



Research Week 2020

“Bending the Curve” in Medically and Socially Complex Youth: Pilot of Novel Interventions in Children’s Health Care (NICH)

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Keywords

Social vulnerability, medical complexity, pediatrics, behavioral health

Abstract

Introduction

Children with medical complexity account for a relatively small percentage (0.4-0.7%) of children but approximately 15-33% of pediatric US healthcare spending. This is often attributed to recurrent hospitalizations that may be tied to social vulnerability. Few, if any, programs have effectively decreased utilization in this population.

Novel Interventions in Children's Healthcare (NICH), an intensive community-based, family-focused intervention, was developed for youth experiencing suboptimal disease management due to social determinants of health. NICH provides 24/7 support from a single 'interventionist' who provides strategic family and systems based interventions, health systems integration, patient needs alignment, and resource access for family and patient. This pilot study examines the effectiveness of NICH on reducing avoidable healthcare utilization and overall cost of care.

Methods

Youth (n=15) enrolled in the NICH pilot met the following criteria: 1) presence of a complex or chronic health condition, 2) avoidable hospitalizations, and 3) lack of response to existing services. Predominately represented medical conditions included type 1 diabetes, cystic fibrosis, and chronic pain. Mean youth age was 14.2 years (SD=4.66), 60% were female, and 80% were non-Hispanic white. Retrospective EHR reviews captured relevant healthcare utilization one year prior to and one year post NICH initiation. Medicaid paid claims data were examined for per-member, per-month (PMPM).

Results

In the year prior to enrollment, youth averaged 3.4 admissions, 25.3 days admitted, and 4.2 ED visits per youth as well as \$4,647 per-member, per-month (PMPM) in paid claims. In

the year following NICH enrollment, youth experienced on average 1.8 admissions, 9.7 days admitted, 3.4 ED visits and an associated \$2,243 PMPM per youth.

Discussion

The NICH pilot offers a promising intervention that addresses the challenges of social vulnerability compounded with medical complexity for pediatric patients in preventing unnecessary health system use. Further study is required to understand its effects and external validity.