the previous ASSP and ASSR projects. SEMI included previously trained trainers in provider training activities to reinforce their teaching skills and offer refresher training to zone and provincial mentors.

### 2. Digital Health Solutions

- **Safe Delivery App (SDA):** A mobile application providing visual and instructional guidance on maternal and neonatal emergency care was introduced as an educational “on-the-job” training tool. Embraced most widely by nurses and midwives, the SDA represented an opportunity to support the most remote healthcare workers to save lives when every minute counted.
- **Impact:** In health zones where the SDA had been rolled out, **complication identification rates increased by 40%, and maternal deaths reduced by 25%. By the end of the SEMI project, all 18 health zones had experienced cascade training on the SDA.**



*Eugene Basa-Mbongo learned new skills during an Emergency and Obstetric training provided by SEMI.*



*Celestin was born at 28 weeks gestation. His mother, Felly, had just begun her seventh month and third trimester of pregnancy. His birth weight was only 2 kg, or 4.4 pounds. In a place where there is no electricity and no NICU, some would say his chances of survival were slim. But his mother, Felly, never lost hope. She followed the instructions given to her by the midwife, Therese Keza, who used the Safe Delivery App (SDA) to guide her. She instructed Felly to hold her baby close to her skin. Felly learned how to practice Kangaroo Care with her small newborn son, supplying him with her own heat. And as his mother held onto him, in her warmth, Celestin held on to his own life.*

### 3. Improving Healthcare Infrastructure

- **Provision of Essential Equipment:** Maternity wards were supplied with essential medical tools to handle complications effectively, improve sanitation to fight infection, and monitor labour progress to more quickly identify and respond to complications.
- **Kangaroo Mother Care Units:** SEMI supported underweight and premature infants by promoting skin-to-skin care methods. Facilities implementing Kangaroo Mother Care saw an **increase in neonatal survival rates particularly among those born with low birth weights.**



*Mungoyo's daughter, Rose, was safely delivered by cesarean by SEMI trained health staff.*

### 4. Community Engagement and Awareness

- **Training for Community Health Workers (CHWs):** the SEMI project leaned on and supported community health committees (CODESAs) and CHWs to educate communities and screen for maternal risks. This was critical for avoiding the three delays (delaying the decision to seek care, reaching a facility, and receiving adequate care) and saving lives through early and regular care.
- **Nutrition Programmes:** through the ASSP and ASSR projects, IMA led intensive revitalization efforts to combat malnutrition in children under 5 years old. Through SEMI, these efforts were scaled up to include pregnant women for the first time. Over the course of the SEMI project, 113,742 pregnant women were screened for malnutrition, 19,217 (16.7%) of whom were under 18 years of age. The average proportion of pregnant women screened per quarter was 35,263 or 31%, giving women the chance to receive adequate care through referrals to healthcare facilities, and improving their chances at carrying a healthy baby to term.

### Challenges and Recommendations

- **Knowledge Retention Issues:** Regular refresher training and mentorship programmes are required to maintain skill levels.
- **Limited Resources:** Increased funding and government commitment are needed for sustainability of improved outcomes.
- **Lack of Neonatal Care Units:** Expansion of neonatal intensive care facilities will improve survival rates of premature infants. Currently limited to select facilities and referral hospitals, large portions of the population living in remote areas with poor road infrastructure lack the ability to see neonatal intensive care when needed.
- **Scalability of Digital Solutions:** Nationwide adoption of learning tools like the SDA can continue to support providers to maintain their skills.

### Conclusion

Investing in maternal and child health remains critical to reducing preventable deaths in the DRC. Through enhanced training, digital innovations, and community engagement, the SEMI project has demonstrated the potential for transformative impact. Scaling these efforts will be key to achieving long-term improvements in maternal and neonatal health outcomes. With **consistent training, infrastructure upgrades, and policy alignment**, the maternal mortality rate could be further reduced by an estimated **15-20% in the next five years.**

### Helping Mothers Deliver Safely: Angel and Tomy's Birth Story

When Angel Mboyo began to haemorrhage at only seven months of pregnancy, she feared for the life of her unborn child. In her remote village in northern Kasai province of the DRC, birth complications often resulted in death for either the mother or child or both. She knew she had to seek care. Bleeding and doubled over in what could only be described as labour pains, she gathered her few possessions and walked out of her small mud hut to flag a motorbike. Thankfully, her village in Kinkole Health Area was only five kilometres from the provincial Ilebo General Reference Hospital, known locally as HGR Ilebo. It would be a gruelling five kilometres on bumpy, single track dirt roads, but at least she wouldn't have to suffer a long trip in her condition.

When she arrived at the hospital, Nurse Beatrice Shikadi, head nurse of the maternity, received her. Nurse Beatrice had recently completed a training in EmONC organized by the SEMI project. During her training she learned how to correctly use a partogram, an effective tool for the early detection of maternal and foetal complications during childbirth.

Using the partogram, she began the process of monitoring the elements of foetal progress and vitality, as well as uterine contractions. She quickly determined the baby's vitals were distressed. Nurse Beatrice knew that if the baby didn't come now, she might not make

it. Because of her training, she also knew this was a delivery that required skills that she didn't have. Angel needed to have a caesarean section and she needed it now.

Nurse Beatrice called Dr. Albert Ndjondo. Dr. Albert says he was born in this very hospital. Once when he was young, he was sick, and his mother brought him to HGR Ilebo for care. He remembered watching the doctors help so many people that day, and it was then that he knew he too wanted to be a doctor. Dr. Albert and his team were also attendees at the SEMI EmONC training. He knew exactly what to do to bring Angel's baby safely into the world. His team prepared Angel for surgery and within the hour, Baby Tomy was alive and breathing in her mother's arms.

Dr. Albert and Nurse Beatrice are two of the 429 health workers trained in 18 health zones in Kasai province during the first several months of the project. These health workers went on to mentor another 519 service providers during clinical mentoring sessions, extending the reach of qualified personnel significantly. With this knowledge, these health workers have safely delivered more than 108,000 babies in project health zones since December 2022.



*Angel gave birth to baby Tomy with the help of Dr. Albert and Nurse Beatrice at Ilebo General Reference Hospital.*

