

THANK YOU!!!

ZMH Maternal Health Update

The Untold Story

Dan and Joan Jones
Medical Missionaries in Zambia

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Praise Item: Thank you to the ZMH midwives and the operating room staff. Your dedication to duty and your efforts to help our maternity patients are greatly appreciated. During the past 3 years, it has been a privilege to work together to improve the care for mothers and newborns.



1 DELIVERY BED IN OLD MATERNITY WARD

Mwabonwa! This is the true story of 1 doctor, 1 anesthetist, 3 theater nurses, and 8 midwives. For the past 3 years, they have dedicated themselves to improving the delivery of maternal health services at ZMH. I would rate our maternity ward as one of the best in the whole country of Zambia. However, this was not the case just 5 years ago. In 2011, we had only 1 delivery bed and 6 postnatal beds. There were only 567 deliveries that year. Back then, the percentage of women delivering at a health facility was only 30% in our area. This figure was even well below the national average of 50% for health care deliveries in Zambia. Women were more often deciding to take their chances to deliver at home. One reason was that the likelihood of delivering a healthy baby was not much better at the hospital than in the village. Why come to the



NEW DELIVERY ROOM WITH FETAL MONITORS

hospital to just end up delivering a stillborn baby? There was no equipment at the hospital to monitor the heart rate of the baby during the labor. It was very difficult to diagnose fetal distress. It is important to diagnose fetal distress to prevent birth asphyxia and subsequent stillbirths. The lower quality care being provided to expecting mothers in the developing world is truly a social justice issue. We figured that if we upgraded our facilities and offered better services to pregnant women at ZMH more of them would choose to deliver at the hospital. So, it became our goal to improve the maternal and newborn health care at ZMH. In 2011, a fundraising campaign was initiated for the ZMH Maternal Health Upgrade Project. Thanks again to the 10 churches and 55 individuals in the USA who made generous donations for the project. In a span of 1 year, \$137,000 was raised for the project. Construction for the projects was started in December 2012. It was completed one year later. The project included rehabilitation and expansion of the maternity ward as well as the construction of an new antenatal ward. Our bed capacity has increased from 7 to 37. We now have 5 delivery beds instead of 1. We have 11 postnatal beds instead of 6. We have 4 incubators beds for mothers with premature babies instead of 0. We have 17 antenatal beds for women with high risk pregnancy complications instead of 0. The antenatal ward has made a big impact to improve maternal and neonatal outcomes. Women with high risk conditions like twins, previous cesarean, and placenta previa can be admitted for closer monitoring during the last month of pregnancy. The project also included procurement of biomedical equipment like fetal monitors, ultrasound machine, infant resuscitation warmers, and incubators. Now, all 5 labor and delivery beds have monitors to detect any problems with the baby's heart rate during the labor. Maybe you have seen the movie called "Field of Dreams". Kevin Costner has a famous line in that movie. He said, "If you build it, they will come." This became our firsthand experience in the ZMH maternity ward. Our volume of deliveries has steadily increased ever since the project was finished. In 2015, we had 1,566 deliveries which is 999 more than we did in 2011. This figure represents a dramatic increase of 176%. Despite this increased volume of deliveries, the staffing levels of midwives has remained pretty much the same. In 2014, the average number of deliveries per midwife was 133. In 2015, the average number of deliveries per midwife was 195. This figure represents a 46% increase since last year. Last year was the first time that the ZMH midwives were close to achieving to the World Health Organization (WHO) goal for a midwife to conduct 200 deliveries in a year. Despite the increased workload, our outcomes for mothers and babies have actually improved. Before the project, there were 4 maternal deaths at ZMH from September 2010 to August 2011. After the project, we had 2 separate 12 months periods (August 2013 to July 2014 and September 2014 to August 2015) during which 0 women died at ZMH due to a childbirth complication. Considering that our number of deliveries has tripled, this accomplishment is quite amazing. For the last 2 years, our total number of preventable, institutional neonatal deaths and stillbirths due to birth asphyxia has remained quite low at 8 or less despite the increased number of deliveries. There was another highlight for our newborn care. For the first time during our tenure at ZMH, 2 premature babies (1 in 2015 and 1 in 2016) born at weights of less than 1,000 grams (which is less than 2 pounds) miraculously survived. Now, ZMH is becoming widely know for its excellent maternity services. ZMH has the only operating room to provide emergency obstetrics services like cesarean section for 3 health districts in the southern region of Zambia. In 2015, we had 266 cesareans which is our highest one year total. In April 2016, we had 37 cesareans which is our highest one month total ever. The 3 health districts are Zimba, Kalomo, and Kazungula. Kalomo District has a hospital but it does not have an operating theater. Kazungula does not have a hospital. The land mass area for the 3 districts is 6,400 square miles which is the size of the state of Connecticut. The total population for the 3 districts is 352,503 which



OLD WAITING AREA FOR HIGH RISK PATIENTS

1/2 of the population of the state of Vermont. There are 40 Rural Health Centers (RHC) in the 3 districts that can refer women with obstetric emergencies to ZMH. Some RHC are quite far away. For example, Nkandanzovu RHC is 100 miles (160 kilometers) from ZMH one way. The condition of the road is very poor. It takes an ambulance 4 hours to just to reach this center. After picking up the patient, it is another 4 hours on the return trip. So, the patient will finally get access to emergency obstetric care at a minimum of 8 hours after the problem started. These long delays contribute to women suffering severe obstetric complications like ruptured uterus and vesicovaginal fistula as well as maternal deaths. There is still a great need to strengthen women's health services at all levels of the Zambian health system. At ZMH, we are doing our small part to help women deliver safely.



NEW ANTENATAL WARD FOR HIGH RISK PATIENTS