

33. THE GLOBAL EPIDEMIOLOGY OF TETANUS



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Introduction. Tetanus, a bacterial toxin generated by *Clostridium tetani*, is the cause of the potentially fatal infectious disease. The illness damages the central nervous system, leading to severe muscle spasms and paralysis. Despite not being directly transmissible between people, tetanus remains a major global health concern.

Aim of study. Overview looks at the up-to-date information about the tetanus epidemic worldwide.

Methods and materials. A literature review was conducted. Analysis of literature sources and scientific articles retrieved from databases such as NihGov, PubMed, NCBI, ScienceDirect, World Health Organization reports and national statistics.

Results. The incidence of tetanus has demonstrated a notable decline over the past two decades, with rates decreasing from 6.9 per 100,000 total population in 2002 to 0.9 in 2022. The most significant improvements have been observed in countries within the African, South-East Asia, and Western Pacific regions. These countries, which were late adopters of immunization programs and experienced high infection rates, have achieved particularly commendable results. However, the incidence of tetanus exhibits notable spatial variation, especially in areas with limited medical infrastructure and restricted access to vaccines, where infection is more susceptible to widespread. Despite vaccination efforts, tetanus remains a health concern in some developing countries, where poor hygiene conditions and unclean wounds facilitate bacterial entry into the body.

Conclusion. Tetanus, though controlled through vaccination and improved medical care, faces challenges. Sustaining collective immunity and universal coverage are crucial. Initiatives for tetanus eradication are needed due to unequal access to medical care and immunizations. Key actions involve modifying health policies, assessing vaccination efficacy, and monitoring incidence rates. Challenges persist in achieving a tetanus-free world, requiring international coordination, resources, and community education.