

# The Aging Brain Care Program:

A 20 year plus Journey  
Dec 20 2023



**INDIANA UNIVERSITY**  
SCHOOL OF MEDICINE



**Regenstrief  
Institute**



**Midwest Dementia Summit 2024**  
**Innovations in Care**



# Disclosures (Malaz Boustani)

- Equity Ownership in
  - RestUp, LLC
  - Preferred Population Health Management, LLC
  - Blue Agilis, LLC
  - DigiCareRealized, Inc
  - Mozyne Health, Inc
- Advisory board member in the past 12 months for :
  - Biogen, Genentech, Lilly, Merck & Eisai
- Author with royalty for
  - Agile Implementation Book; The Agile Network Book
- Teacher of
  - IU Graduate Certificate in Innovation and Implementation Science
- Scientist who receive funding from Federal agencies
  - NIH
  - AHRQ
  - CMS



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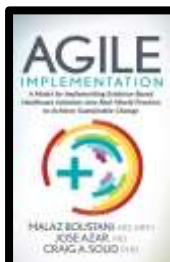


# The Scientific Village at IU Center for Aging Research



**Midwest Dementia Summit 2024**  
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## Effectiveness of Collaborative Care for Older Adults With Alzheimer Disease in Primary Care: A Randomized Controlled Trial

Christopher M. Callahan, MD  
Malaz A. Boustani, MD, MPH  
Frederick W. Unverzagt, PhD  
Betsy R. Bouillon, PhD

## The Aging Brain Care Medical Home: Preliminary Data

Michael A. LaMonte, MD, MPH<sup>1,2</sup>; Catherine A. Alder, JD, MSW<sup>3</sup>; Christopher M. Callahan, MD<sup>1,2</sup>; Joseph Gero, PhD<sup>4</sup>; Doreen D. French, PhD<sup>5</sup>; Mary G. Astron, PhD<sup>6</sup>; Karne Boustani, PhD<sup>7</sup>; Lee Levin, MBA<sup>8</sup>; Doreen D. French, MS<sup>9</sup>; and Malaz A. Boustani, MD, MPH<sup>1,2</sup>



**Aging & Mental Health**  
Publication details, including instructions for authors and subscription information:  
<http://www.informaworld.com/smpg/title-content/1713404778>

## Implementing dementia care models in primary care settings: The Aging Brain Care Medical Home

Christopher M. Callahan<sup>1,2</sup>; Malaz A. Boustani<sup>1,2</sup>; Michael Weiner<sup>1,2</sup>; Robin A. Beck<sup>3</sup>; Lee R. Levin<sup>4</sup>; Jeffrey J. Goldmann<sup>5</sup>; Doreen D. French<sup>6</sup>; William H. Franks<sup>7</sup>

**CLINICAL INVESTIGATION**  
**Risks and Benefits of Screening for Dementia in Primary Care: The Indiana University Cognitive Health Outcomes Investigation of the Comparative Effectiveness of Dementia Screening (IU CHOICE) Trial**  
Nicole S. Fennell, PhD, MHA<sup>1,2,3,4</sup>; Cl Anthony J. Perkins, MS<sup>5</sup>; Susan Gero, PhD<sup>6</sup>; Greg A. Sachs, MD<sup>7,8</sup>; and Malaz A. Boustani, MD, MPH<sup>1,2</sup>



## SPECIAL ARTICLE

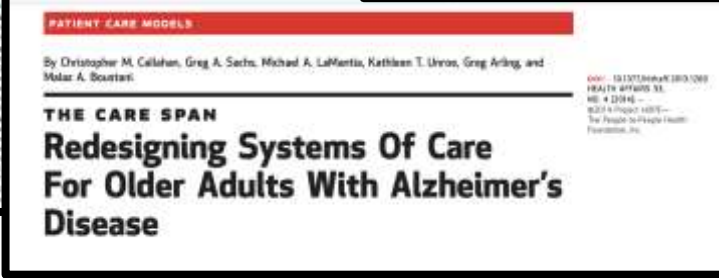
## State of Science: Bridging the Science-Practice Gap in Aging, Dementia and Mental Health

