

KENYA

UNLOCKING THE MYSTERY OF CHILDHOOD DEATHS

A team of researchers is partnering with Kenyatta National Hospital to produce some of the most comprehensive information on respiratory deaths among children in Africa. The hope is that lessons will benefit communities worldwide.

Kenya is determined to save children's lives by understanding why they are dying. Respiratory tract infections, particularly pneumonia, are a leading cause of death in Kenyan children under the age of five. A new study called the Pediatric Respiratory Etiology Surveillance Study merges traditional pathology, new laboratory technology, and information from autopsies to better understand the cause of respiratory disease among children.

MAKING NEW CONNECTIONS

- **CAUSE OF DEATH:** The study follows children hospitalized in the pediatric and intensive care wards at Kenyatta National Hospital in Nairobi. In the unfortunate event that a child dies of respiratory disease, the program provides guardians with grief counseling and extra time before asking their permission to conduct an autopsy. The technique used in the autopsy for specimen collection is minimally invasive and therefore more culturally sensitive. Being more sensitive to the needs of parents has increased rates of study participation to 60%.
- **NEW DIAGNOSTICS:** Laboratory testing is needed for the study because it can be difficult to tell the source of a respiratory infection based on symptoms alone. A new test called the TAQMAN Array Card, is being used to test samples from children in the study. The multiple-pathogen test can diagnose between 20–40 pathogens for up to eight patients at the same time, and do it within 2.5 hours. Faster and better results can help guide treatment and detect outbreaks sooner.
- **COMBINING INNOVATION:** The study analyzes the molecular data from the multiple-pathogen technology card in tandem with the pathological data from the autopsies. This groundbreaking approach could unlock the mystery of why so many young children die of respiratory disease.

PUTTING IT TO THE TEST

Information from the study is already being used by healthcare workers at the hospital. Testing picked up an outbreak of respiratory syncytial virus in the neonatal ward, which led to improved infection control practices and helped stop the spread of the virus. The methods used in the study will serve as a model for other programs and countries as they work to save the lives of young children.

A commitment to reducing childhood deaths through the Pediatric Respiratory Etiology Surveillance Study is being led by the Centers for Disease Control and Prevention (CDC) Influenza Division through their successful Influenza program in Kenya in collaboration with Kenyatta National Hospital. Support is also provided from CDC's Division of High Consequence Pathogens and Pathology.

A groundbreaking study in Kenya is producing some of the first data on respiratory deaths among children in Africa.



Researchers in Kenya are working to prevent respiratory deaths among children.

Read the full story: http://www.cdc.gov/globalhealth/healthprotection/gdd/stories/kenya_mystery_childhood_deaths.html