**Title**: Understanding the utility of the TELE-ASD-PEDS in the aftermath of the COVID-19 pandemic

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**Introduction**: Historically, autism evaluations have required direct face-to-face assessment of symptoms and commonly utilized a well-validated standardized assessment (i.e., Autism Diagnostic Observation Schedule, Second Edition; ADOS-2) to elicit and quantify specific autistic behaviors (Lord et al., 2012). However, with the onset of the COVID-19 pandemic, clinicians across the world quickly altered the way they conducted autism services, including diagnostic evaluations. One diagnostic tool that was widely utilized for toddlers during the pandemic was the TELE-ASD-PEDS (TAP; Wagner, Stone, et al., 2021). Research has suggested that when the TAP is used as part of a full autism evaluation, both clinicians and caregivers are satisfied (Corona et al., 2020; Corona et al., 2024; Wagner et al., 2020; Wagner et al., 2021). Further, a recent study found that the diagnoses made using the TAP showed agreement with in-person evaluations for over 90% of participants (Corona et al., 2024). As we have transitioned back to consistent, in person autism evaluation, the role of tele-assessment in the broader landscape of autism evaluation has yet to be fully defined. Our current study sought to 1) describe referral patterns following tele-assessment appointments and 2) examine differences between children who did and did not receive a conclusive diagnostic outcome using the TAP.

**Method**: Study data were collected and managed using REDCap electronic data capture tools. Data from May 1, 2020 to December 31, 2023 was extracted from both the child's electronic medical records and a clinical database housed in the Division of Developmental Medicine in a midwestern academic medical center. In total our sample included 321 toddlers and young children (mean age in years=3.13; SD=0.89; 64% White) who attended a virtual TAP appointment. Of those children, 106 (33.02%) attended a follow up in person assessment. Chart review was conducted to determine diagnostic outcome and reason for referral to in person psychological evaluation for each of these children.

**Results**: The TAP assessment was able to be administered in 91.9% (n = 294) of tele-assessment appointments. Of those appointments, 60.9% (n = 179) were rated as conclusive (e.g., no further concern for autism or an autism diagnosis was able to be made). A follow-up referral for psychology testing was made in 42.5% (n = 125) of appointments. The most common reason for referral was the inability to gather evidence to determine if the child met full diagnostic criteria for autism (82.3%), followed by lack of congruence between parent report and clinician observation (9.7%). Other reasons included technology concerns or inconsistent child participation (i.e., due to illness or behavior challenges). Clinicians reported that the TAP was an appropriate appointment type in 89% (n = 103) of cases. Regarding differences between children with conclusive TAP appointments and children with inconclusive TAP appointments, children who were male, had higher adaptive behavior skills, and had lower scores on the TAP were more likely to be inconclusive. There were no differences in conclusiveness based on race, ethnicity, current language level, or whether the child was preterm.

**Discussion:** Telehealth emerged as an acceptable alternative for in person autism evaluation during the COVID-19 pandemic. As a gradual return to fully in person autism evaluation has occurred, it is critical to understand how telehealth assessment fits within the broader landscape of autism evaluation. Our results suggest higher rates of inconclusive TAP appointments than some prior research, which may indicate that clinicians lean toward more conservative practices when access to in person testing is available. However, our results also confirm prior findings that indicate children with conclusive telehealth evaluations demonstrate lower adaptive skills (McNally Keehn et al., 2023). Findings have implications for the development of future triage processes and quality improvement efforts.

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