

An innovation for mothers and babies no matter where they are born

A health center in the Morogoro region of Tanzania is staffed by a single midwife. She is trained to refer patients to the hospital if any complications arise during labor, but the referral system is not robust. The patient—now in a complicated stage of labor—would have to walk from the clinic, high on a hill, to the nearest road, about 10 km away, to then catch a public bus for a 40-minute ride to Mikumi Hospital, where doctors, supported by the NGO CUAMM, are available.

Instances of prolonged second stage of labor or fetal distress impact approximately 15% of pregnancies worldwide and are among the common causes of maternal and newborn mortality and morbidity. In such cases, the OB-GYN or midwife needs assistance to quickly and safely deliver the baby. Without proper intervention, severe complications may arise, such as postpartum hemorrhage, perinatal asphyxia and fistula.

Current alternatives for assisted delivery include forceps and vacuum extractors, but these devices may themselves cause complications, and the risks and complexities associated with current devices may inhibit utilization. These tools are not available at the clinic in Morogoro. The other alternative in cases

of prolonged or complicated labor is to refer the mother for a cesarean section. However, cesarean sections add cost, increase the risk of infection and are not available in many low-resource settings.

That's why BD, in collaboration with WHO, Saving Lives at Birth: a Grand Challenge for Development*, the Bill and Melinda Gates Foundation and other partners, is developing the BD Odon Device™. The BD Odon Device is a new innovation for assisted vaginal birth in cases of prolonged or complicated second stage of labor. If proven effective through clinical trials, the BD Odon Device may provide a safe and effective alternative to forceps and vacuum. The goal of BD is to enable OB-GYNs and midlevel





healthcare providers, such as the midwife in Morogoro, with technology to safely and effectively resolve cases of prolonged or complicated second stage of labor locally in the clinic.

In a world far from the Morogoro district of Tanzania, Professor Tim Draycott from the University of Bristol, U.K. is contemplating another public health challenge: the increasing rate of cesarean deliveries worldwide. Approximately one-fourth of all cesareans occur in the second stage of labor and many of these cesarean deliveries could be avoided if the obstetricians were skilled and felt confident in performing assisted vaginal deliveries.

Professor Draycott and his team conducted a series of simulated studies with prototypes of the BD Odon Device at his center in Bristol. Based on studies so far, he believes that this simple device could reinvigorate interest and confidence within the medical community for performing assisted vaginal birth, hoping

to reduce avoidable, unnecessary and sometimes dangerous cesarean sections.

The BD Odon Device is currently in development with clinical studies beginning soon. If the studies yield positive results, BD anticipates launching this innovation in markets around the world. The BD Odon Device is an example of effective collaboration between public and private sector and academia to support SDG 3 and the Every Woman Every Child Global Strategy, and to help save lives of mothers and newborns, no matter where they are born.

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*Saving Lives at Birth partners include USAID, the Norwegian Ministry of Foreign Affairs, the Bill and Melinda Gates Foundation, Grand Challenges Canada, UK Aid and KOICA.

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