

INPLASY

Predictive Value of Lactate-to-Albumin Ratio for Mortality in Critically Ill Children: A Systematic Review and Meta-Analysis

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Sciences.**ADMINISTRATIVE INFORMATION****Support** - None.**Review Stage at time of this submission** - Data analysis.**Conflicts of interest** - None declared.**INPLASY registration number:** INPLASY202670074**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 19 July 2026 and was last updated on 19 July 2026.**INTRODUCTION**

Review question / Objective The lactate-to-albumin ratio (LAR) integrates tissue hypoperfusion and inflammation markers, yet its predictive value for mortality in critically ill children remains unquantified.

Condition being studied The research team comes from the Department of Critical Care Medicine of a tertiary hospital in China, and all the team members have perfect clinical experience in critical care and resuscitation. Moreover, our team members have published more than 50 meta analyses, which can guarantee the successful completion of the current research.

METHODS

Participant or population The study enrolled a cohort of children aged less than 18 years with an acute critical illness.

Intervention The study measured the LAR at any clinically relevant time point during the treatment course.

Comparator The study measured the LAR at any clinically relevant time point as control group.

Study designs to be included Prospective and retrospective cohort designs, case-control studies.

Eligibility criteria Studies were considered for inclusion if they met all of the PICOS criteria: (1) Population: The study enrolled a cohort of children aged less than 18 years with an acute critical illness. (2) Exposure: The study measured the LAR at any clinically relevant time point during the treatment course. (3) Outcome: The primary outcome was all-cause mortality. (4) Study Design: The study must have been an original observational study that reported quantitative data sufficient for our analysis.

Information sources PubMed, Embase, and the Cochrane Library. Additional searches were

performed in grey literature sources, including ClinicalTrials.gov and the WHO International Clinical Trials Registry Platform.

Main outcome(s) The primary outcome was all-cause mortality.

Quality assessment / Risk of bias analysis The quality of included studies was assessed using the Newcastle-Ottawa Scale (NOS).

Strategy of data synthesis Meta-analysis.

Subgroup analysis Pre-specified subgroup analyses were performed to investigate potential sources of heterogeneity, including the study quality, population, effect measure, sample size, mortality risk, and mortality assessed timing.

Sensitivity analysis We conducted sensitivity analyses by sequentially removing each individual study and recalculating the pooled estimate.

Country(ies) involved China.

Keywords Lactate/albumin ratio; Pediatric intensive care unit; Critical illness; Mortality; Prognosis; Meta-analysis.

Contributions of each author

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