Bilikit™: A Revolutionary Solution for Newborn Jaundice

**THE NEED**

Neonatal jaundice is the most common condition requiring medical treatment in newborns. It presents as a yellow discoloration of the baby’s skin and eyes, caused by excess bilirubin (a yellow pigment of red blood cells). Infant jaundice usually occurs because a baby’s liver isn’t mature enough to get rid of bilirubin in the bloodstream.

Left untreated, jaundice can lead to permanent neurological damage, cerebral palsy, deafness and even death. Approximately 1 million newborns annually have jaundice severe enough to require intervention.

In Peru, more than 90% of health facilities lack the equipment and training to adequately diagnose and treat neonatal jaundice, contributing to a rate of jaundice-linked brain damage (kernicterus) up to 20 times greater than in high-income countries. Even among healthcare facilities considered equipped for neonatal jaundice care, many have substandard or inoperative devices.

Timely screening, diagnosis and treatment must be made within the first days of life to prevent irreversible injury.

**OUR SOLUTION**

INMED Andes is introducing a revolutionary trio of portable technologies to reach vulnerable newborns in under-resourced areas. Called the Bilikit™, each component fills a critical need in timely jaundice care.

In partnership with the technology developers and INMED Partnerships for Children, INMED Andes is working with regional and local health networks, health centers and hospitals, community health agents (CHAs), and new parents in the Peruvian highlands of Junín and La Libertad to diagnose, screen, and treat neonatal jaundice within the first days of life by:

- Developing and adapting educational materials to raise awareness among healthcare professionals and the public of the need for jaundice screening and treatment.
- Providing training to local and regional health providers and CHAs in the 3 technologies that make up the Bilikit™.
- Establishing jaundice management centers in rural regions, each equipped with the Bilikit™.
At the heart of the Bilikit™ are 3 simple-to-use, durable and portable technologies that make it possible to deliver bedside neonatal jaundice care—even in the most remote regions of the world.

1. **The Bili-ruler™**, developed by Brigham and Women’s Global Newborn Health Lab, is a simple, dependable and low-cost tool for universal screening of newborns during the first week of life when jaundice reaches its peak. The ruler-type instrument comprises five shades of yellow that correspond to bilirubin concentrations. It quickly allows healthcare workers to identify the severity of the condition before the onset of irreversible symptoms.

2. **The Bilistick®** is a hand-held, point-of-care diagnostic device, enabling quantitative serum bilirubin testing with just a pinprick of blood. Developed by Bilimetrix, it produces results in just minutes—right at a baby’s bedside. Because of the simplicity of the method, the small size of the device and the use of a battery powered reader, the Bilistick® does not require a highly qualified staff or equipped facilities for analysis. This is particularly important for babies whose families live far from health facilities.

3. **The Bili-Hut™**, developed by Little Sparrows Technologies, is an ultra-portable, high-intensity blue light (LED) phototherapy device that provides highly effective, noninvasive treatment for neonatal jaundice. Durable yet lightweight, the Bili-Hut™ folds flat for easy transport. Its battery-powered capability enables critical bedside jaundice treatment for newborns in areas with unreliable line power. The interior nest positions and comforts the newborn during treatment and can be removed and washed for reuse.

For more information, please contact Dr. Fernando Perez: fperez@inmed.org or visit [https://inmedandes.org/la-ictericia-neonatal](https://inmedandes.org/la-ictericia-neonatal) (Spanish) and [https://inmed.org/the-bilikit](https://inmed.org/the-bilikit) (English)