



Editorial

World Pneumonia Day 2023: Reducing the impact of pneumonia in the Americas

Día Mundial de la Neumonía 2023: Reducir el impacto de la neumonía en las Américas

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Pneumonia is considered as the leading cause of death due to infectious diseases across all ages globally⁽¹⁾. According to the Global Burden of Disease Report, 2.5 million people from around the world died from pneumonia in 2019⁽²⁾. Both children aged less than 5 years and older adults comprised the most vulnerable population⁽²⁾.

In the World Health Organization (WHO) region of the Americas 323,000 people died from pneumonia in 2019⁽²⁾. This includes 20,699 children aged less than 5 years and 226,723 adults aged 70 years and older⁽²⁾. Despite that, pneumonia mortality of children aged less than 5 years decreased from 105,031 deaths in 1990 to 20,696 deaths in 2019. The factors that contributed to this decline in pneumonia mortality in children were related to improvements made in childhood waste, air pollution, and poor sanitation. These risk factors are well known for death due to pneumonia. Also, the availability of antibiotic therapy and implementation of vaccination contributed to these results⁽¹⁾. In contrast, the mortality of adults aged 70 years and older has remained unchanged for the past 20 years. In 1990, there were a reported 116,070 adults aged 70 years who died from pneumonia. In 2019, the reported number was 226,723 deaths. The main reason for this was an across-the-board increase in the aging population, number of people with multiple chronic clinical conditions, and frail people.

The highest pneumonia mortality rates in the Americas in 2019 were among people aged 70 and older. Indeed, 291.87 of 100,000 people died in this age group and the pneumonia mortality rate for children aged less than 5 years was reported to be 28.11⁽²⁾. Over 80% of all pneumonia deaths in the Americas occurs in ten countries: Brazil (88,600 deaths), USA (81,900 deaths), Argentina (36,300 deaths), Mexico (22,600 deaths), Peru (18,200 deaths), Guatemala (9,900 deaths), Canada (9,125 deaths), Colombia (7,900 deaths), Bolivia (6,600 deaths) and Haiti (6,300 deaths). The five countries with the highest number of deaths related to pneumonia in children were Brazil (4,900 deaths), Haiti (3,200 deaths), Guatemala (2,400 deaths), Mexico (2,700 deaths) and Bolivia (1,600 deaths)⁽²⁾.

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Importantly, a 2019 cross-country systematic analysis about the burden of antimicrobial resistance in the Americas showed that an estimated 569,000 deaths associated with bacterial antimicrobial resistance (AMR) and 141,000 deaths attributable to bacterial AMR among the 35 countries in the WHO Region of the Americas. The highest mortality burden associated with antimicrobial resistance in the region was related to lower respiratory tract and chest infections, with a total number of 189,000 deaths⁽³⁾. In the report, *Streptococcus pneumoniae* (pneumococcus), the leading pneumonia-related pathogen, was included among the five bacterial pathogens that caused each one more than 50,000 AMR-associated deaths in the Americas in 2019. The deaths related to pneumococcus were 56,500 (45,800-70,200)⁽³⁾. It is vital to provide integrated, good-quality health services to ensure all people can access high-impact interventions that prevent, diagnose and treat pneumonia while reducing the number of people dying from this treatable and preventable disease.

The COVID-19 pandemic has highlighted the impact of pneumonia on the world⁽⁴⁾. Advancements in research and development can lead to the development of new vaccines, more effective treatments, and improved diagnostics for pneumonia. However, it was not more evident than that in the Americas: there were more than 193 million infections and more than 2.9 million deaths⁽⁵⁾. The disproportionately effect of the COVID-19 pandemic in this regions have had a profound impact on their population^(6,7).

Early diagnosis and treatment of pneumonia especially in vulnerable populations is critical in minimizing the harm caused by this disease⁽⁸⁾. Community awareness⁽⁹⁾ and engagement, education, access to medical oxygen and antibiotics and reinforced inclusion of community health workers can contribute to ensuring good-quality services and saving lives^(10,11). In recent years, mobile health (mHealth)⁽¹²⁾ and telehealth solutions⁽¹³⁾ have provided platforms for early symptom reporting, patient monitoring, and education on preventive measures.

Factors related to the risk of death in children include wasting, low birth weight, household air pollution, non-exclusive breastfeeding, short gestation, non-handwashing facilities and outdoor air pollution. Good nutrition is essential for

strengthening the immune system, thus reducing susceptibility to infections like pneumonia⁽¹³⁾. Increased air pollution due to climate change has been linked to the prevalence of respiratory diseases, including pneumonia⁽¹⁴⁾. In the elderly, smoking, low temperature, outdoor air pollution, secondhand smoke and non-handwashing facilities are factors related to pneumonia mortality⁽¹⁾. Despite the existence of low-cost and effective interventions, almost all these factors are related to poverty. Preventing pneumonia is crucial and should be based on key interventions such as access to pneumonia-fighting vaccines across the whole population^(15,16). Guaranteeing adequate water, hygiene and sanitation in all communities, improving health information systems, leveraging information and communication technologies, and addressing environmental factors, like improving air quality and access to affordable, reliable, sustainable and modern energy, can also make a difference.

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