Regional Variation in Standardized Costs of Care at Children's Hospitals

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BACKGROUND: Though regional variation in healthcare spending has received national attention, it has not been widely studied in pediatrics.

OBJECTIVES: (1) To evaluate regional variation in costs of care for 3 inpatient pediatric conditions, (2) assess potential drivers of variation, and (3) estimate cost savings from reducing variation.

DESIGN/SETTING/PATIENTS: Retrospective cohort study of hospitalizations for asthma, diabetic ketoacidosis (DKA), and acute gastroenteritis (AGE) at 46 children's hospitals from October 2014 to September 2015.

INTERVENTION/MEASUREMENTS: Variation in trimmed standardized costs were assessed within and across regions. Linear mixed effects models were adjusted for patient- and encounter-level variables to assess drivers of variation.

RESULTS: After adjusting for patient-level factors, variation remained. Using census division clusters, mean trimmed and adjusted total standardized costs were 120% higher for asthma ($1920 vs $4227), 46% higher for DKA ($7429 vs $10,881), and 150% higher for AGE ($3316 vs $8292) in the highest-cost compared with the lowest-cost region. Comparing hospitals in the same region, standardized costs were significantly different ($P < 0.001$) for each condition in each region. Drivers of variation were encounter-level variables including length of stay and intensive care unit utilization. For this cohort, annual savings from reducing variation would equal $69.1 million at the interregional level and $25.2 million at the intraregional level.

CONCLUSIONS: Pediatric hospital costs vary between and within regions. Future studies should examine how much of this variation is avoidable. To the extent that less spending does not compromise outcomes, care models may be adjusted to eliminate unwarranted variation and reduce costs.

Journal:

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