

Case Study: Eskenazi Health's Aging Brain Care Program

An Interdisciplinary Collaborative Care Model for People Living with Dementia

"Our faculty investigators have a passion for, and excellence in, designing practical, high-impact, real world research focused on improving care for frail older adults, including those with dementia, and their caregivers."

Dr. Greg A. Sachs, Chief of the Division of General Internal Medicine and Geriatrics at the Indiana University School of Medicine, Scientist, Indiana University Center for Aging Research & Regenstrief Institute, Inc.

BACKGROUND

Over the past decade, Indiana University School of Medicine and its Center for Aging Research have developed an innovative collaborative care program for people living with dementia and their caregivers. The Aging Brain Care (ABC) program is an interdisciplinary medical model designed to support primary care providers (PCPs) in the diagnosis and management of all forms of cognitive impairment. PCPs report multiple difficulties in meeting the needs of people living with dementia, including insufficient time, inadequate reimbursement, poor access to dementia care expertise and community resources, and a lack of communication among medical, social and community providers.¹ Adapted for use by the Sandra Eskenazi Center for Brain Care Innovation at Eskenazi Health in Indianapolis, the ABC program's goal is to help PCPs overcome these challenges in order to improve outcomes and reduce avoidable health care costs for people living with dementia in the community.

Eskenazi Health first opened its ABC clinic in 2008. The clinic provided its collaborative care intervention for patients and caregivers during 5 half-day sessions staffed by an interdisciplinary team. In 2010, the health system launched the ABC mobile program as part of a small grant-funded pilot. This branch of the program served 200 patients within a community health center and was designed to deliver care to patients and caregivers in their homes and/or community settings. The mobile program was staffed by a nurse practitioner with clinical support from a doctor, and a social worker was added in the second year. In 2012, with support from a CMS Health Care Innovation Award, the ABC mobile program expanded to serve 2,000 patients across Central Indiana. The expanded program required the development of a new workforce of community health workers. Finally, in 2017, Eskenazi Health began to adapt the model to a population health management approach, merging clinic and mobile services. The ABC program now has 6 physician-led interdisciplinary teams, each with around 150

patients in its current roster for population health management, and patients are seen across service settings.

IN BRIEF: DEMENTIA CARE AT ESKENAZI HEALTH

Program Name: Aging Brain Care Program

Institutional Home: The Eskenazi Health System is an urban safety-net integrated health care system that serves a racially and ethnically diverse population in Indianapolis and surrounding counties. It is affiliated with Indiana University School of Medicine. Eskenazi Health has a 315-bed hospital and outpatient facilities that serve nearly 1 million outpatient visitors a year.

Location: Indianapolis and surrounding counties of central Indiana

Patient Population: The ABC program cares for people living with any level of cognitive impairment, and in community settings (non-nursing home). Care is provided in the clinic, hospital, home, and assisted living settings. Patients living in nursing homes receive dementia care under a separate program called OPTIMISTIC.

Caregiver support: Caregivers receive support from ABC clinical program staff, as well as connections to services at the Indiana Alzheimer's Disease Center, the Alzheimer's Association, the local Area Agency on Aging, and other community organizations.

Staffing Model: Six interdisciplinary teams consisting of a physician, nurse (RN), social worker, 2-3 care coordinator assistants (specially trained community health workers), a medical assistant, and a neuropsychology testing technician. A psychologist reviews the neuropsychology testing results.

Funding Model: NIH/AHRQ grants, CMMI grants, insurance payments for billable clinical services, health system support, and philanthropy

APPROACH

The ABC program begins for every patient with a thorough diagnostic evaluation performed by 1 of 6 physician-led interdisciplinary teams, followed by a family conference to disclose the diagnosis and develop a comprehensive and individualized care plan. The program then follows patients longitudinally and assists with the implementation of the care plan via ongoing clinic- and telephone-based assessment and care coordination, as well as home visits. The ABC team includes a physician, who is either a board-certified geriatrician or gero-psychiatrist, two care coordinators—one a social worker and the other a registered nurse, a medical assistant, 3 or 4 community health workers known as care coordinator assistants (CCAs), and a technician trained in the administration of neuropsychological tests. Nurses and social workers receive on-the-job training, while the CCAs receive training in care for patients living with dementia and depression.

