

CHALLENGES

Dementia is a growing public health concern which affects over 50 million people worldwide, a total which is projected to grow to more than 150 million by 2050.¹ Alzheimer's disease (AD) is the most common type of dementia, predominantly affecting those 65 years and older, and is characterized by a global decline in cognition and an inability to perform daily activities.

An estimated 6.5 million Americans age 65 and older were living with Alzheimer's in 2022.²

The phenotypic and genotypic variability in AD makes early diagnosis and stratification of patients, at the prodromal or an earlier stage of AD, challenging.

SOLUTION

Objective assessments remotely captured by smartphone technology, allow for measurement of subtle, non-demonstrative cues often overlooked by traditional stratification methods.

- Biomarkers of AD include speech (word repetition, word fillers like 'um,' unintelligibility), voice pauses, shimmers, and harmonics-to-noise ratio) and facial activity
- In a non-interventional usability study, 10 AD patients aged 71-97 were asked to use the AiCure digital assessments app:
- 40% of them had no prior smartphone use experience (60% of them had flip phones)
- 80% of participants felt confident they would be able to use the app to complete dosing on their own without any assistance

BENEFITS

AiCure's mobile app combined with its vast repository of normative data complements in-person clinical measures to better assess treatment efficacy and patient selection.

- May help alleviate rater variability for clinical cognitive assessments
- Develop novel insights and normative data only available from direct visualization of patient experience
- Templates for annotation of multimodal data to enable rapid deployment, analytics, and model development

¹ Abdelnour, C., et al. Perspectives and challenges in patient stratification in Alzheimer's disease. *Alz Res Therapy* 14, 112 (2022). <https://doi.org/10.1186/s13195-022-01055-y>

² Alzheimer's Association. 2022 Alzheimer's Disease Facts and Figures. *Alzheimers Dement* 2022;18.