

CLARIFY

speech analysis and keystroke tracking for early AD detection

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UC San Diego
SCHOOL OF MEDICINE



KeyWise AI



SOUTH TEXAS
ALZHEIMER'S DISEASE
RESEARCH CENTER



UT Health
San Antonio
Glenys Biggs Institute for Alzheimer's
& Neurodegenerative Diseases

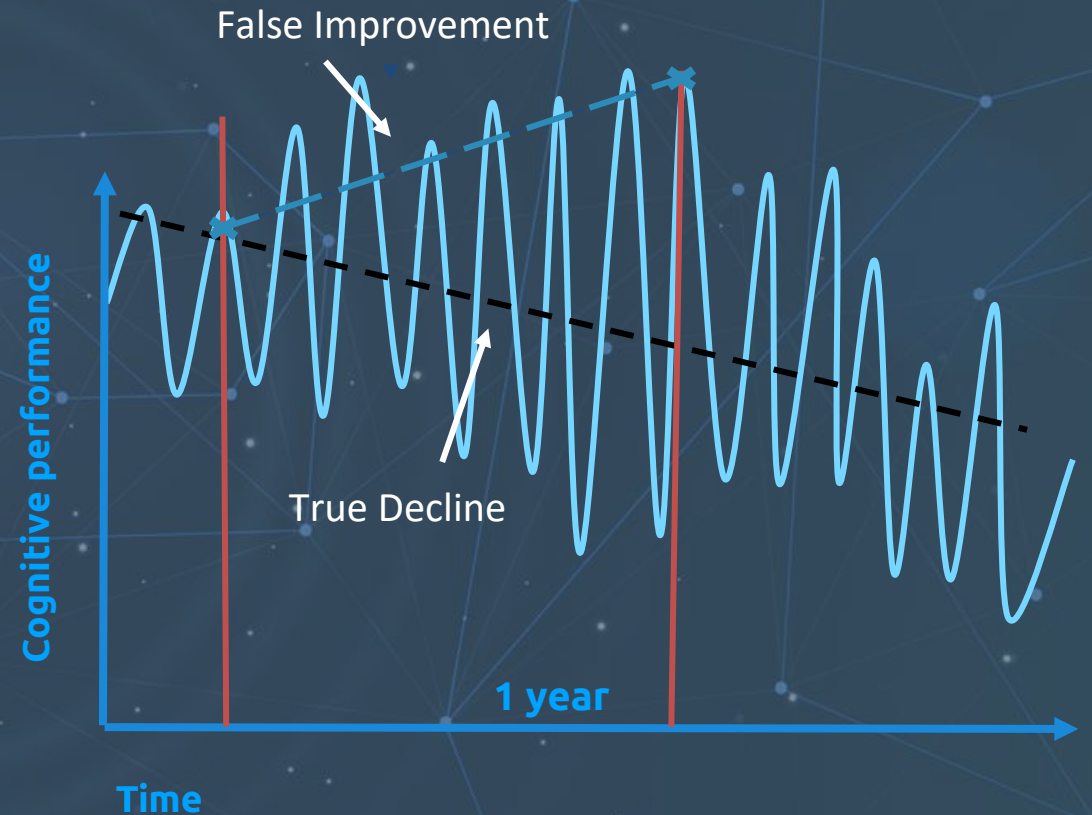


THE PROBLEM

MCI is underdiagnosed

ADRCs need cognitive assessments that are:

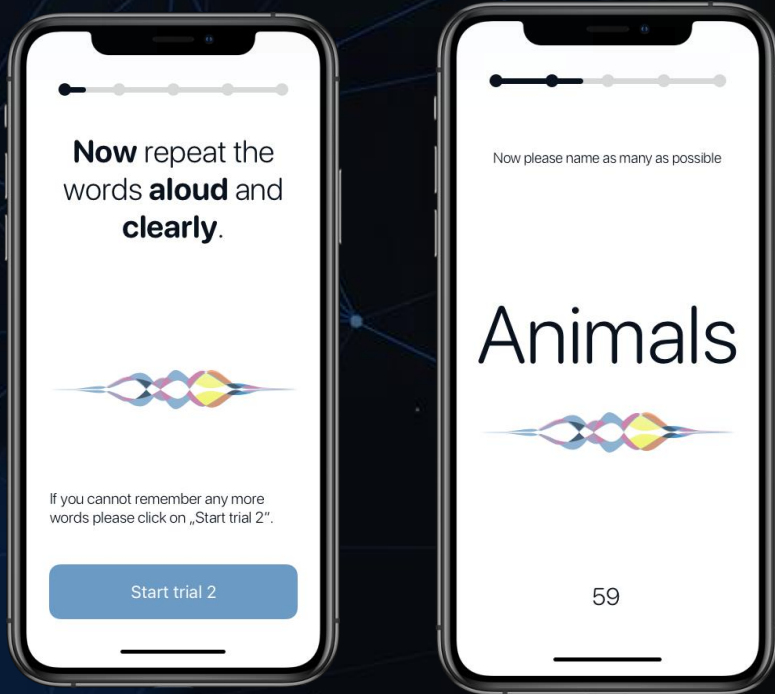
- Sensitive to early cognitive changes
- Culturally tailored & inclusive
- Low burden
- Fast implementation
- Cost-effective
- Scalable



THE SOLUTION: Remote Collection of Multimodal, Low-Burden, & Inexpensive Digital Biomarkers

ki:e SB-C

*Harnessing AI and automatic **speech** analysis*



ACTIVE



PASSIVE

Skye by KeyWise AI™

Fitness tracker for the brain

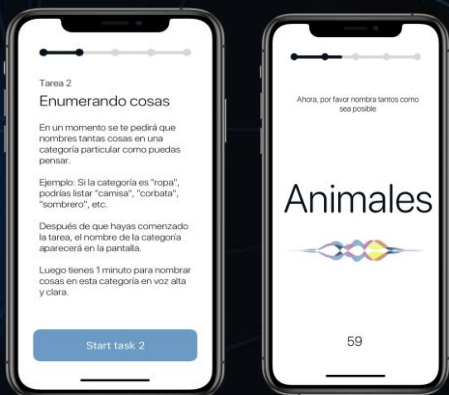


What do people do on their phones? They talk & they type

FEASIBILITY & VALIDITY

Key SB-C:

- Validated across **languages & cohorts** robustly (AUC ~0.81) detects early stage cog decline
- High corr. w/ PACC 5 ($r = 0.8$; $N = 686$)
- **Employed in clinical AD trials** as pre-screening tool ($N > 5000$)



KeySkye:

- Validated across **languages & cohorts**
- Mod-strong corr. w/ tests of exe. fxn & processing speed (r 's = 0.5-0.6) & global cognition ($r = 0.4$)
- Prelim work differentiates Hispanics w/ & w/o ADRD risk ($N = 158$)
- **Elucidates changes in circadian rhythms and IIV**



THE IMPACT



- Increase screening efficiency & expand enrollment
- Early detection & tracking of cognitive deficits
- Reach participants historically underrepresented in ADRCs
- In the wild assessment - Less time-intensive & invasive
- Inexpensive - No need to purchase additional sensors or hardware



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UTRGV
UT Health
Rio Grande Valley

BEYOND THE DIGITAL BIOMARKER PILOT PROGRAM

- Clinical grade technologies - already deployed in clinical trials
- Gateway study for accelerating ADRC research
- Large-scale implementation in NACC sites
- Expansion of screening & assessment refinement in underrepresented & marginalized individuals



OUR TEAM



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THANK YOU FOR YOUR ATTENTION!

