

# Multimodal digital health technologies (DHTs) allow for more efficient and less costly recruitment and reduced patient burden with decentralized clinical trials

## About Modality.AI, Inc.

[Modality.AI](#) created Tina, a virtual guide that interviews patients with neurological conditions such as amyotrophic lateral sclerosis (ALS), Parkinson's, or schizophrenia. Tina analyzes what patients say and do to inform clinical trial sponsors about how their interventions affect disease progression.



## The opportunity

- 4 out of 5 clinical trials fail today, leading to billions of dollars of lost opportunity for developers of drugs and other interventions.
- Long recruitment times and inefficient processes are key drivers of this.
- DHTs offer opportunities for decentralized clinical research with rapid recruitment.

## The challenge

Recruitment for clinical trials in dementia, Alzheimer's Disease (AD), and mild cognitive impairment (MCI) are especially challenging, given intricate inclusion-exclusion criteria and increased burden on elderly patients, which in turn makes the recruitment process long, expensive, and burdensome.

## The approach

- Modality's objective DHT allows for rapid recruitment and assessment of MCI participants remotely from the comfort of their homes.
- The assessment extracts and analyzes digital biomarkers from different modalities (speech acoustics, orofacial movement, natural language, among others), providing more frequent, continuous-valued, sensitive measurements of MCI disease progression. It can also be more reliable than categorical scales.



### The impact

- ✓ In partnership with Janssen Research & Development, LLC, a Johnson & Johnson company, and the Department of Veterans Affairs (VA), we demonstrated the feasibility of rapid recruitment of 100 MCI patients and 100 healthy controls from the VA Healthcare System **within 5 weeks** (as opposed to several months for typical observational studies today). This corresponds to 4x savings in associated recruitment time and costs ([Roesler et al. 2024](#)).
- ✓ We found that participants retained **over 90%** throughout the study, and the usability results were excellent. This demonstrates a reduced burden for decentralized trials relative to their in-person counterparts ([Roesler et al. 2024](#)).

“Our longstanding work on multimodal remote assessments for MCI and other neurological diseases exemplifies how DHTs like Modality can be used for rapid and effective recruitment, saving clinical trial sponsors time and cost and paving the way for efficient, patient-friendly, and decentralized trials.”

— **Vikram Ramanarayanan**

CSO, *Modality.AI*

This case study was adapted from the paper “[Towards Scalable Remote Assessment of Mild Cognitive Impairment Via Multimodal Dialog](#)” by Oliver Roesler et al. (2024), published in *Proceedings of Interspeech*.

