



Building Cognitive Assessment Tools with Atlantic Fellows for Equity in Brain Health

Victor Valcour MD PhD

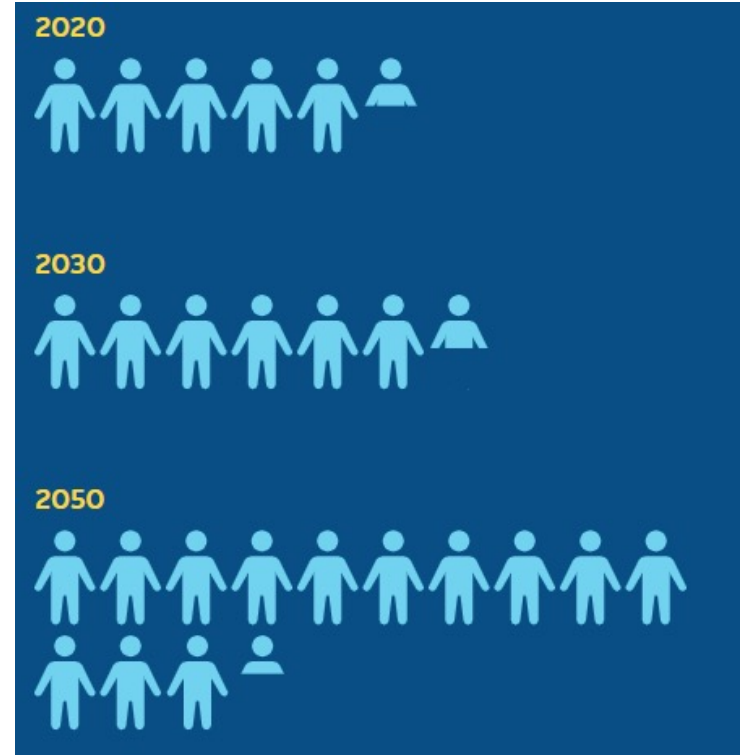
Memory and Aging Center and
Atlantic Fellows for Equity in Brain Health

October 2023



Global Dementia Prevalence

- Over 55 million people were living with dementia in 2020
- Projected to increase to 78 million by 2030
- And 139 million by 2050



Dementia Costs

By 2050, 71% of all people living with dementia will live in low- and middle-income countries.



