

Data Tells the Story of Frequently Admitted Pediatric Patients

Jacqueline Kueser, *Vice President*
Matt Hall, Ph.D., *Senior Statistician*

As part of the CHCA Owners' Research and Development program, a group of physician researchers worked together to describe the characteristics of patients admitted frequently to children's hospitals and the reasons for their admissions. The project, led by Boston's Jay Berry, M.D., M.P.H., concluded that targeting interventions to a modestly-sized group of patients could potentially have a significant effect on overall inpatient resource utilization.

The research group analyzed the patient population using data from the Pediatric Health Information System (PHIS) and also sought out critical input from hospital executives.

The study revealed the following based on analyzing 317,643 patients admitted to 37 children's hospitals in 2003 with follow-up through 2008:

- Patients with ≥ 5 admissions in 365 days made up only 3% of all children but totaled 19% of admissions while consuming:
 - 23% of all *hospital bed days*
 - 23% of all *total charges*
- This small patient group accounted for one-quarter of inpatient expenditures (\$3.4 billion).
- These patients had the following characteristics:
 - Older and had a higher prevalence of complex, chronic conditions and technology assistance
 - Rarely admitted for ambulatory care sensitive reasons
 - Nearly 1 in 3 patients were admitted for the same organ system problem recurrently

According to the study authors, even the best planning may not prevent future readmissions for children with complex chronic conditions if community providers and the health system are underequipped to meet patient needs, optimally manage their acute illnesses and minimize their chronic illness exacerbations. [Review the published study in the Journal of the American Medical Association](#) for more details. Based on this initial work, the research group will study this population to determine how to best provide cost-effective, high-quality inpatient and outpatient care that could have a significant impact on overall hospital bed use and costs. This work will be completed at the end of 2011.

What Can My Hospital Team Do to Improve Care for Frequently Admitted Patients?

- 1) Identify the risk populations for frequent admissions within your patient base.
- 2) Determine if you are effectively managing these patient populations by answering the following:
 - How do we reduce repeat hospitalizations and resource consumption for these patients?
 - Can we improve adult transition strategies?
 - Does our community have Medical Home enhancement programs, specifically for patients with neuromuscular diseases?
 - Should we redefine ambulatory care sensitive hospitalizations that involve technology malfunction? Chronic illness exacerbation (beyond asthma)?
- 3) Assemble multidisciplinary teams to determine standardized care processes based on existing, evidence-based practice guidelines.
- 4) Identify population-specific needs that can be met using current hospital programs (inpatient and outpatient).
- 5) Work with national and community services to identify services to fill gaps.
- 6) Monitor and respond to population indicators for appropriateness and effectiveness of hospitalization, clinical management and outcomes.
- 7) Consider current and future reimbursement implications associated with these patients.

This research can help hospital leaders understand:

- *Why some children are hospitalized on a recurrent basis*
- *The implications, now and into the future, of multiple repeated admissions for these patients and children's hospitals*