

Largest global childhood pneumonia etiology study launched

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Pneumonia kills more children around the world than any other disease, but the last major effort to study the causes of childhood pneumonia across many countries was conducted in the 1980's. This week, a groundbreaking new study called the Pneumonia Etiology Research for Child Health (PERCH) study gets off the ground. A collaboration between 5 African and 2 Asian research sites coordinated by the International Vaccine Access Center (IVAC) at Johns Hopkins Bloomberg School of Public Health, the study will systematically look at current and likely future causes of childhood pneumonia in some of the world's hardest hit populations.

Aiming to enroll more than 12,000 children in seven different countries, PERCH will be the largest, multi-country study of its kind in over 20 years. The study is funded by a grant from the Bill & Melinda Gates Foundation and is expected to inform global efforts against [pneumonia](#) – the world's biggest killer of young children – in the years to come. The study is being conducted in Bangladesh, The Gambia, Kenya, Mali, South Africa, Thailand, and Zambia, and in collaboration with local and international research stations and universities, including laboratory support from the University of Otago and Canterbury Health Laboratories, New Zealand.

"Every child in the world is at risk of pneumonia. While we're preventing lots of pneumonia with vaccines due to some germs, we need a new evidence-base on pneumonia to assure that we use effective treatments and develop the right vaccines for the next decade," said Orin

Levine, lead investigator on the study and professor of International Health at Johns Hopkins Bloomberg School of Public Health.

Pneumonia remains the leading infectious cause of childhood deaths around the world, accounting for more than 1.5 million child deaths per year, with 98 percent of these deaths occurring in developing countries. Pneumonia kills more young children under five years old than HIV and malaria combined. Current strategies for prevention and treatment of childhood pneumonia in developing countries were developed primarily based on research conducted in the 1980s that identified the common causes of pneumonia.

Major changes have taken place since those studies were conducted that make the continued use of that evidence base potentially misleading. Most of the information available right now was collected before HIV infection became widespread and does not reflect changes in living conditions like the growth of mega-cities. Perhaps most importantly, access to pneumococcal and Hib conjugate vaccines is increasing around the world. When these two important causes of childhood pneumonia become less common, new treatment approaches will be needed.

Recent breakthroughs in laboratory testing also mean that the PERCH study will be able to identify infections that might have been missed in the past and perhaps even discover new, previously unknown viruses and bacteria. The PERCH study is using a new diagnostic test developed by Fast Track Diagnostics that can detect up to 30 different germs in a single specimen. Dr. Richard Adegbola, senior program officer at the Bill & Melinda Gates Foundation says "PERCH is a centerpiece of the Foundation's [child health](#) research programs. By harnessing the latest advances in science and technology, we expect the results of the PERCH study will make major contributions to the field of pneumonia control and prevention."

The KEMRI Wellcome Trust Research Programme in Kilifi, Kenya and the Chris Hani Baragwanath Hospital in Soweto, South Africa are two of eight collaborating research institutions and will be the first of seven sites to begin enrolling patients into the study. "By successfully introducing Hib and pneumococcal conjugate vaccines in Kilifi, we are reducing the burden of serious pneumonia in our [population](#). But we still have many cases among children admitted to hospital and we want to know what the causes are so we can treat them better or maybe prevent them in the future," said Dr. Anthony Scott, the principal investigator for the PERCH study site in Kilifi.

Provided by International Vaccine Access Center

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