Risk Factors for Dementia

Birth

- Genetics

Early Life

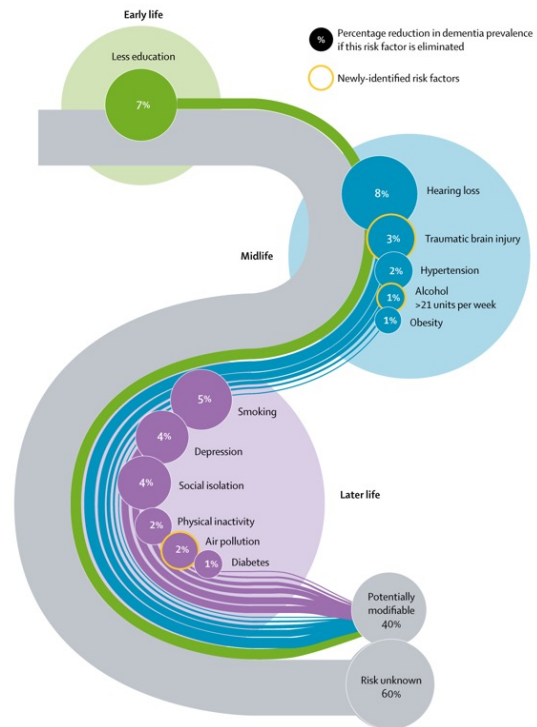
- Education

Midlife

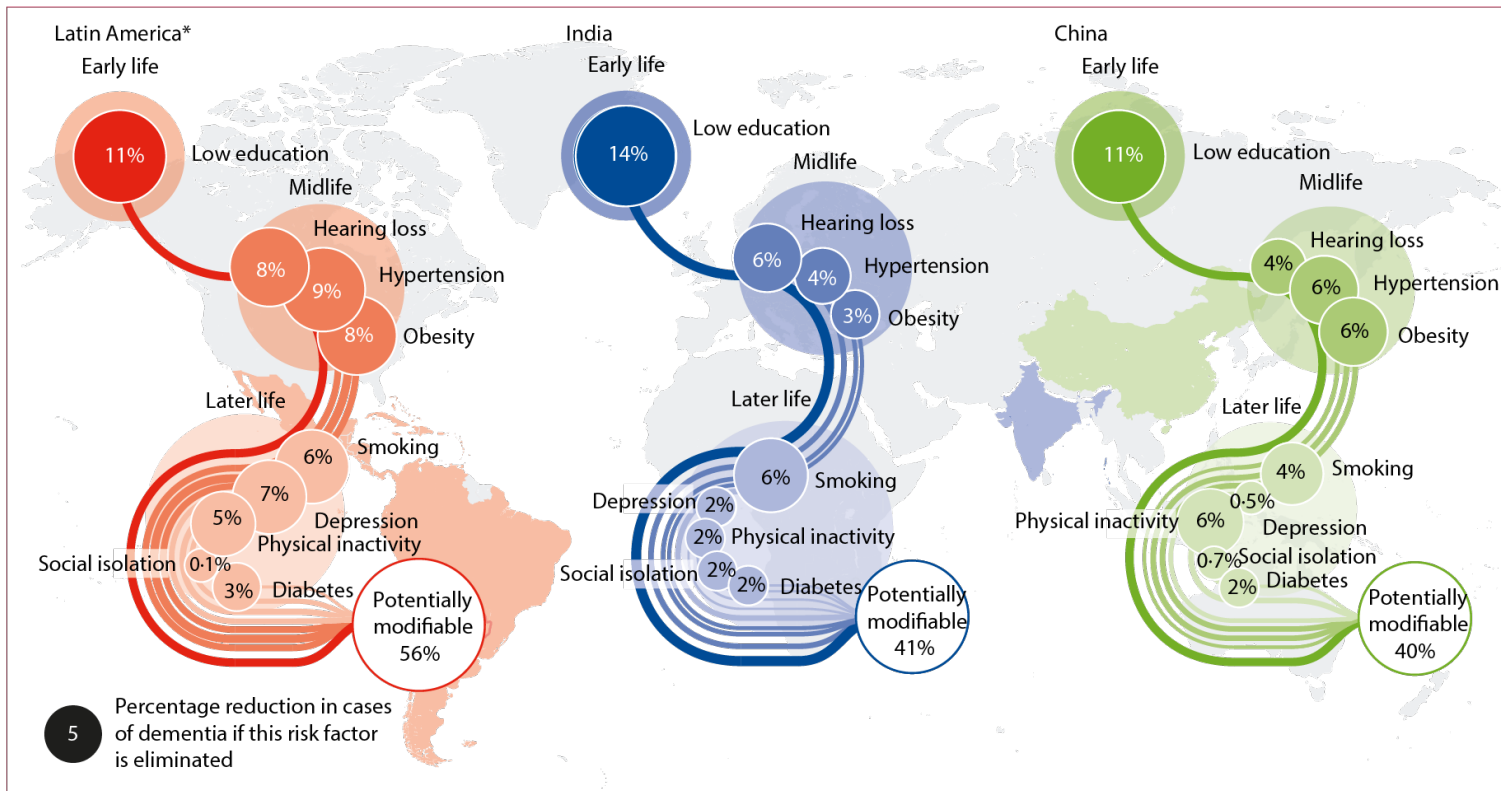
- Hearing loss
- Traumatic brain injury
- Hypertension
- Alcohol
- Obesity

Late Life

- Smoking
- Depression
- Social isolation
- Physical inactivity
- Air pollution
- Diabetes