Christopher M. Callahan, MD<sup>1,2</sup>; Malaz A. Boustani, MD, MPH<sup>1,2</sup>

Journal of the American Geriatrics Society

## Design, implement, and diffuse scalable and sustainable solutions for dementia care

Malaz Boustani MD, MPH<sup>1,2,3</sup> | Jürgen Unützer MD, MPH, MA<sup>4</sup> | Lucil K. Leykum MD, MBA, MS<sup>5,6</sup>

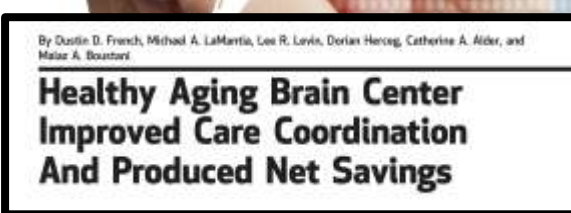
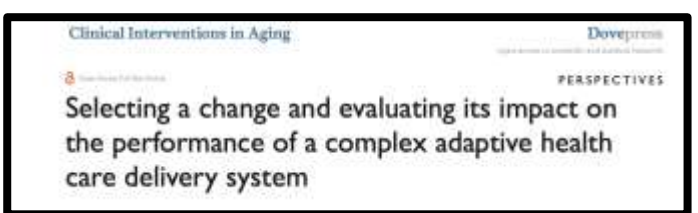


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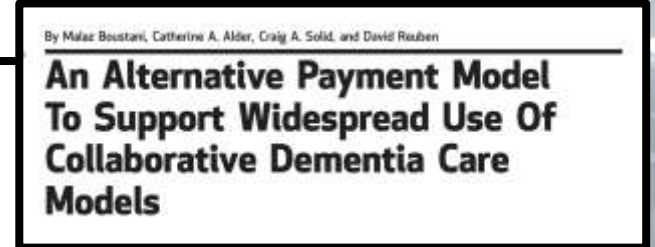
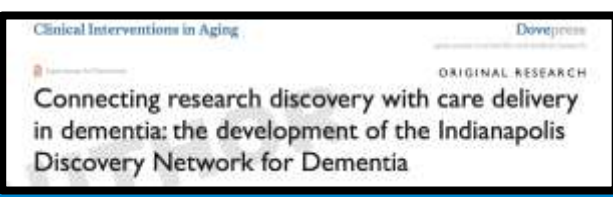
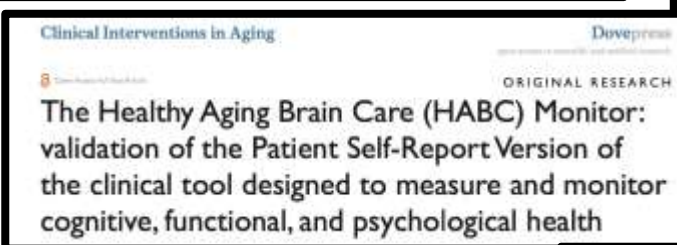
## Implementing innovative models of dementia care: The Healthy Aging Brain Center

Malaz A. Boustani<sup>1,2</sup>; Greg A. Sachs<sup>3,4</sup>; Catherine A. Alder<sup>5</sup>; Stephanie Klugman<sup>6</sup>; Cathy C. Schubert<sup>7</sup>; Mary Guenther Astron<sup>8</sup>; Ann M. Hake<sup>9</sup>; Frederick W. Unverzagt<sup>10</sup>; Martin Parfry<sup>11</sup>; Brady E. Matthews<sup>12</sup>; Anthony J. Perkoz<sup>13</sup>; Robin A. Beck<sup>14</sup>; Christopher M. Callahan<sup>15</sup>

Online publication date: 26 January 2011



By Doreen D. French, Michael A. LaMonte, Lee R. Levin, Doreen D. French, Catherine A. Alder, and Malaz A. Boustani



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# The Problem

## Alzheimer's Disease and Related Dementia

- More than 3 million people with dementia experience cognitive, functional, behavioral and psychological disabilities
- Dementia generates significant financial and emotional stress for both the person with dementia and their unpaid caregivers:
  - Poor quality of life for both the person with dementia, and their unpaid caregivers
  - Higher emergency room utilization
  - More frequent hospital admissions
  - More days in nursing home facilities
  - \$41,000 to \$56,000 yearly total cost per person



