CONTEXT
Transfer of youth with chronic health conditions to adult care is often suboptimal due to factors such as emotional and cognitive developmental challenges, lack of individual and family-centered social supports, communication and coordination challenges between health care sectors, and a lack of appropriately trained adult health care providers. Decline in health after transfer of care to adult health care providers is well described, possibly due to lapses in adherence, follow-up, and insurance coverage; however, most studies reporting this phenomenon have focused on single populations such as those with sickle cell disease, diabetes mellitus, or organ transplantation, and relatively little is known about those with chronic mental health and neurodevelopmental conditions.

OBJECTIVES
This study aims to compare the patterns of health care use and costs for youth with chronic health conditions before and after transfer from paediatric to adult health care services.

METHODS
Youth born in Ontario, Canada, between April 1, 1989, and April 1, 1993, were assigned to 11 mutually exclusive, hierarchically arranged clinical groupings, including “complex” chronic conditions (CCCs), non-complex chronic conditions (N-CCCs), and chronic mental health conditions (CMHCs). Health service utilization and systems costs were examined by sector: acute care admissions, intensive care unit, ED visits, rehabilitation and complex continuing care facilities, outpatient drugs, primary care and specialist physician visits, and home care service visits. Service costs were determined from payments to providers using service-specific unit costs. Outcomes were compared between 2-year periods before and after transfer of paediatric services, the subjects’ 18th birthday.

FINDINGS
Among 104,497 youth, mortality was highest in those with CCCs, but did not increase after transfer (1.3% vs. 1.5%). Costs were highest among youth with CCCs and decreased after transfer (before and after median: $4,626 vs. $3,733; Costs increased slightly for N-CCCs ($569 vs. $589), and decreased for CMHCs ($1,774 vs. $1,545). Emergency department visits increased only among youth with N-CCCs. High-acuity emergency department visits increased CCCs and N-CCCs, but not for CMHC, who had the highest visit rate. Among the 11 individual conditions, costs only increased in youth with asthma, and decreased in those with neurologic impairment, lupus, inflammatory bowel disease, and mood/affective disorders. Inpatient hospitalizations contributed to >30% of overall costs both pre- and post-transfer for all three groups, and were the largest contributor of overall costs in the CMHC group both pre- and post-transfer. Across all groups, visits to an adult specialist increased in the 2 years after transfer, whereas both primary care and subspecialty visits to paediatricians decreased.

CONCLUSIONS
Patterns of health care use of young adults with childhood-onset chronic conditions may look very similar to the patterns these people exhibited as youth, at least in the short-term. The implication is that quality metrics focused on transfers may need longer observation periods to detect meaningful differences in health system use and that patterns of health service utilization may not accurately reflect the overall health status of this population. Future work with longer time horizons and replication of our study design in other jurisdictions will further illuminate the trajectories of youth with chronic conditions as they traverse into the adult health care system.

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