

Socioeconomic Status and In-hospital Pediatric Mortality

Date:

Jan 2013

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OBJECTIVE: Socioeconomic status (SES) is inversely related to pediatric mortality in the community. However, it is unknown if this association exists for in-hospital pediatric mortality. Our objective was to determine the association of SES with in-hospital pediatric mortality among children's hospitals and to compare observed mortality with expected mortality generated from national all-hospital inpatient data.

METHODS: This is a retrospective cohort study from 2009 to 2010 of all 1,053,101 hospitalizations at 42 tertiary care, freestanding children's hospitals. The main exposure was SES, determined by the median annual household income for the patient's ZIP code. The main outcome measure was death during the admission. Primary outcomes of interest were stratified by income and diagnosis-based service lines. Observed-to-expected mortality ratios were created, and trends across quartiles of SES were examined.

RESULTS: Death occurred in 8950 (0.84%) of the hospitalizations. Overall, mortality rates were associated with SES ($P < .0001$) and followed an inverse linear association ($P < .0001$). Similarly, observed-to-expected mortality was associated with SES in an inverse association ($P = .014$). However, mortality overall was less than expected for all income quartiles ($P < .05$). The association of SES and mortality varied by service line; only 3 service lines (cardiac, gastrointestinal, and neonatal) demonstrated an inverse association between SES and observed-to-expected mortality.

CONCLUSIONS: Within children's hospitals, SES is inversely associated with in-hospital mortality, but is lower than expected for even the lowest SES quartile. The association between SES and mortality varies by service line. Multifaceted interventions initiated in the inpatient setting could potentially ameliorate SES disparities in in-hospital pediatric mortality

Authors:

Colvin JD, Zaniletti I, Fieldston ES, Gottlieb LM, Raphael JL, Hall M, Cowden JD, Shah SS