



Photo: C. Nelson

# Indonesia's Healthy Start

World health experts estimate that nearly 20 million people in Indonesia are chronic carriers of the hepatitis B virus, which causes serious liver complications that can lead to death. Between 25 and 30 percent of carriers are infected through mother-to-child transmission of the virus.

Because hepatitis B can be prevented through a series of immunizations, PATH and the Indonesian Ministry of Health (MOH) set out to immunize newborns on the island of Lombok, Indonesia. The resulting Hepatitis B Model Immunization Program achieved a nearly 100-percent rate of immunization. It also set the stage for a broader child-survival program called Healthy Start.

As the following stories show, PATH's unique ability to combine communications, technology, and advocacy enabled these programs to significantly improve women's and children's health in Indonesia.

## **The Model Program: Delivering the Birth Dose on Lombok**

PATH and the Indonesian MOH collaborated on a model program on the Indonesian island of Lombok. Implemented from 1987 to

1991, this program introduced a comprehensive system for delivering the vital “birth dose” of the hepatitis B vaccine.

This innovative program tackled nearly every aspect of hepatitis B vaccine delivery, from working with manufacturers and securing affordable prices, to training health workers on immunization techniques. In addition, the model program established a registration system for tracking and monitoring pregnancies and births, as well as a community-based vaccine-delivery program that sent trained vaccinators to villages to administer hepatitis B immunizations to each child within one week of birth. These components were crucial to the program’s success.

By the end of the model program, the hepatitis B carrier rate among children under the age of four years fell from 6.2 to 1.9 percent. Recognizing the significance of these results, the Indonesian government adopted a national policy requiring hepatitis B vaccine for all newborns. In 2003, every infant born in Indonesia will be eligible to receive the hepatitis B vaccine.

### **Healthy Start: Integrating Prenatal and Postnatal Care**

World health experts estimate that each year, more than 250,000 Indonesian infants die from preventable illnesses.

Most births in Indonesia take place at home with assistance from traditional birth attendants (TBAs) who have little or no health training. Although inadequate nutrition and hygiene put babies at high risk of disease and illness, access to health services is poor, and

several months may pass before an infant is examined by a trained health provider.

Recognizing the urgency of these issues, the Healthy Start program (1990–1997) aimed to reduce infant mortality caused by infectious disease, poor nutrition, and poor hygiene. The program added a full range of prenatal and postnatal care interventions to the hepatitis B vaccinations that were already underway.

Healthy Start used the model program’s community-based registration system to track and report pregnancies and births. These efforts were critical to the timely delivery of life-saving services; they ensured that pregnant women received essential prenatal services and that trained midwives visited women and their newborns within a week of birth. The system also enabled program staff to monitor the type and frequency of services that pregnant women received, as well as newborns’ specific needs, immunization schedules, and growth status.

### **Building Capacity, Increasing Knowledge**

Increasing the capacity and knowledge of birth attendants is a key component of reducing infant mortality. Building on the model program’s initiatives, the Healthy Start program paired newly trained government midwives in rural areas with TBAs, who still deliver most babies. Community health volunteers also motivated pregnant women to seek prenatal services. By strengthening the collaboration between midwives and TBAs and increasing women’s knowledge, Healthy Start made significant progress on its goal of reducing infant mortality.

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Photo: C. Nelson

# PATH's BIRTHweigh™ Scale

Infants who weigh less than 2.5 kilograms at birth are considered low-birthweight babies and are highly susceptible to health complications, including death. They require specialized care and must be kept warm.

Typically, traditional birth attendants (TBAs) do not have access to metered birth scales or the training to read them, so a baby's low birthweight may go undetected until complications arise. To help TBAs and other attendants, PATH developed the BIRTHweigh scale. This simple, low-cost, hand-held spring scale provides an easy-to-use and easy-to-read method for determining birthweight. To use the BIRTHweigh scale, health workers simply place the baby in a secure sling that is suspended by a hook on the scale. A window on the scale shows yellow if the baby is low-birthweight and blue if the baby weighs at least 2.5 kilograms, the desired weight for a healthy newborn.



*On this updated BIRTHweigh scale, the yellow button sinks into the grip if the baby weighs at least 2.5 kilograms. This version allows birth attendants to feel whether babies are at a healthy weight, even in the dark.*



In Healthy Start, midwives provided TBAs with a pictorial packet of information that included two information cards. These cards were used to record basic information about the birth, such as infant name, birth date, and mother's name. The cards came in two colors: yellow and blue. TBAs used the BIRTHweigh scale to determine the baby's weight. If the baby had a healthy weight, the TBA filled out the blue card; if the baby was underweight, the TBA filled out the yellow card.

TBAs then turned the cards into the village midwives. If a midwife received a yellow card, she knew that a low-birthweight baby had been born, and she would make a special effort to reach the baby within 24 hours. During this visit, the midwife provided essential information, supplies, and care to ensure the survival of the low-birthweight infant.

*BIRTHweigh is a trademark of Program for Appropriate Technology in Health (PATH).*

One of the most important elements of the program was the training that midwives provided to TBAs on clean delivery practices and safe cord care. Midwives also provided TBAs with pictorial information on breastfeeding, hygiene, care of low-birthweight babies, and techniques for weighing newborns. TBAs learned how to fill out a simple color-coded card that informed midwives of each birth and recorded the birthweight and outcome (see previous page).

These information cards prompted midwives to visit homes within one day of delivery to administer vaccinations and provide additional information about breastfeeding, hygiene, family planning, immunizations, and, in the case of low-birthweight infants, special care. Midwives also provided supplies of vitamin A, iodine, iron, and soap.

Another important element of the program was its decentralized, cross-sectoral approach to health care—so important in this era of health reform. By addressing several aspects of maternal health, child health, and family planning in a single visit with mother and infant, the program made for efficient use of personnel, equipment, and transportation, and it allowed costs of the visits to be distributed across several cost centers.

### **Saving Lives with Healthy Start**

In 1999, PATH and the MOH measured the results of the Healthy Start activities and compared them with baseline data collected in 1996. The results showed a statistically

significant decrease in the number of infant deaths and low-birthweight babies on Lombok. The results also demonstrated a sharp increase in several important indicators, including the number of women receiving four or more prenatal care visits, the use of iron supplements during pregnancy, and rates of immunization for hepatitis B and polio.

Five years after the original Healthy Start program ended, these methods remain a core part of standard delivery practices on Lombok. The MOH plans to expand awareness of these methods into other parts of Indonesia.

### **The Partners: Critical to Success**

The success of both the Hepatitis B Model Immunization Program and Healthy Start can be directly attributed to the projects' many partners and contributors. The Australian Agency for International Development, the Indonesian Ministry of Health, the United States Agency for International Development, PATH, the Macfarlane Burnet Centre for Medical Research (Melbourne), and the James S. McDonnell Foundation contributed valuable resources for launching the model program. Each of these organizations was integral to the programs' achievements.

Most important, however, the midwives, TBAs, women, and children on Lombok were dedicated and enthusiastic participants of these efforts, and we are grateful for their contributions. Together, these groups have achieved successes that will be appreciated for generations to come.