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Child mortality in Africa and south Asia: a multidimensional research and policy framework



Globally, progress has been made to address the diagnosis and management of common and avoidable acute illnesses that contribute to child mortality. Nevertheless, regions across sub-Saharan Africa and south Asia continue to have the highest rates of mortality in children younger than 5 years, with most deaths occurring after discharge from health facilities, indicating a gap in care following hospitalisation.^{1,2}

In a large, multicentre, prospective cohort study with high follow-up and robust data collection,³ the Childhood Acute Illness and Nutrition Network enrolled 3101 children aged 2–23 months with acute illness from nine rural and urban hospitals across six sub-Saharan African and south Asian countries, and investigated mortality during the first 30 days of hospital admission and within 180 days of hospital discharge. Participants were divided into the following three cohorts according to their nutritional status, which was defined by anthropometry using mid-upper-arm circumference: no wasting, moderate wasting, and severe wasting or kwashiorkor. One in every ten children (350 [11.3%]) died, of whom two-thirds (234 [66.9%]) died within 30 days of hospital admission and half (168 [48.0%]) died within 180 days of hospital discharge. Furthermore, there was a disproportionately high mortality rate among children with severe wasting.³

Despite receiving care as recommended by current WHO and national guidelines, most deaths were attributed to avoidable disorders, such as severe sepsis, pneumonia, diarrhoea, and malnutrition. This observation highlights the potential shortcoming of current practices, which focus on inpatient management of common syndromes but have limited outpatient guidance on community-based models for managing children following hospital discharge.⁴ Additionally, this finding emphasises the need for interventions that address the social determinants of child survival, besides the clinically evident illness.

As the authors point out,³ numerous psychosocial pathways link the risk of mortality to nutritional status and severity of illness. Evidence is clear that social determinants of health magnify post-discharge mortality through reduced access to health care and

adequate nutrition, which creates a cycle of disease and malnutrition.⁵ Underlying medical and nutritional status are syndromes of compounding adverse effects from the interaction of disease with a history of structural, social, and economic inequality.⁶ Therefore, recognising and addressing the social determinants of child nutritional status is a crucial first step in lowering child mortality. Furthermore, although not explored in this study, it is necessary to identify the biomedical factors that contribute to the malnutrition that leads to post-discharge child mortality to present a complete picture of the problem and to develop effective interventions, particularly where progress appears to be stalled.⁷

Referring all discharged children for post-hospital evaluation to prevent relapse and for continuous monitoring is not feasible in resource-limited countries. Therefore, risk stratification is a potential tool for identifying children at high risk of mortality and for effectively allocating resources to children in greatest need.^{8,9} However, it is important to acknowledge that risk stratification alone should not be seen as a solution to an inherently more complex multidimensional and multisectoral issue. First, the discharge planning process needs to be strengthened and referral mechanisms that better identify and engage with children and families who need additional support need to be ascertained. Second, a weak health system foundation cannot support best practice interventions; therefore, primary and community health systems should also be strengthened to promote preventive services. Third, much more needs to be done to validate predictive models of post-discharge risk and the evidence-based interventions that reduce child mortality in the community setting. Finally, even the most conscientious risk-based resource allocation cannot eliminate a contagion from a neighbourhood or provide all the socioeconomic and institutional resources needed for children to thrive, possibly because living conditions supersede the impact of facility-based care.

Hence, a suggested research approach would be to not only create and validate a risk predictive tool but also take the next step and integrate this tool into the current nurturing framework and comprehensive child

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programmes (eg, Integrated Management of Childhood Illnesses), which focus on health promotion across a continuum of care from community settings to health facilities. This approach would enable early detection of children at risk of mortality and would facilitate timely case management, while reducing misallocation of scarce resources due to over-referrals and the admission of uncomplicated cases, which can lead to overtreatment and adverse outcomes (eg, antibiotic resistance).¹⁰

Child mortality is a complicated issue that frequently involves mixed infections in the context of poor socioeconomic conditions and evolving pathogenesis. Although more prospective studies are needed, synergistic strategies addressing health inequity in a multipronged approach have the most potential in reducing child mortality.⁶

We declare no competing interests.

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