

Symposium: “Pediatric Research Around the World: Sustained Activities at Research Hubs”

Pediatric Infectious Disease Research in Nha Trang, Vietnam

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[Abstract]

Introduction

Since 2007, the Nha Trang Office of the Nagasaki University Vietnam Research Project has conducted long-term epidemiological studies on pediatric infectious diseases in south-central Vietnam in collaboration with national and local research and medical institutions. This report summarises activities, findings, and future perspectives.

Maternal and congenital infections

A birth cohort established in 2009–2010, enrolling approximately 2,000 mother–infant pairs, investigated maternal and congenital infections, including hepatitis B and rubella, and their impact on child development. Following the nationwide rubella outbreak in 2011, longitudinal follow-up of children with congenital rubella syndrome revealed a high burden of cardiac, sensory, and developmental disorders. A second birth cohort (2017–2018) further assessed post-vaccine rubella susceptibility and the prevalence and outcomes of congenital Zika virus infection.

Vaccine-preventable diseases

Serological epidemiological studies targeting pertussis, diphtheria, measles, hepatitis B, and pneumococcal disease evaluated immunity gaps, carriage, and transmission risks using birth cohorts and community- and school-based surveys. Cluster-randomised trials demonstrated that reduced-dose pneumococcal conjugate vaccine schedules were non-inferior to standard schedules in suppressing vaccine-type carriage, providing evidence relevant to vaccine policy.

Acute respiratory infections

Since 2007, continuous hospital-based surveillance among children admitted with respiratory symptoms has characterised the incidence, aetiology, and molecular epidemiology of acute respiratory infections. Major pathogens, including respiratory syncytial virus, influenza viruses, and human metapneumovirus, were identified, and long-term genomic analyses elucidated changes in circulating strains.

Conclusion

Together, these integrated research platforms support effective surveillance, policy-relevant evidence generation, and capacity building for pediatric infectious disease control. Building on the established surveillance and laboratory infrastructure, future efforts will focus on strengthening continuous monitoring of major pathogens and vaccine-preventable diseases, promoting research collaboration, and fostering human resource development.

keywords : Vietnam; Maternal and congenital infections; Vaccine-preventable diseases (VPDs); Acute respiratory infections; Pediatrics