

## Management of Respiratory Diseases and Deployment of Transport Systems in Children in Indonesia

**(1) Background;** In Indonesia, the under-five mortality rate is about 10 times higher than in Japan, and about 70% of these deaths are due to respiratory diseases such as pneumonia, bronchiolitis, and asthma. As an island nation, access to advanced medical care is limited due to the dispersion of medical resources, and the establishment of a seamless patient transport system from primary care to higher-order medical institutions is an urgent issue. Especially for patients with acute respiratory failure, timely and appropriate monitoring and the dissemination of effective respiratory support techniques are expected to contribute significantly to the reduction of mortality.

**(2) Aims;** This project aims to standardize and establish initial assessment, monitoring, and simple respiratory support (mainly high-flow nasal cannula therapy; HFNT) for pediatric respiratory disease from primary to higher-level healthcare facilities throughout Indonesia.

**(3) Overview;** Based on the collaboration between the Japanese Society of Pediatric Emergency Medicine and the Indonesian Society of Pediatrics (Pediatric Emergency Intensive Care Section and New Medical Technology Evaluation Section), the project will focus on Harapan Kita Mother and Child Hospital, Yogyakarta Children's Hospital and Medan Children's Hospital in Jakarta. On the Japanese side, the Pediatrics Department and PICU of St. Marianna University School of Medicine will take the lead, cooperating with the dispatch of experts, including those from the National Center for Child Health and Development. On-the-job training will focus on respiratory management techniques, patient transport models, and telemedicine system operation methods to train local medical personnel.

**(4) Expected outcomes**

**Reduction of infant mortality rate:** Prevention of serious illness and quality of patient transport improved through the dissemination of appropriate assessment and management guidelines, and the mortality rate of children under 5 years old improved from 23 out of 1,000 to less than 20 out of 1,000.

**Medical human resource development:** Transfer of Japanese pediatric emergency and intensive care know-how to establish a sustainable medical care system.

**Establishment of a transport model:** Establish a patient transport system through appropriate respiratory monitoring and the use of telemedicine technology to reduce medical disparities between regions.

In the second year, a local champion team will take the lead in conducting training, and in the third year, the infrastructure for transport medicine and telemedicine will be developed in collaboration with the Indonesian Pediatric Society.

