Breathing Program May Help Save Newborns' Lives

Training midwives and other birth attendants to help babies start breathing immediately after birth may prevent stillbirths and newborn deaths in the developing world, two new studies suggest.

So-called birth asphyxia—when babies are born not breathing—is one of the major causes of newborn death in regions with limited resources, researchers said.

The Helping Babies Breathe program, launched by the American Academy of Pediatrics (AAP), trains birth attendants to immediately dry and warm babies—and to start breathing for babies with a bag and mask if they don't breathe on their own within one minute.

Reducing infant mortality in the developing world is one of the United Nations Millennium Development Goals—but progress has been slow, according to Dr. Jeffrey Perlman from Weill Cornell Medical College in New York, who helped implement Helping Babies Breathe in Tanzania.

"The majority of deliveries in resource-limited areas are done by the midwife, and the midwife wasn't really taught how to deal with a baby once they were born," Perlman told Reuters Health. Instead, he said, midwives tend to focus on the mother immediately after the birth.

"If you can just teach them, when the baby's born, to immediately dry the baby off… that drying and a little bit of stimulating will probably get 90 to 93 percent of babies breathing that weren't breathing before," said Perlman, one of the authors of a study published Monday in Pediatrics.

"That's the most exciting part, that something very simple can

save many, many lives."

Perlman and his colleagues compared about 8,000 babies born at eight hospitals before birth assistants were trained in the breathing program to almost ten times as many babies born afterward.

Program leaders initially taught the breathing techniques to 40 "master trainers" from the eight hospitals over two days. Some master trainers then went to other hospitals and health centers in the area to teach midwives and other health care providers, in what the research team called "a cascade model approach."

The researchers found newborn deaths dropped from 13 per 1,000 babies to seven per 1,000 once Helping Babies Breathe was implemented. The rate of stillbirth fell from 19 per 1,000 babies before to just over 14 per 1,000 after.

In a second study from Southern India, another set of researchers saw no change in newborn deaths after the same program was taught to almost 600 birth attendants in rural health centers.

However, stillbirth rates fell from 30 per 1,000 babies to 23 per 1,000 after the training, Dr. Shivaprasad Goudar from Jawaharlal Nehru Medical College in Belgaum, Karnataka and colleagues found.

"We really need to focus on the early steps of resuscitation for the developing world, because that's where most of the mortality is occurring – in other words, just getting babies to breathe," said Dr. John Kattwinkel from the University of Virginia in Charlottesville, who wrote a commentary published with the new studies.

"In many countries, well over half of the deliveries occur out in the clinics and in the homes. That's what this program is designed for," he told Reuters Health. "It would be a terrific

strategy to implement widely.”

Perlman estimated that expanding the program to all of Tanzania over the next couple of years would cost about $5 million.

According to United Nations data, 32 babies die in India for every 1,000 live births and 26 per 1,000 die in Tanzania. In the United States overall, four babies die for every 1,000 live births – but the figures are much higher in certain poorer parts of the country.

The Helping Babies Breathe program is supported in part by the Laerdal Foundation for Acute Medicine. Laerdal Medical manufactures breathing simulators and other products related to the program’s work.

According to Kattwinkel, the evidence provided by these two studies should help conjure up support for Helping Babies Breathe and allow it to spread to other limited-resource areas.

Perlman agreed, saying the program is now being pursued in about 70 countries worldwide. The most important component, he added, is that it must have government support locally, as has been the case in Tanzania.

“There are very few things that you can do simply that you can save, even in the worst case, three-quarters of a million (babies),” Perlman said.