Patients are identified through a variety of mechanisms, including recruitment from dementia studies at Indiana University School of Medicine, case findings through outreach programs to primary clinical care practices, referrals from clinicians in the system and the region, referrals from social services, and word of mouth. During the CMS Health Care Innovation Challenge Award, patients were also identified through an EHR search for those with ICD-9 codes for dementia and depression. These patients were enrolled in the program with permission from their PCP.

The program's diagnostic evaluation includes a complete history and physical; assessment of cognition using standardized instruments to accurately diagnose and stage the severity of dementia; assessment of decision-making capacity; functional assessment; and evaluation for neuropsychiatric and behavioral symptoms. The initial assessment also includes medication reconciliation and review for high-risk medications, with a particular focus on anticholinergic and psychoactive medications, evaluation of safety, identification of caregivers, and assessment of caregiver knowledge and needs. In addition to using standardized assessment tools such as the MMSE for cognition and the PHQ-9 for depression, the ABC program also uses its own composite measure for evaluation of cognition, affect, behavioral symptoms, and caregiver burden, called the HABC-Monitor. Many of the components of the initial diagnostic assessment are included in ongoing management. The results of the evaluations are used to stratify patients into 3 tiers: mild, moderate, and major needs. Disease severity or stage is also determined.

Once the diagnostic evaluation is complete, a family conference is held to discuss the patient's diagnosis, goals of care, and advance care planning needs, and to develop a comprehensive care plan.

ABC CARE PLANS

Although care plans are tailored to the individual needs of the patient and their family, they share several key components:

- **Caregiver support:** The ABC program provides families with dementia education and printed materials relating to disease and problem-specific information, as well as general tips on caregiving. The program also regularly monitors family caregivers' emotional and physical health, and connects caregivers with local resources.
- **Informal telephone support:** The program provides a 24/7 phone line that is staffed by RNs, as well as a 24/7 telephone line provided by the health system for night and weekend calls. The program's RNs and social workers give their direct phone line information to families as well.
- **Medication management:** The ABC program works to reconcile medications and reduce prescription of anticholinergic medications that may be harmful or no longer beneficial. It prescribes appropriate medications for stroke, including efforts to reduce its risk, and addresses palliative care needs such as pain.

→ **Care coordination:** The ABC program's RNs and social workers manage care transitions across settings and help to address acute care problems with collaborating providers.

After an initial enrollment period, which includes monthly visits (at a minimum), patients and caregivers with mild needs are contacted at least quarterly. Those with moderate needs are seen monthly, with some variation, while patients with major needs are generally seen every 1–2 weeks. Contact can be a combination of phone calls and home visits, in addition to clinic visits, dependent on need. Communication with the patient's other physicians, including their primary care physician, is driven by protocol and/or patient/caregiver need. The majority of communication occurs through messaging available in the EHR, which allows the program to update all staff involved in care of the patient.

The deployment of the ABC program's staffing model is in transition as the program evolves to include population health management. Currently, each of the program's 6 physicians has a roster of 150 patients for population health management, with plans to grow this significantly by using CCAs to increase patient contact and management in the home. In the clinic, each of the 6 physicians conducts a half-day clinic per week, seeing either 5 or 6 patients per session. Physicians see at least 1 new patient and conduct 1 family conference in each of their clinic sessions. The team RNs and social workers typically spend half their week in clinic sessions and the other half in preparation, follow-up, and case management. This is evolving as the model moves to population health management and some clinic time is now spent reviewing registries, as well as having RNs, SWs, and CCAs available to do home visits. Care coordinator assistants have an average of 200 additional encounters per month outside of clinic. About 60 percent of these have been home visits with the remainder phone calls. The program expects to have out-of-clinic contacts by CCAs, RNs, and SWs increase significantly in 2018–2019.

The ABC program tracks a variety of measures to assess quality and costs. Process measures include audits of the notes of the RNs, social workers, and CCAs, as well as annual assessments of staff competency in their use of measurement tools and delivery of standard protocols. The program uses a simple check-box tool to monitor adherence to clinical protocols and clinicians receive monthly reports of patient and family satisfaction that are standard in the health system. The program also tracks quality by measuring outcomes that include the MMSE, PHQ-9, HABC Caregiver Monitor, and the use of anticholinergic medications. As a measure of quality

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and cost, the program tracks health care utilization with an emphasis on reducing emergency room and hospital admissions.