Plassman et al, NeuroEpi 2007; Hurd et al, N Engl J Med 2013; Phelan et al, JAMA 2012; Callahan CM et al, JAGS 201; Alz Ass Facts & Figure 2017;

# The Financial Challenge Alzheimer's Disease and Related Dementia

Total annual Medicare cost per **Average** patient

- ~\$15,000
- Potentially avoidable cost of ~\$3,000

Total annual Medicare cost per **Dementia** patient

- **~\$25,000**
- Potentially avoidable cost (36.9%) of **~\$8,000**

Health Care Spending for Dementia population is very high

- Medicare spending: **3x** greater for seniors with Alzheimer's Dementia
- Medicaid spending: **19x** greater for dual eligible beneficiaries with Alzheimer's Dementia



# Aging Brain Care Program

## Obsession with Implementability, Scalability and Sustainability

- **1990's to 2001 (JAHF)**
  - Designed the Aging Brain Care Model (**ABC beta**) based on IMPACT.
- **2001 to 2006 (AHRQ)**
  - Evaluated the ABC model in randomized controlled trial.
- **2006 to 2012 (Eskenazi, NIMH, Forest, Novartis)**
  - Developed IDND
  - Translated the model into a local **clinical** program (**ABC 1.0**).
  - Connected with UCLA, Hopkins and Greifswald
  - Developed and Validated the HABC-Monitor
  - Developed the eMR-ABC
  - Served 1,000 patients in Indianapolis.





# Aging Brain Care Program

## Obsession with Implementability, Scalability and Sustainability

- **2012-2023 (Eskenazi, NIA, CMS),**
  - Developed and evaluated a **scalable clinical** version (**ABC 2.0**)
  - Connected with UCSF and UN
  - Co founded then sold PPHM
  - Served 5,000 patients in Indiana (2015).
- **2018 -2023 (CMS, JAHF)**
  - Build a village to create demand for the ABC Model
    - AA, AARP, USAgainst AD, JAHF, Milken Institute, NIA Summit on ADRD
      - How to create a movement Video
  - Developed an Alternative Payment Model (2018)
    - Lessons learned from IMAPCT.
  - CMS GUIDE approved (July 31 2023)
    - IMAGE



# Aging Brain Care Program

## Obsession with Implementability, Scalability and Sustainability

- 2016 – 2027 (NIA)
  - Expanded the ABC to other vulnerable population (ICU survivors, Trauma Survivors, Delirium Survivors)
    - CCRP, TMH, DANE, Cirrhosis MH, Rx for Hope 2.0
  - Developing a **scalable community** version (**ABC 3.0**)
    - iCare ABC
    - ABC Community
  - Expanding to PALLIATIVE CARE:
    - ABC Virtual
    - INPEACE

# ABC Program in a Nutshell

- **Population-Based Care:**
  - A panel of patients and informal caregivers living with recognized dementia.
- **Measurement-Based Treatment to Target:**
  - HABC-Monitor (Caregiver reported and patient reported)
- **Dyad-Centered Collaboration:**
  - Co-develop brain care plan
- **Evidence-Based Care:**
  - Caregiver stress prevention bundle
  - Medication Management
  - Transitional care
- **Accountable Care**
  - HABC-Monitor-CG total score < 15 within 12 months
  - HABC-M-SR total score < 15 within 12 months
  - 90 days readmission < 5%



