With the advent of the opioid crisis in the United States, pediatric providers must be cognizant of the potential long-term effects of exposure to opioids during childhood and adolescence. In this month's Pediatrics, Feinstein and colleagues share their results suggesting that children and youth with special healthcare needs (CYSHCN) may require special consideration when it comes to opioid use (10.1542/peds.2018-2199). In this study, authors examined a retrospective cohort of over 2 million CYSHCN 0-18 years from 11 states representing geographically diverse regions of the United States. Patients were further categorized into having a chronic complex condition or not, according to the Agency for Healthcare Research and Quality Chronic Condition Indicator system.1 Opioid exposure (OE) was defined as any filled opioid prescription and classified as single or multiple fill episodes to identify individuals that may have ongoing need for opioids such as chronic or prolonged pain. In addition to describing the diagnoses associated with OE, study authors also evaluated healthcare utilization in a variety of outpatient and inpatient settings. All comparisons utilized a stringent level of significance of p<0.001.

On first look, authors are quick to note that 80% of all children with OEs during the study period had special healthcare needs. CYSHCN with OE were more often older (ages 10-18 years 69.4% vs. 48.7% for non-CYSHCN), female (52.0% vs. 47.7%), non-Hispanic white (55.0% vs. 46.9) and had more chronic conditions (3 conditions: 49.1% vs. 30.6%). Chronic conditions such as cancer (24%) and hematologic disease (22.8%) were associated with high rates of OE, likely due to treatment for entities commonly associated with chronic pain (e.g. sickle cell disease). The link between OE and a particular medical condition was less clear for children assisted with medical technology, who also had an OE rate of 22%, although post-procedural pain management is one possibility. Study authors examined the specific opioids prescribed for CYSHCN and found that nearly 80% were for single-fill prescriptions likely not intended for long-term use, with combination acetaminophen-opioid medications being the most commonly prescribed. Interestingly, codeine was the second-most prescribed opioid despite reports questioning the safety of the medication in children.2

Feinstein et. al. next evaluated the diagnoses associated with OE in CYSHCN. Surprisingly, the most frequent category of diagnosis recorded for an encounter preceding OE was related to infections, encompassing nearly 26% of all prescriptions. Injury was in a close second at 22.3% of preceding encounters with a variety of categories such as gastrointestinal, dental, and mental health issues, among others, listed for the remaining categories. In this study, we learn that only 18.3% of OEs were preceded by contact with a primary-care provider. A combined 80% of OEs were instead preceded by emergency department, outpatient surgery, and outpatient specialty visits.
Taken together, these results identify multiple areas for future studies of OE in CYSHCN. For starters, CYSHCN receive a disproportionate amount of outpatient OE. Accordingly, future studies aiming to establish best practices for opioid use must consider this heterogeneous patient population. Perhaps more alarmingly, CYSHCN with OE were often concurrently prescribed medications from multiple different classes. More than 50% of CYSHCN who received OE had five or more concurrent prescriptions from different medication classes that may place children at greater risk for adverse polypharmacy interactions with opioids. This risk could be further potentiated given that the majority of OE occurred after visits with providers that may not be as familiar with a child’s complete medical history. Study authors acknowledged that their results and subsequent conclusions may be limited by the uncertainty associated with administrative claims data. Nonetheless, the findings from Feinstein and colleagues support the need for careful consideration of CYSHCN when developing best-practices for opioid prescribing.

References: