



# Delivering Better Care to Aging Adults: How Physicians Can Leverage Unity Global Care's ALBERTai to Transform Aging in Place through better patient monitoring between visits.

By Dr. Thomas M. Gill, Yale School of Medicine & David S. DuPlay, Co-Founder & CEO Unity Global Care Inc.

## The Visibility Gap That Costs Lives

Every physician managing older adult patients knows the feeling. A 78-year-old patient with hypertension, mild cognitive impairment, and a history of falls leaves the exam room with an updated care plan. Medications have been reviewed, vitals checked, and the clinical encounter has been productive. But the moment that patient walks out the door, the physician's clinical visibility essentially disappears. What happens between appointments, whether that patient is sleeping, eating, moving, taking medications, and functioning consistently with the care plan remains largely unknown to even the most attentive and conscientious physician.

This is not a minor inconvenience. It is one of the most consequential structural failures in modern medicine, and the statistics behind it are deeply alarming. According to the Centers for Disease Control and Prevention (CDC), approximately 36 million falls occur among older adults each year in the United States, resulting in more than 32,000 deaths, 3 million emergency department visits, and direct medical costs exceeding \$50 billion annually (CDC, 2023).

Falls remain the leading cause of injury-related death among adults aged 65 and older, yet the majority of fall-related decline is preceded by subtle, detectable changes in gait, balance, sleep, and activity, changes that go entirely unnoticed in the episodic, visit-based care model that most physicians are structurally constrained to practice.

The scale of the aging population makes the urgency even more pronounced. According to the United Nations World Social Report (2023), the number of people aged 70 and older is projected to more than double globally by 2050. In the United States,

10,000 Americans turn 65 every single day, and there are currently approximately 40 million adults aging in place (*Administration for Community Living, U.S. Department of Health and Human Services, 2022*). These are your patients. And right now, between your scheduled appointments with them, the clinical picture goes entirely dark. ALBERTai, the artificial intelligence platform developed by Unity Global Care, was built to change that reality in a meaningful, scalable, and clinically rigorous way.

## **What ALBERTai Does and Why It Matters Clinically**

ALBERTai functions as a unified intelligence layer that integrates observational, behavioral, physiological, nutritional, psychosocial, and functional data generated in the home care environment into a single, continuously updated, and proactively actionable picture of each individual patient. It monitors dozens of indicators over time, sleep patterns, mobility, appetite, cognitive function, medication adherence, mood, balance, and strength, creating a comprehensive and continuously evolving portrait of how a patient is actually functioning in their daily life at home.

Critically, ALBERTai does not merely collect or store data. It interprets that information in longitudinal context, learning from patterns across weeks and months to detect subtle changes before they manifest as clinical emergencies. As Unity Global Care Co-Founder and CEO David DuPlay has described it, most home care environments today are simultaneously data rich and insight poor. Information exists in disconnected silos, and no one connects the dots until something goes wrong. ALBERTai was designed specifically to connect those dots automatically, continuously, and in time to act before a manageable clinical signal becomes an unmanageable clinical crisis.

## **The ALBERTai Aging-in-Place Score®: A New Kind of Clinical Instrument**

At the center of ALBERTai's capabilities is the multi-patent pending ALBERTai Aging-in-Place Score®, a continuously updated composite indicator that synthesizes multiple data streams, including physical health biomarkers, cognitive function indicators, mobility and strength assessments, behavioral and functional stability patterns, sleep quality and duration, appetite and nutritional signals, and medication adherence data into a single, clinically meaningful number that any member of a patient's care team can understand and act upon.

Rather than reflecting a snapshot of a patient's condition at a single point in time, as any clinic visit necessarily does, the Aging-in-Place Score is generated by algorithms that analyze longitudinal trends, tracking not just where a patient is today but how they are trending across weeks and months. The result is a real-time, continuously refined assessment of how safely and successfully an individual is aging in their home environment, and whether that trajectory is stable, improving, or beginning to deteriorate in ways that demand clinical attention.

For a primary care physician managing 50 patients over the age of 70 who are aging in place, this is genuinely transformative. Currently, meaningful insight into those patients' day-to-day functional status is available only at scheduled appointments, which may

occur monthly, quarterly, or even less frequently. Between those encounters, a patient's condition can decline substantially before anyone with clinical training becomes aware of it. The Aging-in-Place Score changes this dynamic entirely, providing each patient's care team with a continuously updated functional health indicator that surfaces early warning signals and enables proactive outreach and intervention rather than reactive crisis management.

## **The Clinical Evidence for Early Intervention**

The case for continuous monitoring and early intervention in aging adults is not theoretical. A robust and growing body of clinical literature, as well as guidance from leading federal and global health authorities, strongly supports the premise that early detection of functional decline dramatically improves patient outcomes.

The World Health Organization (WHO) has identified falls prevention as a global public health priority, noting that falls are largely preventable when early risk factors are identified and addressed, and that multifactorial risk assessment and intervention programs can reduce fall rates by up to 30 to 40 percent (*WHO, Global Report on Falls Prevention in Older Age, updated guidance 2021*). The key word is early. Intervention works when it precedes the fall, not when it follows it.

The CDC's STEADI (Stopping Elderly Accidents, Deaths & Injuries) initiative, developed in partnership with clinical professional organizations, explicitly recommends that healthcare providers incorporate standardized fall risk screening, gait and balance assessment, and ongoing monitoring into primary care for older adults (*CDC STEADI, 2023*). ALBERTai operationalizes these recommendations at scale, extending continuous fall risk surveillance into the home environment where the falls actually occur and where the clinical signals that precede them first appear.

The National Institute on Aging (NIA), a component of the National Institutes of Health (NIH), has emphasized that early detection of cognitive decline is among the highest clinical priorities in aging medicine, noting that interventions initiated at the mild cognitive impairment stage, before dementia progresses, carry substantially greater potential to slow functional decline and preserve quality of life (*NIA, 2023*). ALBERTai's continuous monitoring of behavioral, sleep, and functional indicators provides exactly the kind of longitudinal data stream that makes early cognitive decline detection possible in real-world home settings, not just in structured clinical assessments administered months apart.

The U.S. Preventive Services Task Force (USPSTF) recommends exercise interventions for community-dwelling adults aged 65 and older who are at increased risk for falls, a recommendation that presupposes the capacity to identify who is at increased risk on an ongoing basis, not just at an annual wellness visit (*USPSTF, 2018*). ALBERTai provides that ongoing identification capacity automatically and continuously, giving physicians the clinical intelligence they need to act on the USPSTF's recommendations in a timely and targeted way.

## **Medication Adherence: A Preventable Crisis at Scale**

Medication non-adherence among older adults is one of the most clinically consequential and consistently underaddressed challenges in primary care. The FDA has noted that medication non-adherence contributes to approximately 125,000 preventable deaths and accounts for 10 to 25 percent of hospital and nursing home admissions annually in the United States (*FDA, 2018*). Among older adults managing multiple chronic conditions, the typical profile of a patient aging in place, the complexity of medication regimens makes adherence monitoring both more difficult and more critical than in any other patient population.

AARP Public Policy Institute research has consistently documented that older adults managing multiple medications face significant and often invisible challenges with adherence, including confusion about dosing schedules, difficulty managing side effects, and concerns about medication costs (*AARP Public Policy Institute, 2019*).

These are not failures of patient motivation or character. They are structural challenges embedded in the complexity of aging with multiple chronic conditions, and they require structural monitoring solutions rather than simply better patient education.

ALBERTai's continuous monitoring of medication adherence patterns provides physicians with real-time alerts when a patient's adherence behavior deviates from the established baseline. This capability enables proactive clinical intervention, a phone call, a telehealth visit, a care manager outreach, before a missed medication cascade progresses to a clinical decompensation, an emergency department visit, or a preventable hospital admission.

## **Mental Health and Social Isolation: The Silent Clinical Crisis**

The clinical impact of social isolation and loneliness among aging adults is increasingly well-documented and represents a critical area of concern for every physician caring for older patients.

The U.S. Surgeon General's Advisory on the Healing Effects of Social Connection and Community (2023) identified social isolation as carrying health risks equivalent to smoking 15 cigarettes per day, and found that older adults are disproportionately affected, with one-quarter of adults aged 65 and older experiencing significant social isolation (*U.S. Surgeon General, 2023*). These findings are not peripheral mental health footnotes. They represent independent clinical risk factors with direct and measurable implications for physical health outcomes and care utilization.

The CDC has reported that social isolation is associated with a 50 percent increased risk of dementia, a 29 percent increased risk of heart disease, and a 32 percent increased risk of stroke among older adults (*CDC, 2021*). For a physician caring for a panel of aging adults, these are not abstract population statistics. They describe the patient who has been living alone since her husband passed, who has gradually stopped attending social activities, and whose declining engagement pattern, visible only through the lens of continuous behavioral monitoring is a harbinger of the cognitive and cardiovascular decline that will eventually drive her to the emergency department.

ALBERTai's behavioral and psychosocial monitoring capabilities tracking mood indicators, communication patterns, and functional engagement over time, provide physicians with ongoing insight into the psychosocial dimensions of their patients' health that a quarterly clinic visit simply cannot capture. When a patient's behavioral indicators suggest progressive withdrawal, reduced engagement, or declining mood, ALBERTai surfaces that signal in time for the physician to respond with targeted clinical intervention rather than discovering the decline only after it has progressed to a crisis.

## **What This Means for Physicians in Value-Based Care**

For physicians operating in value-based care arrangements, including Medicare Advantage plans, Accountable Care Organizations, and the Merit-based Incentive Payment System (MIPS), ALBERTai's continuous monitoring and the Aging-in-Place Score provide something of extraordinary practical value: longitudinal, real-world outcome data on patients between visits. The Centers for Medicare & Medicaid Services (CMS) has made clear through its quality reporting programs and value-based payment reforms that clinical performance metrics will increasingly depend on longitudinal patient outcomes, not just visit-based process measures (*CMS, Value-Based Programs, 2023*).

A patient whose Aging-in-Place Score stabilizes or improves under an established care plan provides objective, real-world evidence of that plan's effectiveness, evidence that no claims data or physician-reported outcome can match in granularity or ecological validity. Conversely, a patient whose Score continues to decline despite an established care plan is generating a signal that the care plan requires reassessment before that decline progresses to a readmission or emergency department visit, the kind of insight that transforms reactive crisis management into genuine preventive medicine.

The American Geriatrics Society (AGS) has called for the systematic integration of technology-based monitoring into the care of community-dwelling older adults, emphasizing that the transition from hospital to home represents a period of particularly elevated clinical risk that current systems are inadequately equipped to manage (*AGS, 2020*). ALBERTai directly and comprehensively addresses this gap, providing physicians with the clinical intelligence infrastructure they need to manage that transition period and the extended community-dwelling phase that follows it with the rigor and continuity that their patients require.

## **The Bottom Line for Physicians**

The clinical reality of aging in America is that the vast majority of care, and the vast majority of clinical events happens at home, not in the exam room. Every physician who has received an after-hours call that a patient has been admitted to the emergency department for a fall, a medication error, a decompensated chronic condition, or an acute mental health crisis has experienced the direct consequence of a care model that goes dark between visits. That darkness is not inevitable. It is a structural problem, and ALBERTai is a structural solution.

ALBERTai does not replace the physician-patient relationship. It extends it, providing continuous clinical intelligence from the environment where your patients actually live their lives, and surfacing that intelligence in time for you to act before a manageable clinical signal becomes an unmanageable clinical crisis. For the 40 million Americans aging in place today, and the tens of millions more who will join them over the coming decade that extension of clinical visibility is not a luxury. It is the future of medicine, and it is available now.

#### **About the Authors:**

##### **Dr. Thomas Gill, Yale School of Medicine**

Dr. Thomas Gill is a physician at Yale who specializes in caring for older adults and studying how to help people stay healthy and independent as they age. For more than 30 years, his research has focused on understanding why older individuals develop difficulties with everyday activities and, importantly, how to prevent or delay those changes.

He leads major research programs at Yale that follow people over time and test new approaches to maintain strength, mobility, and quality of life. His work has helped shape how doctors and scientists think about aging, disability, and independence.

Dr. Gill has published extensively and received many honors for his contributions. At Yale, he also directs key programs devoted to aging research and the health of older adults. Dr. Gill has led and contributed to groundbreaking epidemiologic research, clinical trials and other aging initiatives. His work has been widely recognized with prestigious awards and leadership roles across Yale and the broader aging research community.

##### **David S. DuPlay, Co-Founder & CEO Unity Global Care**

Dave brings a uniquely informed perspective to the conversation around aging, technology, and compassionate care. A patient advocate, entrepreneur, and seasoned healthcare strategist with more than 30 years of experience working alongside medical professionals, research organizations, and patient communities across virtually every disease area, Dave has dedicated his career to aligning the goals of all healthcare stakeholders in service of better patient outcomes. As Chairman of Vital Options International, a global health foundation founded in 1983 and committed to health education, advocacy, and financial assistance for patients in minority and underserved communities worldwide, Dave understands firsthand the human stakes embedded in every healthcare decision.

A recognized author and speaker on the challenges facing vulnerable populations, Dave is a passionate believer that technology, when thoughtfully applied, has the power to close gaps in care, amplify the voices of those too often left behind, and preserve the dignity of aging individuals and the families who love them. It is through this lens that Dave Co-Founded Unity Global Care Inc., to bring the ALBERTai eco-system to families and providers, not merely as tools of convenience, but as meaningful instruments of empowerment for some of the most emotionally complex moments families will ever face.