

Poster number: W5

Abstract Title: Virtual-first comprehensive care for children with medical complexity under population-based payment model.

Presenter: Exie L. Meredith DNP, APRN, CPNP-AC, Nurse Practitioner, Imagine Pediatrics, Houston, Tx

## **Virtual-first Comprehensive Care for Children with Medical Complexity Under Population-based Payment Model**

Cheryl Kinsella, MSN, APRN, CPNP-PC, Exie Meredith DNP, APRN, CPNP-AC, Jade Makarenko, MSN, APRN, CPNP-PC, Patricia Hayes MD, Gena Tadych, RN, MBA, Ruchi Kaushik MD MEd MPH, Alison Curfman MD, MBA  
Imagine Pediatrics, Nashville, TN

IRB Approval was not needed for this project.

Key Words: Children with medication complexity, value-based care, virtual care

### **Abstract**

**Research Question:** Does a value-based comprehensive wraparound care model impact unplanned visits for children with medical complexity?

**Background & Significance:** Children with medical complexity (CMC) represent <1% of children but >30% of pediatric health care costs. CMC experience fragmented, uncoordinated, or unavailable outpatient health care; inadequate home health services; high admission and readmission rates; and high health care costs. While comprehensive care pilot programs for CMC have demonstrated reduction in ED visits, hospitalizations, and mortality rates and improvement in satisfaction measures, no U.S. program has scaled beyond a few hundred patients or used a population-based payment model to finance the program.

**Design/Methods:** We established a multidisciplinary virtual-first comprehensive care program for CMC, providing care coordination, education, parental support, behavioral health care, and acute medical care virtually. A multidisciplinary care team of pediatricians, nurse practitioners, nurses, licensed clinical social workers, and care team assistants provide comprehensive care to eligible CMC. CMC begin with enrollment (mobile app download), intake (RN), and onboarding visits (provider) and, after calculation of a stability score, are stratified to weekly RN visits for 1 to 4 weeks and monthly thereafter. Families receive in-app daily digital touchpoints. We identify care gaps through these touchpoints or family outreach via the app and triage to the appropriate care-team member. For patients requiring in-person assessment, we deploy a mobile-integrated care team to the patient's home in eligible regions. We track enrollment, diagnosis, and healthcare utilization diversion. The program is financed through a population-based payment model arranged with UnitedHealthcare and Centene.

**Results:** Among 19880 payer-assigned patients in our program, we have engaged and enrolled 2884 patients since 1/1/2023. Assigned patients have an average of 4.8 complex CCs (SD 2.9 CCs). The most common complex CCs include asthma (37.7%), cardiovascular disorders (30.8%), ADHD (30.3%), technology dependence (27.3%), and anxiety disorders (26.8%). Since establishing utilization diversion tracking, program patients avoided 368 unplanned urgent care and 188 unplanned emergency department visits through 8/31/2023.

**Discussion/Conclusion:** This novel virtual care-coordination program financed by a population-based payment model shows promising engagement and utilization prevention for CMC.