

# The Role of Financial Drivers in the Regionalization of Pediatric Care

Jeffrey Riese, MD, Brian Alverson, MD

General hospitals provide most pediatric inpatient care in the United States.<sup>1</sup> As hospitalization rates decrease nationwide, the regionalization of inpatient pediatric care and concentration at children's hospitals could limit health care accessibility, especially for those in rural communities.<sup>2,3</sup>

In this month's issue of *Pediatrics*, Cushing et al<sup>4</sup> use data from the American Hospital Association survey to describe trends in pediatric inpatient capacity and access over 10 years. They demonstrate that, although there has been an overall decline in pediatric inpatient units and beds, there has also been consolidation of pediatric care with an increase in the number of inpatient beds at children's hospitals. Lower-volume pediatric units, those without an associated PICU, and those in more rural areas were at highest risk for closure. As a result of this trend, the investigators found nearly 25% of US children had an increase in distance to their nearest inpatient pediatric unit. Another notable trend: whereas inpatient unit beds increased by 12.1% at children's hospitals, PICU beds increased 46.4%, resulting in an increasing share of children's hospitals' inpatient beds having a PICU designation and further limiting accessibility of critical care services for children in rural areas.

One driver of these trends is likely to be what Probst et al previously described as the "structural

urbanism" in health care, in which a bias exists toward large population centers.<sup>5</sup> The etiology is thought to stem not only from a market orientation, which requires a larger number of customers to generate profit, but also from a public health focus driving preferential funding toward larger population centers.

Urban children's hospitals provide the majority of high-cost hospitalizations, and PICU use is increasing.<sup>6-8</sup> It remains unknown whether the observed increase in children's hospital PICU beds relates to increased medical complexity or if having more beds simply drives greater use. Regardless, the financial benefits to the hospital cannot be overlooked. Recently reported data from trends in bronchiolitis hospitalization may be an example in support of unnecessary use.<sup>9</sup> Whereas overall hospitalizations for bronchiolitis, a common inpatient diagnosis, have been decreasing, bronchiolitis hospitalizations at children's hospitals and associated hospital costs for these hospitalizations have been increasing, even for patients without medical complexity and those who do not require mechanical ventilation.<sup>10</sup>

Cushing et al<sup>4</sup> may underestimate the role that "observation status" designation may have in the allocation of pediatric inpatient resources. A substantial portion of inpatient hospitalizations are assigned to observation status, which

Brown University, Providence, Rhode Island

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Address correspondence to Jeffrey Riese, MD, Department of Pediatrics, Rhode Island Hospital, 593 Eddy St, Providence, RI 02903. E-mail: [jriese@lifespan.org](mailto:jriese@lifespan.org)

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typically has a lower hospital reimbursement rate than regular admissions.<sup>11–14</sup> As many as one-third of pediatric discharges from hospitals reporting observation status in the 2010 Pediatric Health Information System had this designation.<sup>15</sup> Administrative databases, including the American Hospital Association database used for this study, that exclude observation stays likely miscalculate inpatient use. One can imagine that urban centers with a higher percentage of PICU beds may have a smaller percentage of observation cases. Therefore, there may be a skew toward preferential exclusion of rural patients in this analysis.

Cushing et al<sup>4</sup> highlight the effect more regionalized care has on disaster or pandemic preparedness. However, the more palpable and direct ramification of this trend will be on the everyday effects on pediatric outcomes. As distance to care increases, there is an associated delay in care, as well as an increase in costs, length of stay, and mortality.<sup>16–18</sup> Although rural areas suffered the steepest declines in pediatric services, urban areas had an 18.6% and 10% decline in nonfreestanding children's hospital pediatric inpatient units and beds, respectively. It is important to remember that even a small increase in distance to pediatric care can have a large impact on access for patients with few resources and lack of transportation.<sup>19–21</sup>

The trend is clear: pediatric inpatient care is more regionalized and concentrated. Intensive care beds are increasingly used, and the reason for that may be partly a financial response to decreased reimbursement rather than increased need for intensive care services. The financial impact will likely result in further

regionalization, leading to poorer access to intensive and inpatient care in many areas of the United States for children who are already vulnerable.

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