RESULTS TO DATE

In multiple studies, the ABC program's collaborative care model has demonstrated improved outcomes for people living with dementia and their families, as well as substantial cost savings. For patients with dementia and depression, the collaborative care model reduces patients' behavioral and psychological symptoms, reduces the burden on patients' informal caregivers, and improves the quality of care. A cost analysis of the program found that the ABC program led to net annual savings per patient of between \$980 and \$2,856; the annual cost for the program is around \$618 per patient.² As the program scales to include population health management, early results have also been promising, with the ABC Medical Home successfully reducing symptom burden among patients living with dementia and depression.³

TOOLS

- Epic EHR: Eskenazi Health moved to Epic as its electronic health record within the last two years. It is being used by the ABC program for both clinic and population health management.
- EHR-ABC: The ABC program has a stand-alone enhanced electronic medical record application that was created to manage patient information. This is being used in parallel with Epic with specific assessment data that can be tracked longitudinally, such as the MMSE and PHQ-9. The software can also track medication use, generate reports, and provide decision support. The ABC program also uses this platform to stratify its Medical Home population into patients with major, moderate and mild needs, in order to allocate resources appropriately.⁴
- Mini-Mental State Exam (MMSE)
- Patient Health Questionnaire (PHQ-9)
- HABC-Monitor: A composite measure of the patient's cognitive issues, affect or emotion (especially depression/anxiety), behavioral problems, and caregiver quality of life and caregiver burden in response to the patient's status.⁵ This measure is completed by caregivers, with a companion measure that can be administered to less impaired patients to get their perspective on their own cognition, affect, function, and behaviors.⁴

LESSONS LEARNED

- **Foster strong working relationships:** Open communication and collaboration among program staff, primary care providers, and health system leadership has been key to growing and sustaining a successful program, particularly as ABC has moved to a population health management approach. Strong relationships have allowed the program to quickly identify and enroll eligible patients, hire and train new staff, and adapt to health system changes.
- **Invest in the right tools:** The program has found its EHR-ABC software indispensable, allowing staff to track the health of the population and quickly

switch lenses to explore the care of individual patients over time. The tools used for tracking adherence to protocol and accountability have also proven critical.

- **Provide for routine, ongoing training:** The program initially underestimated the need for ongoing validation of competency and frequent training on program protocols, interventions, and data collection methodologies.

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- 2 French, D.D., LaMantia, M.A., Livin, L.R., Herceg, D., Alder, C.A., Boustani, M.A. "Healthy Aging Brain Center Improved Care Coordination and Produced Net Savings," *Health Aff*, 2014; 33(4): 613-618. Web access: <http://doi.org/10.1377/hlthaff.2013.1221>.
- 3 LaMantia, M.A., Alder, C.A., Callahan, C.M., Gao, S., French, D.D., Austrom, M.G., Boustani, M.A., et al. "The Aging Brain Care Medical Home: Preliminary Data," *J Am Geriatr Soc*, 2015; 63(6): 1209-1213. Web access: <http://doi.org/10.1111/jgs.13447>.
- 4 The EHR-ABC and the HABC-Monitor have both been licensed to *Preferred Population Health Management, LLC* for distribution. For more information, please call 317-245-7482.
- 5 Monahan, P.O., Boustani, M.A., Alder, C., Galvin, J.E., Perkins, A.J., Healey, P., Callahan, C. "Clinical Interventions in Aging Practical Clinical Tool to Monitor Dementia Symptoms: The HABC-Monitor," *Clin Interv Aging*, 2012; 7: 143-157. Web access: <http://doi.org/10.2147/CIA.S30663>.

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Case study prepared by: Saskia Siderow, MPH, Managing Director, Ormond House LLC

Content based on information provided by Greg Sachs, MD, Chief of the Division of General Internal Medicine and Geriatrics at the Indiana University School of Medicine; Scientist, Indiana University Center for Aging Research & Regenstrief Institute, Inc.