



# DRC-IHP EFFECTIVE INNOVATIONS

## Saving new lives with Helping Babies Breathe

“...I have a bicycle; sometimes the tire runs out of air. I deliver babies; sometimes a baby’s lungs run out of air. Now that I know how to reinflate lungs like a bicycle tire, I know I could have saved many babies over the years.”

—Mama Christine, birth attendant

### Integrated Health Project in the Democratic Republic of Congo



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*The Government of the Democratic Republic of Congo (DRC) has set ambitious targets for improving the country’s health system, in the wake of decades of instability. The challenges are many: despite rapid improvement in the last few years, under-five mortality is still 104 per 1,000 live births; and maternal mortality was nearly 85 out of 10,000 according to the Demographic and Health Survey 2013.*

*Helping Babies Breathe (HBB) is helping newborns survive neonatal asphyxia.*

## The Integrated Health Project in the Democratic Republic of Congo (DRC-IHP)

*DRC-IHP works closely with the Government of the Democratic Republic of Congo to strengthen the country's health system at every level and achieve the Ministry of Health's targets of saving 437,000 lives of children and mothers over five years.*

*Data modeling using the Lives Saved Tool (LiST) shows that DRC-IHP interventions saved the lives of more than 150,000 children over just three years. The project has improved health services for more than 12 million people—17 percent of the Congolese population.*

*DRC-IHP focuses on maternal, newborn, and child health; family planning; nutrition, malaria, and tuberculosis; HIV and AIDS; and water, sanitation, and hygiene (WASH)—applying many proven, low-cost, high-impact innovations on a large scale.*

*Funded by the U.S. Agency for International Development (USAID), the President's Emergency Plan for AIDS Relief (PEPFAR), and the President's Malaria Initiative (PMI), DRC-IHP works in 78 health zones in four provinces: Kasai Oriental, Kasai Occidental, Katanga, and Sud Kivu. The project has upgraded the quality of services at more than 2,000 locations—from community sites to local health centers to regional hospitals.*

*Management Sciences for Health (MSH) implements DRC-IHP with partners International Rescue Committee and Overseas Strategic Consulting, Ltd. (OSC). Activities continue through June 2016 under DRC-IHPplus with partners OSC and Pathfinder/Evidence to Action (E2A). DRC-IHPplus has expanded to cover 83 health zones.*

In conjunction with the Ministry of Health, DRC-IHP achieved the following results in project health zones between 2010 and 2015:

- *increased the proportion of women who delivered babies in a facility with a skilled birth attendant from 73% in 2010 to 89% in 2015*
- *increased the percent of newborns receiving essential newborn care from 67% in 2010 to 88% in 2015*
- *inspired new mothers to breastfeed newborns in their first hour, increasing the rate from 2% in 2010 to 96% in three years*
- *vaccinated over 97% of children under the age of 12 months (more than 2 million) in project areas with DPT-HepB-Hib3*
- *detected and treated nearly 60,000 cases of TB*
- *provided more than 1.5 million pregnant women with at least two doses of sulfadoxine pyrimethamine (SP) for IPTp to prevent malaria*
- *enabled 2.4 million people to adopt a modern family planning method*
- *provided more than 2.9 million people in target areas with first-time access to improved drinking water supply*
- *enabled more than 868,000 people with first-time access to improved sanitation facilities (from a baseline of 124,000 in 2010)*

### ACKNOWLEDGMENTS:

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In addition, we recognize the Ministry of Health in DRC for its close partnership in making the Integrated Health Project an outstanding and sustainable success.

Finally, we gratefully acknowledge the support of PEPFAR, USAID, PMI, and the American people for funding this important project, with special recognition to the USAID/DRC Mission for its dedication to strengthening the DRC health system and improving the health of the people of the DRC.

## Helping Babies Breathe: An internationally-proven approach, scaled up in DRC

HBB is a global, educational program to teach health providers at all levels ways to resuscitate newborns who are not breathing. Designed for areas with limited resources, HBB is an initiative of the American Academy of Pediatrics (AAP) in collaboration with the World Health Organization (WHO), USAID, and a number of other global health organizations.