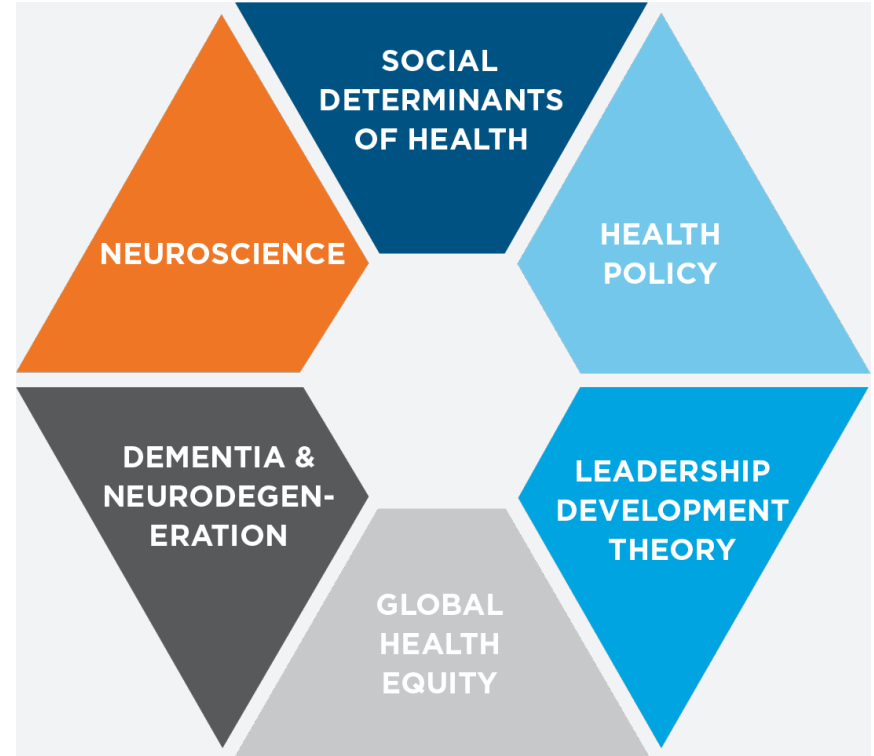
Population attributable fractions for modifiable risk factors in low- and middle-income countries



Atlantic Fellows for Equity in Brain Health



The Atlantic Fellows for Equity in Brain Health program at GBHI provides innovative training, networking and support to emerging leaders focused on improving brain health and reducing the impact of dementia worldwide.



GBHI

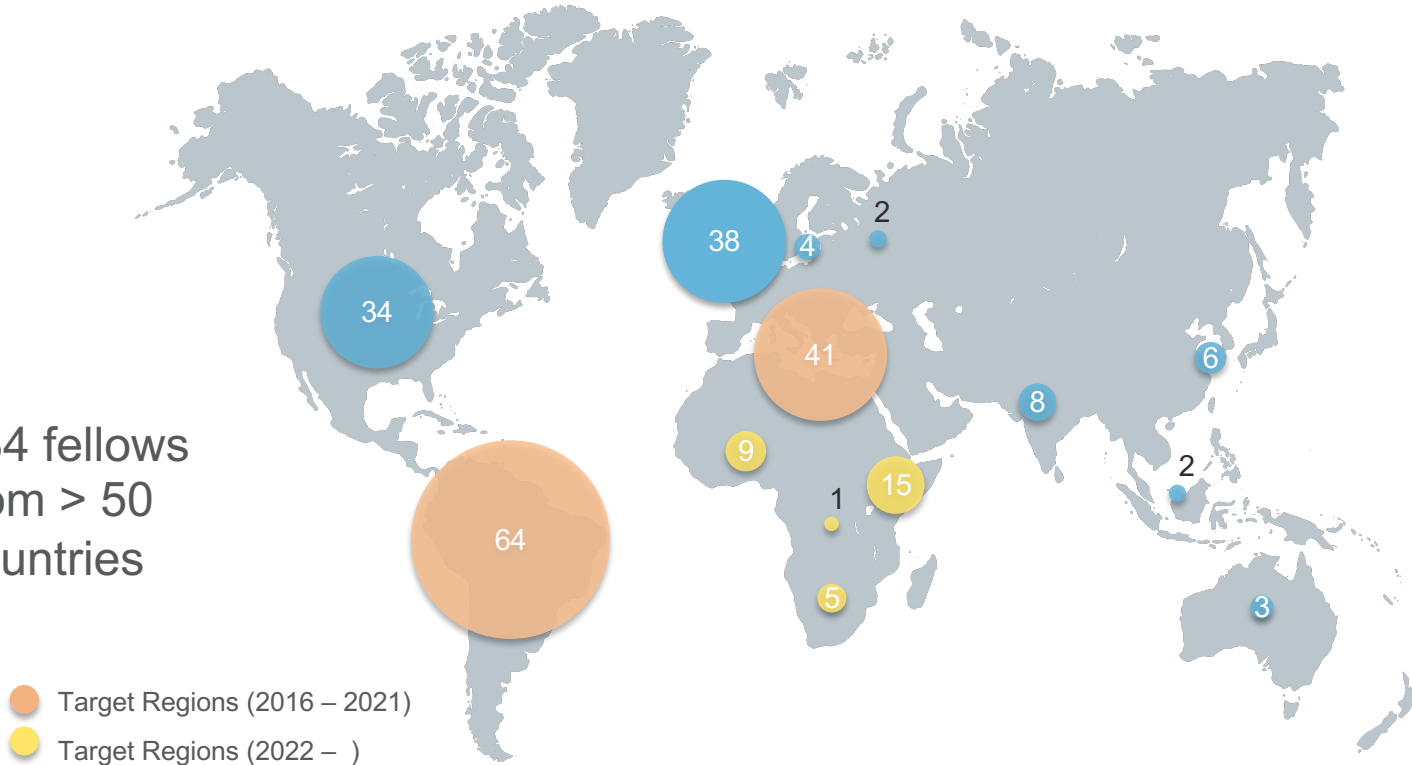
- **12-month in-residence training for all disciplines; career duration accompaniment**
- **Includes clinical observations, leadership training, skills development**
- **Access to pilot funding (\$25K) for activities in home regions**

