Community Pharmacists Expand Access to Cognitive Function Assessments with the Cognivue *Clarity*® Device

Amina Abubaka, PharmD, AAHIVP[1]; Saswat Kabisatpathy, PharmD[2]; Susan Lutz[3,*]; Jessica Sinclair, PharmD[4]

[1]President, Avant Institute; [2]Director of Strategy & Analytics, Avant Institute; [3]Vice President of Market Access and Strategic Partnerships, Cognivue Inc., Victor, NY; [4]Director of Education and Research Outcomes, Avant Institute. *Presenting author.

KEY TAKEAWAY: With training and use of the Cognitive Clarity® device, pharmacists can easily provide an objective cognitive function assessment. Widespread implementation of pharmacy-based computerized cognitive testing could greatly expand access to meet the brain health needs of the growing senior population including patients living in medically underserved and rural areas.

BACKGROUND

Most initial cognitive assessments are performed by primary care physicians (PCPs). With the growing senior population reaching the age of increased risk for Alzheimer's (65 yrs), coupled with the projected shortage of up to 48,000 PCPs by 2034[1], use of pharmacy-based cognitive assessments can greatly expand access.

Pharmacists are more accessible than PCPs[2] and are among the most trusted healthcare professionals. One barrier to widespread cognitive screening in pharmacies is that most routinely recognized and valid screening tools require "pen and paper" type assessments administered, interpreted, and recorded by a trained healthcare professional. With the availability of the computerized Cognivue *Clarity*® device, which uses FDA-cleared technology for self-assessment of cognitive function, pharmacists are uniquely positioned to provide this testing.

The Cognivue *Clarity*® test involves a device that is similar in size and design to a laptop (Figure 1). Users turn the Cogniwheel to isolate certain images on the screen that change as the test progresses. Based on the user's response, a proprietary algorithm evaluates six cognitive domains: visuospatial, executive function/attention, naming/language, memory, delayed recall and abstraction. Cognivue *Clarity*® also measures reaction time and speed processing.

The Cognivue *Clarity*® device is an adjunctive tool for evaluating cognitive function and is not a stand-alone diagnostic tool. Clinical contextualization is required.

Figure 1. The Cognivue *Clarity*® device

METHODS

Member pharmacies of Community Pharmacy Enhanced Services Network (CPESN) USA were selected to conduct standardized cognitive function tests using the Cognivue *Clarity*® device.

Patient eligibility criteria for a Cognivue *Clarity*® screen included being ≥65 years old, fluent in English, full vision in at least one eye, full use of at least one functional hand, and in overall good health with no acute symptoms. Study participants also had to have the ability to complete a survey about their cognitive screening history and primary care provider contact information.

Pharmacies were instructed to run reports within their pharmacy management system for patients ≥65. Potential patients were contacted via phone call or in-person to assess their interest in project participation. Interested patients were scheduled for a pharmacy consultation.

Prior to the start of cognitive screening, all selected pharmacies participated in training sessions where both Cognivue and the Avant Institute led applicable components of the training process.

Pharmacies submitted eCare Plans to CPESN USA that included the total number of patients tested, number of patients receiving a first-time cognitive screening, and number of patients with test results indicating cognitive decline.

To assess the overall pharmacy experience with the implementation of standardized cognitive screening assessments using the Cognivue *Clarity*® device, two surveys were distributed post-patient data collection period to participating project pharmacies.

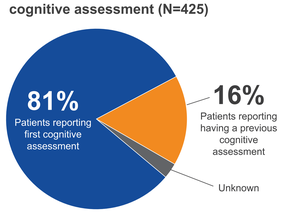
Patient data was collected from August 2022 through December 2022.

RESULTS

Nineteen CPESN pharmacy sites from 13 states, 10 within medically underserved or rural areas, submitted 425 eCare plans that were eligible for analysis.

Less than 16% (67/425) patients reported having a previous cognitive assessment, with 81% (343/425) reporting this was their first cognitive assessment, and the remainder reported unknown (Figure 2).

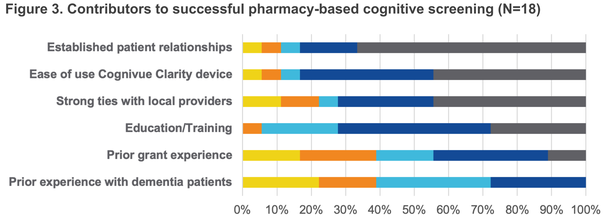
Figure 2. Percentage of study participants who previously had a cognitive assessment (N=425)



Approximately 73% (312/425) of patients had Cognivue clinical overall scores outside the normal range and were referred to their PCP.

Site surveys post-data collection showed that >83% and >72% of pharmacies rated ease of use of the Cognivue *Clarity*® device, and education and training, to be an extremely significant or significant contributor to study success, respectively (Figure 3).

Figure 3. Contributors to successful pharmacy-based cognitive screening (N=18)



CONCLUSIONS

Pharmacists are often overlooked as a vital link to assessing the cognitive health of seniors. This study showed that with training and use of the Cognitive *Clarity*® device, pharmacists can easily provide seniors with an objective cognitive function assessment. Pharmacists successfully utilized the Cognivue *Clarity*® device to quickly screen 425 patients over a span of ≤5 months, including patients living in medically underserved and rural areas.

Expansion of this practice innovation throughout the US could greatly increase access to rapid cognitive assessment, improve pharmacist-patient and pharmacist-physician relationships, and greatly facilitate appropriate clinical interventions to improve the cognitive health of seniors across the US.

REFERENCES

1. IHS Markit Ltd. The Complexities of Physician Supply and Demand: Projections From 2019 to 2034. Washington, DC: AAMC; 2021.
2. Tsuyuki RT, Beahm NP, Okada H, et al. Pharmacists as accessible primary health care providers: review of the evidence. *Canadian Pharm J/Revue des Pharmaciens du Canada*. 2018;151(1):4-5.

CONTACT

Jessica Sinclair, Director of Education and Research Outcomes, Avant Institute
Email: jessica@avantpharmacy.com

Susan Lutz, Vice President of Market Access and Strategic Partnerships, Cognivue, Inc.
Email: susanlutz@cognivue.com

The Avant Institute lead this project, which was funded by a grant from the Davos Alzheimer's Collaborative.