

**RISK FACTORS FOR MORTALITY IN CHILDREN
WITH HOSPITAL-ACQUIRED PNEUMONIA IN DR. SOETOMO GENERAL
HOSPITAL**

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ABSTRACT

Background: Hospital-Acquired Pneumonia (HAP) is a nosocomial pneumonia that brings negative impacts such as prolonged hospital stay and increased cost. Prior studies often discussed about the risk factors of HAP mortality in adult patients rather than in children.

Objective: Analyze the risk factors of mortality in children with HAP.

Method: This was a retrospective observational analytic study using cross sectional method with total sampling. Samples were inpatients at Pediatric Inpatient Room Dr. Soetomo General Hospital which qualified the inclusion and exclusion criteria. Independent variables were: gender, age, onset of HAP, length of stay (LOS), comorbidities, birth weight, type of breastfeeding, the use of mechanical ventilation (MV), and response to therapy. Dependent variable was mortality. The data were collected from medical records, were analyzed by bivariate and multivariate analysis.

Results: A total of 73 children were enrolled in this study. The mortality of children with HAP was 23.3%. Bivariate analysis showed that age ($p = 0.009$), the use of MV ($p = 0.029$), and response to therapy ($p = 0.036$) were risk factors associated with mortality in children with HAP in Dr. Soetomo General Hospital. The use of MV was the significant risk factor ($p = 0.023$) given by the multivariate analysis. Gender, onset of HAP, LOS, comorbidities, and type of breastfeeding were not proven to be the risk factors for mortality.

Conclusions: Age, the use of MV, and response to therapy were risk factors associated with mortality in children with HAP in General Hospital Dr. Soetomo. The use of MV was the significant factor for mortality in children with HAP.

Keywords: *Hospital-Acquired Pneumonia; risk factor; mortality; children*