

CHALLENGES

Autism spectrum disorder (ASD) is defined as the occurrence of persistent impairments in social interaction and the presence of restricted, repetitive patterns of behaviors, interests, or activities.¹

One of the most common pediatric diagnoses, ASD affects 1 in 100 children globally and 1 in 44 children in the U.S.²

Development of novel treatments for ASD requires accurate measurement of symptom severity in response to treatment. However, traditional diagnostic tools for assessing ASD can lead to errors.

For instance, out of every 100 children with ASD, the common modified checklist for autism in toddlers with follow-up (M-CHAT/F) flags about 39. Out of every 100 children it flags, about 85 are false positives.³

SOLUTION

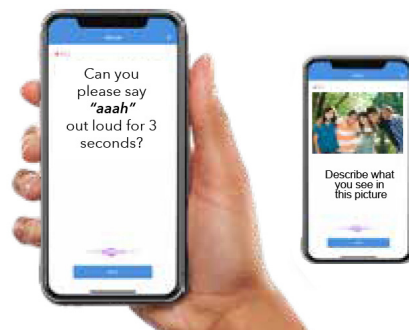
AiCure Platform is a smartphone-based technology for remote measurement of ASD symptomatology.

Individuals with ASD have been shown to demonstrate difficulty in expressing certain emotions or mimicking them on cue. From behavior captured during smartphone tasks, AiCure computer vision-based algorithms can objectively quantify facial expressivity in response to carefully designed stimuli and prompts as a biomarker of ASD symptomatology.⁴

Social attentional behavior has been shown to be a strong indicator of disease severity in ASD. By showing patients socially valenced images using AiCure Platform and quantifying their attention through measurement of head and eye gaze directionality, such symptomatology can be objectively captured as biomarkers of ASD alongside general motor impairments often observed.

BENEFITS

- Greater visibility into a patient's health than is possible with traditional assessments
- Using smartphone technology with digital biomarkers of ASD reduces burden for patients, caretakers, and clinicians
- All recorded video/audio is saved in secure cloud-based storage compliant with all regulatory guidelines for protected health information



¹ Maenner MJ, et al. Prevalence and Characteristics of Autism Spectrum Disorder Among Children Aged 8 Years — Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2018. MMWR Surveill Summ 2021;70(No. SS-11):1-16. DOI: <http://dx.doi.org/10.15585/mmwr.ss7011a1>

² World Health Organization Autism Fact Sheet, Accessed 12 December 2022.

³ Onishchenko et al. Reduced false positives in autism screening via digital biomarkers inferred from deep comorbidity patterns. Sci. Adv. 2021; 7 : eabf0354. 6 October 2021.

⁴ Abbas A, et al. Use of interactive smartphone tasks for remote assessment of symptom severity in autism spectrum disorder. Poster 449.026, INSAR 2020.