

# Research Project Brief

## **PROJECT** | Use of Durable Medical Equipment and Supplies in Children and Youth with Special Healthcare Needs

- *Term: September 2019 to February 2021*
- *Grantee: CYSHCN*
- *Sub-recipient: Boston Children's Hospital*
- *Funding Agency: Health Research Services Administration, MCH Research Networks Program*
- *Grant Number: UA6MC31102*

**Background** | Durable medical equipment and supplies (DMES) can help some children and youth with special healthcare needs (CYSHCN) overcome life-limiting, physiologic deficits in function that arise from their underlying chronic health conditions. Unfortunately, families report serious problems such as: incorrect and/or incompatible parts, recurrent technology malfunctions, difficulties with pediatric clinicians' ordering, oversight, and monitoring of DMES, and more.

The public health systems that advertise the ability to identify a subset of children assisted with indwelling medical devices rely solely on ICD diagnosis and procedure codes that severely under-detect the use of DMES. As a result, little is known about the true prevalence of DMES use among CYSHCN as well as how use of DME might indicate a higher severity or fragility of health and therefore correlate with healthcare use and outcomes.

DMES companies use the Centers for Medicare and Medicaid Services' (CMS) open-source Healthcare Common Procedure Coding System (HCPCS) when submitting claims to payers for dispensed DMES items in patients' homes. HCPCS claims contain clinically-rich, information about specific DMES and could be used with those databases to identify all the DMES used by a child and used by all CYSHCN in a population. Those HCPCS claims are included and available in administrative claims databases maintained by private and public payors as well as states.

**Potential Impact** | Categorizing the HCPCS codes to a DMES and an organ system might prove to be a feasible and value adaptation for use with CYSHCN. Complementing ICD-based systems with HCPCS claims may enhance the ability to abstract important population-based patient information about physiologic function, especially when equivalent clinical data cannot be feasibly obtained.

In this emerging investigator proposal we will advance methods to identify use of DMES in populations of CYSHCN. The main deliverable from the proposal will be an adapted, open-source system of HCPCS codes that are equipped to identify and describe use of a broad array of DMES in CYSHCN from administrative claims data.



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