<https://www.gbhi.org/apply>



2016–2023 Regions

234 fellows
from > 50
countries



14 Regions

Northern America
Latin America & Caribbean
Northern Europe
Western Europe
Eastern Europe
Mediterranean
Western Africa
Middle Africa
Southern Africa
Eastern Africa
Southern Asia
Southeastern Asia
Eastern Asia
Oceania

Target Regions (2016 – 2021)

Target Regions (2022 –)

Speakers Name + Title /
Presentation Title or References

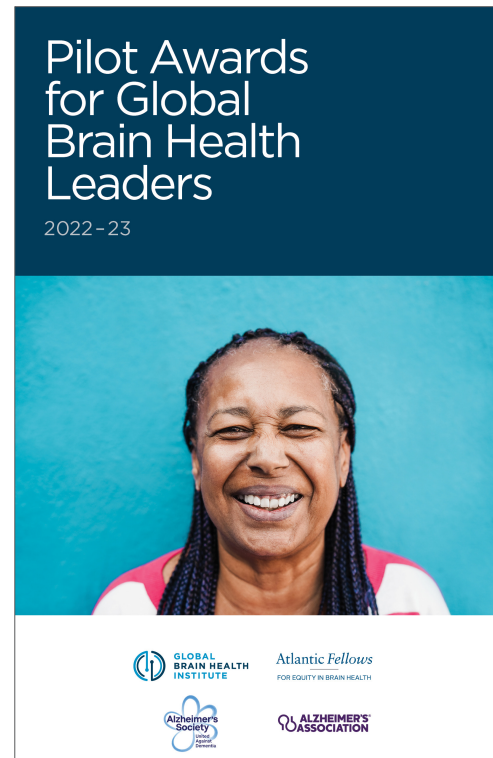


Pilot Awards for Global Brain Health Leaders

Aim to achieve impact goals through fellow-led local projects (\$25K)

- Fellows and regional mentors decide on the project (locally-informed)

Generous support by the U.S. Alzheimer's Association & Alzheimer's Society UK



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\$350K awarded to 14 pilots implemented in 7 countries

Fellow	Pilot Title	Institution	Country
Lingani Mbakile-Mahlanza	Evaluating the effectiveness of informational supports for people with TBI	University of Botswana	Botswana
Mohamed Salama	Facebook interaction as a potential marker of cognitive decline	American University in Cairo	Egypt
Selam Yoseph	A new care model for the treatment of behavioral symptoms of dementia.	Addis Ababa University	Ethiopia
Yared Zewde	Cultural adaptation and validation of Brain Health Assessment in Ethiopia	Addis Ababa University	Ethiopia
Maëlenn Guerchet	Validation of the short 10/66 dementia diagnostic assessment in Ghana.	Kintampo Health Research Centre (KHRC)	Ghana
Kunle Adewale	Arts for Brain Health	Arts in Medicine Projects	Nigeria
Rufus Akinyemi	Vascular heALTH, frailTy and cognition in Ageing Nigerians sTudy [VALIANT]	College of Medicine, University of Ibadan	Nigeria
Chukwuanugo Ogbuagu	Deployment of Cognitive Assessment Tool for Primary Health Care in Nigeria	Nnamdi Azikiwe University Teaching Hospital	Nigeria
Funmi Akindejoye	The Bloom Social Therapeutic Horticultural Project for the Elderly	Arts in Medicine Projects	Nigeria
Kirti Ranchod	Promoting Brain Health: development of patient education resources	TBD	South Africa
Melissa Chan	Amplifying the voices of people with dementia and carers in South Africa	Bessie Makatini Foundation	South Africa
Paul Modjadji	Dementia and the seventh art in South Africa: Producing an advocacy film	Leaders Who Dare to Dream Foundation	South Africa
Khanyo Ngcobo	Knowledge, attitudes and practices on dementia in healers and physicians	University of KwaZulu-Natal, Durban	South Africa
Primrose Nyamayaro	Adapting a cognitive training program for adults ageing with HIV	Faculty of Medicine and Health Sciences, University of Zimbabwe	Zimbabwe