# ABC Program's Tools

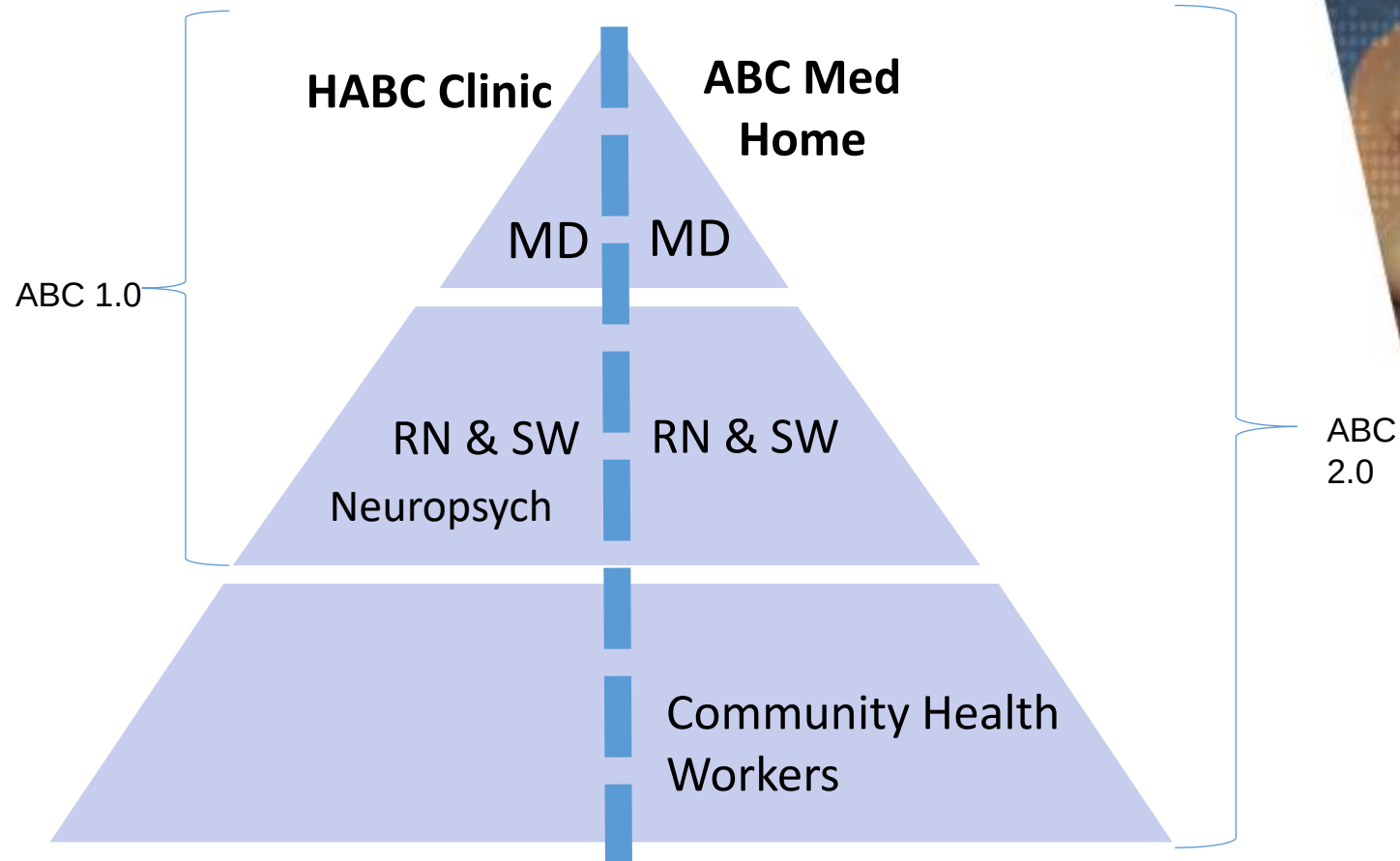
- HABC Monitor for both self and Caregiver report
- Care Coordination software
- Caregiver Booklet
- Anticholinergic Cognitive Burden Scale
- Replication Manual
- Online training for Dementia Care Coaches

LaMantia et al JAGS 2015; Frame et al eGEMS 2013; Monahan et al, JCIA 2010;  
Monahan et al JCIA 2012; Boustani et al, JCIA 2009