HBB was introduced in the DRC by the Church of Latter-Day Saints (LDS) in 2007. Among their first trainees was Lucie Zikudieka, then at the Ministry of Health and now Senior Technical Advisor for Maternal and Newborn Health at DRC-IHP. Initially DRC-IHP partnered with LDS to provide the materials and international instructors; today the instructors are those trained by the project.

Like other health system innovations implemented by DRC-IHP, HBB is highly effective, scientifically proven, and internationally recognized. To take it to scale, the DRC-IHP, with the MOH, has trained 448 birth attendants in HBB since 2012. Many of these sessions are trainings-for-trainers, with an explicit expectation that participants will train and mentor others in the technique. DRC-IHP has also provided the equipment and teaching materials needed for facilities to perform HBB and continue to conduct refreshers and new trainings.



Photo by Rebecca Weaver


Providers who practice HBB demonstrate a **90 percent success rate** in reviving newborns. In the quarter ending June 2015 alone, in DRC-IHP-supported health zones birth attendants trained in HBB were able to **resuscitate 632 babies** out of 710 born with neonatal asphyxia.

“HBB training is simple and effective. We need to continue to invest in training...to ensure that every baby born in DRC not breathing has access to this life-saving technique.”

—Lucie Zikudieka, Senior Technical Advisor, DRC-IHP

## The HBB training package

- An evidence-based educational program, based on the International Liaison Committee on Resuscitation (ILCOR) Consensus on Science conclusions that have undergone a WHO scientific technical review
- Picture-based, culturally relevant learning materials, including a Learner Workbook, Action Plan wall poster, and Facilitator Flip Chart
- A realistic newborn simulator (“Baby Natalie”) for hands-on practice, plus bag-mask ventilators, and bulb suction cups
- Ongoing mentorship and supportive supervision



Sylvie Bundu is the DRC government midwife assigned to Kakala's health center. She is delighted with the HBB training she has received as part of the DRC-IHP supported training program. “HBB is a simple but useful technique” she said. “It saves babies lives not only in a hospital but here, in a small village health center.”

# Helping Babies Breathe in Action

Baby Mushombe entered the world through natural delivery—and immediately struggled to breathe. His respiratory distress could have cost him his life, as it does for many infants in the DRC, where 118,122 newborns died in 2012, according to the World Health Organization.

Fortunately for Mushombe, the hospital had a team of midwives and assistants who had mastered the Helping Babies Breathe technique. The USAID-funded DRC-IHP trained providers throughout 78 health zones in this resuscitation technique developed for environments with limited resources. With simple equipment and methods, HBB helps babies start breathing during the first minute of life, a critical period known as “the Golden Minute.”

Mushombe’s mother recalled, “I had given up hope, but I saw the team jump into action from the first minute. Five minutes after giving birth, I was very glad to see my baby alive and without health problems—thanks to the midwives’ skills.”

The health zone of Lemera, in Sud Kivu Province, where Mushombe was born, had a particularly high rate of

newborn mortality before integrating HBB into health care courses. But between January and March 2015, the two sites in Lemera that incorporated HBB saved the lives of 31 of 32 infants born with respiratory distress, respectively.



Lula Bitshi was photographed in St. Francis Hospital in Tshimbulu, Kasai Occidental. Mothers like her benefit from the DRC-IHP supported Helping Babies Breathe (HBB) training at St. Francis Hospital.

## What’s new

DRC-IHP adapted HBB training to one that can be shared with an unschooled birth attendant or a nursing or medical student at university. While most medical instruction in DRC consists of lectures and reading, DRC-IHP sessions feature hands-on work and immediate feedback so that all participants develop the skills—and the confidence—to use

them. Participants express amazement that they can do easily what they thought only specialized physicians could manage.

HBB instruction is part of an intensive, three-week curriculum on maternal and infant health, tailored for all levels of health providers and administrators.