Early Successes and Impact



\$2.3M in funding awarded to fellows working in Africa



90+ publications in peer-reviewed journals



35+ invited talks or presentations



7 fellows have received significant media coverage



5 fellows have been promoted post-fellowship



22 community events have been hosted (including seminars, arts workshops, and exhibits)



Pilot Awards for Global Brain Health Leaders

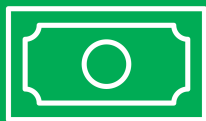
137

pilots across 42 countries
awarded \$3.4M



71

distinct
conferences
and seminars



\$72.6M

in total funding secured
by awardees & \$2.3M
of that in leveraged funds



116 publications
in leading journals



62

media outlets covered
15 pilot awards



Kunle Adewale, Art interventions for
brain health, Nigeria



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Atlantic Fellows Activities After Training

Culturally Adapting a Cognitive Training Program Primrose Nyamayaro, Zimbabwe

- HIV-associated neurocognitive disorders are one of the biggest threats to brain health in this region.
- Project aims to adapt and translate a computerized cognitive training program for adults aging with HIV.



Atlantic Fellows Activities After Training

Cultural Adaptation and Validation of Brain Health Assessment Yared Zewde, Neurologist, Ethiopia

- Cognitive and functional status of aging individuals in Ethiopia remains unknown.
- Project will adapt and validate a gold standard brain health assessment battery (TabCAT).
- Takes only 10 minutes to administer, ideal for busy clinics in primary care settings.



Atlantic Fellows Activities After Training

Evaluating the Effectiveness of Informational Supports for People with Traumatic Brain Injury

Lingani Mbakile Mahlanza, Neuropsychologist, Botswana

- The impact of traumatic brain injury (TBI) is exacerbated by lack of resources and limited access to support and rehabilitation.
- Project developed educational resources for TBI survivors and their families and examined the impact of a comprehensive approach to TBI support.





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Harmonized Multidomain Neuropsychological Battery for Diverse Populations

Launched in 2013

PI: Elena Tsoy, UCSF

Project Manager : Shireen Javandel



UCSF

University of California
San Francisco

Harmonized Multidomain Neuropsychological Testing Battery

Rationale:

- Many lower-resourced regions have translated and employed screening tools for dementia
- Some have also employed focus groups to culturally adapt tools
- Few have completed proper validation studies
- While these help identify dementia, there are **very few multidomain batteries for diagnostics and research**

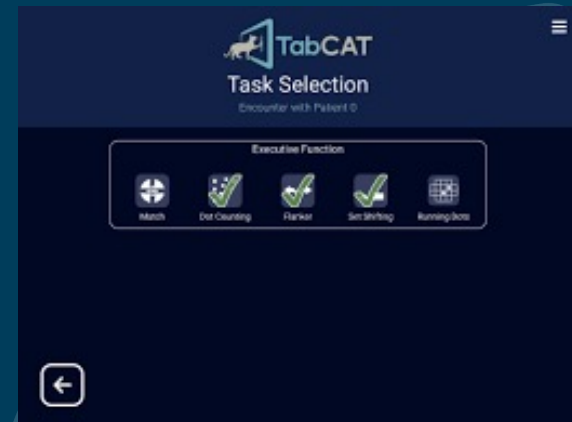
Harmonized Multidomain Neuropsychological Testing Battery

Plan:

- Leveraging the **Cognitive Assessments Across Diverse Populations** working group of Atlantic Fellows – international group from all areas of the globe
- Created and funded cultural adaptation, translation, and the capture of up to 200 healthy community dwelling controls
- Work underway in Kenya, Ethiopia, Botswana and Arab-speaking Israel

Harmonized Multidomain Neuropsychological Testing Battery

- Battery is a mix of paper and pencil tests as well as digital tests on the TabCat platform
- Tests are designed to mitigate cultural influences and language
- Once enrolled, we will create novel regression-based norms that will easily calculate performance against expectations based on key determinant factors
- Will transform research infrastructure





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Thank you

Victor Valcour, MD, PhD

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