# Workforce Evolution for ABC Program

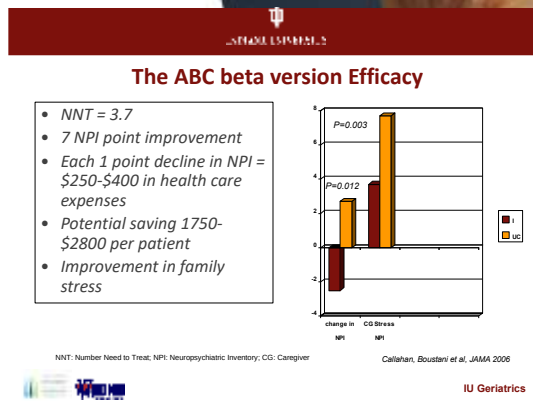
Today ABC: M-F 8-5 p.m. About \$140 PMPM CHW to patient ratio: 1:120



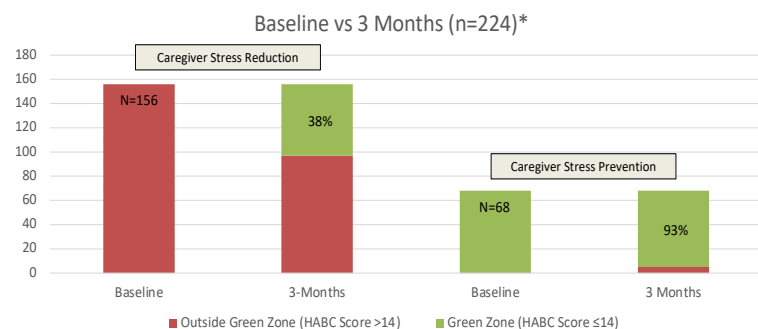
PMPM=per member per month; MD=medical doctor; RN=registered nurse; SW=social worker; CHW=community health worker;

# Why ABC Program?

| The Quality of Care Indicator Domain                                           | ABC | PCC |
|--------------------------------------------------------------------------------|-----|-----|
| % seen at ER again within one week                                             | 14% | 15% |
| % re-hospitalized within 30 days of discharge                                  | 11% | 20% |
| % with at least one order of definite anticholinergics                         | 19% | 40% |
| % with at least one order of neuroleptics                                      | 5%  | 5%  |
| % with at least one order of anti-dementia drugs                               | 55% | 13% |
| % with at least one order of antidepressant drugs                              | 68% | 48% |
| % with at least one order of definite anticholinergics and anti-dementia drugs | 16% | 32% |
| % with at least one LDL order                                                  | 82% | 72% |
| % of patients with LDL < 130                                                   | 45% | 23% |
| % with at least one HbA1c order                                                | 78% | 62% |
| % of patients with HbA1c < 8                                                   | 78% | 51% |
| % with last systolic BP < 160                                                  | 27% | 24% |



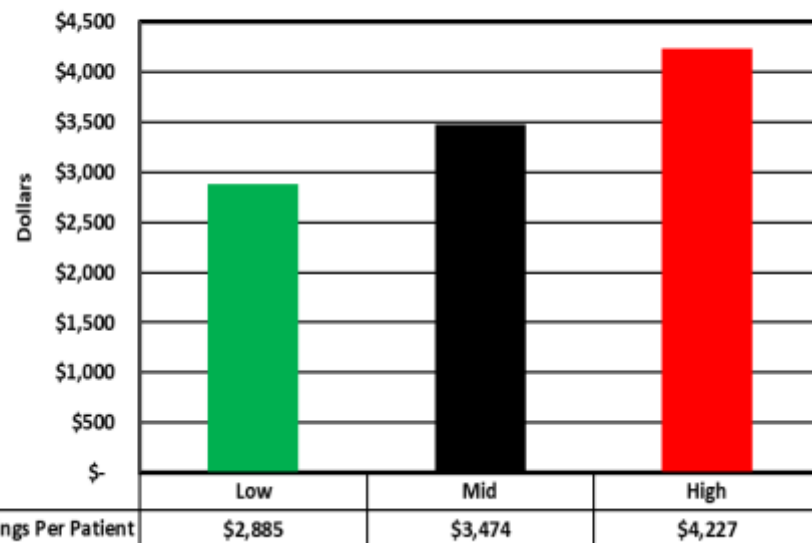
## ABC Program Effectiveness



\*McNemar Chi-Squared Test P<0.001

Counsel et al, JAGS 2023

French et al, Health Affairs 2014



Boustani et al, Aging & Mental Health 2011



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