Pneumonia in children: Causes and Potential Solutions

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The rate of P. pneumoniae infection in children is on the rise in Latin America and the Caribbean. Among children under 5 years old, this infection is associated with an increased risk of death and worsened health. It is also associated with a lower level of education, more frequent medication administration, and more frequent palliative care.

Pneumonia is a chronic lung infection which causes a respiratory cascade of complications. In this cascade the body damages the lungs in three different ways: an inner layer of the pulmonary sac collapses, hypoxia is induced in the air sacs that separates lungs from the heart, and macrophages, immune cells of the respiratory system, overcompensate by producing inflammatory compounds in the air sacs.

The cause of pneumonia is not entirely known, but it is often associated with the consumption of certain foods or an acute infection by bacteria or viruses.

The Intensucede-Bolivar MÃ©xico Banco de Chile (IDB) is an ongoing research project funded by the Fondo de Deuda Privada & Inclusion de la Agencia Hidroso PÃºblica in recognition of the importance of research in addressing causes of respiratory problems. We are working on this important public health problem. In addition to a large sample of cases of the disease with pathogen data in a wide range of medical codes and diagnosis codes, our research project has also evaluated factors involved in childrenâ€™s morbidity and mortality, in order to develop a spectrum of approaches to prevent this illness and also to improve its therapeutic response.

Biological mechanisms that cause pneumococcal disease (klamnetispora villosa) may be responsible for the upward trend in incidence and mortality. These mechanisms may include genes that produce a bacterial-cryptoxidizing enzyme in the cells of the nose and respiratory tract, and that speed up the rate of bacterial invasion and consequently the bodyâ€™s resistance.

We evaluated potential opportunities for intervention in this important area. The most probable avenues in addressing deaths and morbidity were: infection prevention and control, preventive therapy, preventive medicine, and reducing environmental pollution and contamination with bacterial pathogens.

We were able to provide the first investigative evidence on the causes of the disease in children. We found that there are genetic and environmental factors involved in the disease. While related genetic factors were important, it was also the immunological factors that conferred the most significant risk of morbidity and mortality. In addition, environmental factors in urban areas â€” failure to dispose of infection-causing objects, infection by the Rorsoul microbe, which occurs mainly in the pipes at the breast (fan 1) and in water reservoirs (fan 2) â€” were also significant in this disorder.

We are now carrying out additional studies on the disease in young adults, which we plan to launch in 2012.

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A Red Fire Hydrant In The Middle Of A Forest