Reduced Readmission Among Medically Complex Children enrolled in a Care Coordination

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Introduction

Hospital readmissions within 30 days are recognized as a key indicator of healthcare quality and are directly linked to reimbursement metrics. Children with medical complexity (CMC), defined by chronic conditions, functional impairments, and intensive healthcare needs, represent a particularly high-risk population for readmissions. Despite comprising approximately 6% of the pediatric population, CMC accounts for 40% of Medicaid spending, 41% of hospital days, and over 40% of pediatric inpatient mortality. To proactively manage this risk, Cleveland Clinic implemented an internally validated, electronic health record (EHR)-embedded readmission risk calculator. The purpose of the quality improvement initiative is to evaluate the impact of a structured, multidisciplinary care-coordination model on 30-day hospital readmission rates among medically complex pediatric patients.

Methods

This quality improvement initiative utilized a retrospective cohort design to analyze patient data from 2023. Inclusion criteria encompassed all CMC patients actively enrolled in the Cleveland Clinic Pediatric Complex Care Clinic. No patient recruitment was required, as this was a non-interventional QI analysis. Each patient was assigned to a multidisciplinary team including a primary care provider (PCP), nurse care coordinator, social worker, dietitian, and psychologist. Interventions included routine follow-ups, proactive post-discharge outreach, and interprofessional communication across care settings.

Results

The average predicted 30-day readmission risk for enrolled patients was 17.7%. The observed 30-day admission was 17.7%, representing a reduction of 20 percentage points compared with expected risk. This cohort demonstrated the strongest readmission performance among all Cleveland Clinic primary care practices in Ohio during the reporting period.

Discussion

Despite high predicted readmission risk, patients enrolled in the Pediatric Complex Care Clinic exhibited significantly lower actual readmission rates. These findings underscore the effectiveness of integrated care-coordination models in improving outcomes for CMC. Given the high healthcare utilization and vulnerability of this population, scaling multidisciplinary care models may improve quality outcomes, enhance continuity of care, and reduce overall healthcare costs. These results support continued expansion of coordinated pediatric complex care programs and reinforce the need for policy and reimbursement structures that sustain integrated care delivery.

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