

PICU Patients At-Risk for PARDS



Approximately 2-4% of patients admitted to PICUs suffer from paediatric acute respiratory distress syndrome (PARDS). PARDS has a mortality rate of nearly 20% and has no specific treatment. Identifying children at risk of developing PARDS could potentially result in more targeted therapies to prevent disease progression and improve patient outcomes.

Children At Risk for PARDS (ARF-PARDS) are identified using criteria established by the Pediatric Acute Lung Injury Consensus Conference (PALICC) in 2015. However, the prevalence, history and outcomes of children who meet these criteria remain unknown.

The PARDS Incidence and Epidemiology (PARDIE) study screened PICU patients in 145 centres across five continents. The study aimed to describe the epidemiology and outcomes of children meeting the ARF-PARDS criteria, including the frequency, timing, and risk factors of a subsequent diagnosis of PARDS. Three hundred and ten critically ill children meeting the PALICC at risk for PARDS criteria were identified.

Study researchers evaluated the frequency of children at risk for PARDS and the rate of subsequent PARDS diagnosis and identified factors associated with it. The frequency of at risk for PARDS was 3.8% among 8122 critically ill children who were screened, and 5.8% among the 5334 screened children on positive pressure ventilation or high-flow oxygen. Among the 310 at-risk children, 21.3% were subsequently diagnosed with PARDS, a media of 22.6 hours later. Subsequent PARDS was associated with increased mortality and a longer duration of invasive ventilation and PICU care. No difference was observed in the rate of subsequent PARDS by respiratory support modality. However, this was independently associated with lower initial saturation: Fio2 ratio, progressive tachycardia and early diuretic administration.

Overall, these findings show that the PALICC criteria identify critically ill children at high risk of PARDS and poor outcomes. There is a need for interventional trials aimed at PARDS prevention that includes patients early in their illness course, including those on high-flow oxygen and positive pressure ventilation.

Source: [Critical Care Medicine](#)

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