## Looking forward

Lucie Zikudieka, Senior Technical Advisor, has been DRC-IHP’s lead trainer for maternal and newborn health. “HBB training is simple and effective,” she says, demonstrating a hand-pump for a newborn. “With HBB we can save 90% of newborns born not breathing.”

need regular refreshers. We also need to continue investing in the equipment, such as the inflatable dolls and resuscitation equipment.

“We want to ensure that every baby born in DRC not breathing has access to this life-saving technique.”

Photo by Rebecca Weaver

“Before HBB we didn’t have a good technique to save a baby who wasn’t born breathing,” said Nurse Judith Kambuye, who has worked at Luiza General Referral Hospital since 1978. “Out of 10 babies who were born not breathing, we were able to save only 3. Now, with HBB, of ten babies born not breathing, we can save nine.”



Photo by Warren Zelman

## Mama Christine’s story

One training in Katanga province made a particular impression on the trainers themselves. In May 2014, the project team arrived to present the full three-week package for women’s reproductive health, having spent months compiling, validating, and printing the curriculum and training materials.

Expecting 32 nurses, the trainers watched with mounting anxiety as 32 women who had never attended school, let alone nursing training, entered the conference room. Local staff had invited the local birth attendants.

“They’re all completely illiterate. Immediately all the written materials go out the window,” recalls Lucie Zikudieka, lead trainer and senior technical advisor. “So we regroup—and decide to show the videos. But that became a problem too—some had never seen a projected image. They insisted we were using sorcery.

At that point, we took out the inflatable baby dolls and showed them how to resuscitate a newborn who isn’t breathing, and had them practice. Then we showed them Kangaroo Care for

premature and other low-birthweight babies—it uses a parent’s body warmth instead of an incubator. After that we said, ‘that’s all we can teach you’ and sent them home.”

But Mama Christine, about 60, refused to leave. She told Lucie: “Madam, I have a bicycle. Sometimes the tire runs out of air. So I take my pump and re-inflate it, then I go on my way. I deliver babies; sometimes a baby’s lungs run out of air. Now that I know how to re-inflate lungs like a tire, I know I could have saved many babies over the years. Since I know such things exist—how can you tell me to go away and not learn more?”

The trainers were so taken by Mama Christine’s thirst for knowledge that they retooled part of the curriculum on birth complications and continued the training another two days. After that, facility nurses replaced the midwives and reaped the benefit of the full course.



## The role of health system innovations

To extend high-quality health services to more people than ever before in the DRC, DRC-IHP has drawn on a number of innovations and scaled them up to make a major difference. The project defines health system innovations as new ways of organizing people, processes, and resources:

- that improve delivery of proven health practices, products, and technologies—licensed, approved, and/or registered as required.
- to achieve greater scale, value, and impact.

By starting with proven methods, health system innovations therefore help close the gap between knowledge and action in public health.

DRC-IHP focuses on securing adoption, ownership, and predictable uptake for successful scale up. This addresses the key enabling factors and constraints to getting the innovation institutionalized—including regulatory, policy, and capacity building requirements, plus change management, demand creation, and funding.

“One pump, two pumps, breathe,” a nurse chants, as she demonstrates pumping air into the mouth and nose of a baby born struggling to breathe. The pump and “Baby Natalie” doll are part of the equipment IHP has provided to health facilities.

Photo by Rebecca Weaver

## About the Effective Innovations Series

This brief is part of a series highlighting health system innovations that DRC-IHP has adapted and implemented on a large scale in the DRC:

**Champion Communities**

**Helping Babies Breathe**

**Integrated Community Case Management**

**Infant and Young Child Feeding**

**Results-based Financing**

Together, these approaches have saved tens of thousands of lives in the DRC over the past few years. We hope these publications will inspire others to use these proven approaches in their own context.

For more information, see:

[www.msh.org/our-work/projects/integrated-health-project](http://www.msh.org/our-work/projects/integrated-health-project)

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