Dan and Joan Jones
Medical Missionaries in Zambia

ZIMBA MISSION HOSPITAL
PILGRIM WESLEYAN CHURCH
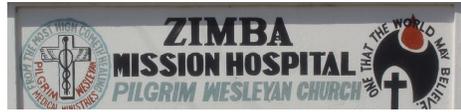
June 2008

Prayer Request: Patience with the hospital staff.

Praise Item: Teams to Zimba this past month.

USA: 1 out of 125 children die before they reach the age of 5 — **Child Health** — Zambia: 1 out of 5 children die before they reach the age of 5

Infant Mortality: Due to the inadequate number of health facilities in Zambia, it is not uncommon to deliver a dead baby. So, it is a challenge to the unborn baby just to be born alive. The stillborn rate is Zambia is estimated to be 1 out of every 32 deliveries. In the U.S. it is only 1 out of every 250 deliveries.

If the baby is lucky enough to be born alive, the baby still faces many challenges in the first month of life which is called the neonatal period. The neonatal mortality rate often is used as an indicator health services being provided in a country In Zambia, 1 out of every 25 babies dies before it reaches 28 days old. In the U.S. this figure is only 1 out of 200.

One main reason for the difference in these figures is the availability of neonatal intensive care units (NICU) in the U.S. There simply are no NICU's in the Zambia. This fact presents a big problem if a baby is born prematurely in Zambia. There are unique challenges for a preterm baby to survive. It is difficult to feed preterm infants and keep them warm even in the best of health care settings let alone in health centers in the developing world.

Preterm infant: Born at 28 weeks and weighed 1.2 kg

HIV/AIDS: Currently, there are 130,000 children in Zambia who are HIV positive. Almost all of these children contracted HIV from their mothers. Every year, there are 28,000 newly infected babies in Zambia.

Tranmission of HIV from the mother to child can occur one of three ways. First, the baby may get the virus during pregnancy while still in the uterus. Second, the baby may get the virus during labor and delivery when it passes through the birth canal. Finally, the baby can get the virus during breastfeeding.

If the mother is HIV positive, there is a 35% chance that the baby will also be HIV positive. There are three interventions which lowers the risk of HIV transmission from mother to child. When these three interventions are used together, the risk of the baby getting the virus from the mother goes down to 2%.

In Zambia, pregnant women are now receiving antiretroviral medications. These medications do reduce the risk that the baby will get the virus from the mother. The other two interventions are elective cesarean delivery and exclusive formula feeding. These interventions are not widely available in Zambia.

If a child is HIV positive, he or she is twice as likely of dying before reaching age 5 than a child who is HIV negative. Thus, it is very important to prevent HIV infections in newborns.

Malnutrition: The World Health Organization (WHO) estimates that 54% of childhood deaths around the world are associated in some way with malnutrition. There can be many causes for lack of food including war, drought, or poverty. Malnutrition is most common between the ages of 6 months and 2 1/2 years old.

The mortality rate for malnutrition is 25%. This figure has remained unchanged for the past 30 years. Death usually occurs within the first 48 hours of admission to the hospital. Causes of death include hypoglycemia, hypothermia, and infections.

There are two types of malnutrition. Marasmus is simply not taking in enough calories. Kwashiorkor is malnutrition associated with edema (body swelling) due to protein deficiency. Treatment is to provide high calorie formula.

In Zambia, 28% of children are malnourished. The sad irony is that 18% of children in the U.S. are considered obese.

Sabata: 2 year old with severe malnutrition and edema (kwashiorkor)

Clean water: The important of a clean water supply cannot be overstated. It is mandatory for life itself. The world's population is estimated to be 6 billion now. It is very difficult to believe that 1 billion people lack access to safe drinking water. That is 1 out of every 6 people on the planet.

How is drinking water contaminated? Water becomes contaminated from human feces. The relative ease of this process is no surprise when you consider that 2.4 billion people don't have proper sanitation facilities (toilets).

Drinking dirty water can have deadly consequences. Most gastrointestinal pathogens are spread by the fecal oral route as described above. Gastroenteritis causes diarrhea. Prolonged diarrhea leads to dehydration. In a child, dehydration can quickly lead to death.

2 million childhood deaths each year are attributed to diarrheal diseases. The figure represents 15% of all child mortality worldwide. In the U.S. the main form of treatment for dehydration is to administer intravenous (IV) fluids. In developing countries, IV fluids are not readily available. So, oral rehydration solution (ORS) is the main form of treatment.

Access to deep water wells and proper sanitation facilities are vital to the health of any community in the developing world.