



# Integrating Alzheimer's Messages into Chronic Disease Programs

A COMMUNICATION GUIDE FOR PUBLIC HEALTH PROFESSIONALS

**October 2023**



NATIONAL ASSOCIATION OF  
**CHRONIC DISEASE DIRECTORS**  
Promoting Health. Preventing Disease.





# PURPOSE

Public professionals can work with chronic disease prevention and control programs and their partners to develop effective communication strategies and leverage existing communication channels to promote the inclusion of brain health messages into chronic disease risk reduction programs. The National Association of Chronic Disease Directors (NACDD) and the Centers for Disease Control and Prevention (CDC) have collaborated to develop this communication guide. The information in this guide are not intended to be stand-alone campaigns, but rather integrated into existing disease risk reduction programs.

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# ALZHEIMER'S BY THE NUMBERS <sup>[1]</sup>

Alzheimer's Disease is the most common type of dementia and the seventh-leading cause of death in the U.S. [1,2]. Alzheimer's is a progressive disease beginning with mild memory loss involving parts of the brain that control thought, memory, and language and can seriously affect a person's ability to carry out daily activities. [1]

According to the 2023 Alzheimer's Association Facts and Figures, an estimated 6.7 million people are living with Alzheimer's disease or a related dementia (ADRD); by 2060, CDC projects the number of people with ADRD will increase to an estimated 14 million people, with certain racial and ethnic minority populations disproportionately affected. [1,3]

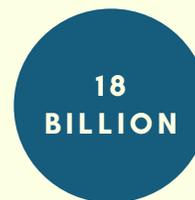
More than 11 million family members and other unpaid caregivers provided an estimated 18 billion hours of care to people with ADRD in 2022. [1] This unpaid care is valued at \$339.5 billion. [1]



**Leading cause of death in the U.S. in 2021**



**Americans living with ADRD in 2022**



**Hours of unpaid care for people with ADRD**

**Value of unpaid care provided**



# UNDERSTANDING CHRONIC DISEASE HEALTH DISPARITIES



According to the Alzheimer’s Association, almost two-thirds of Americans with Alzheimer’s disease are women. [1] In the U.S., non-Hispanic Black and Hispanic older adults are disproportionately affected by Alzheimer’s or related dementias compared with White older adults. The difference in risk for ADRD among racial and ethnic groups may be partially explained by social determinants of health. [1,4,5]

**Structural racism contributes to health and socioeconomic disparities that may affect dementia risk.**

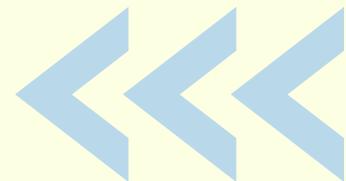


Where you live, the quality of schools, exposure to harmful toxins and pollutants, access to quality healthcare, employment prospects, occupational safety, the ability to pass wealth to subsequent generations, treatment by the legal system, and exposure to violence are all examples of social determinants of health with structural racism often serving as a root cause. [5,6,7] These differences may increase the risk for chronic conditions that are associated with higher dementia risk, such as cardiovascular disease. [8] These health conditions disproportionately affect Black and Hispanic persons and may partially explain the elevated risk of dementia among this population. [4,8]

Studies have shown that American Indian, Asian, Black, and Hispanic persons experience more barriers when accessing dementia care, have less trust in medical research, and have less trust that they will receive excellent care from health professionals who understand their ethnic and racial background and experiences. [4]

- **Two-thirds of Black persons (66%) believe it is harder for them to get excellent care for ADRD**, while two in five American Indian persons (40%) and Hispanic persons (39%) believe their own race or ethnicity makes it harder to get care, as do one-third of Asian American persons (34%). [4]
- **Nearly two-thirds of Black persons (62%) believe that medical research is biased against people of color** – a view shared by substantial numbers of Asian (45%), American Indian (40%), and Hispanic persons (36%) as well. Only half of Black persons (53%) trust a future cure for Alzheimer’s will be shared equally regardless of race, color, or ethnicity. [4]
- **Fewer than half of Black (48%) and American Indian (47%) persons feel confident they have access to providers who understand their ethnic or racial background and experiences**, and only about three in five Asian (63%) and Hispanic (59%) persons feel confident. [4]

**Populations with lower income and who are underserved have higher rates of chronic disease, and at the same time, they may face barriers to accessing healthy food and opportunities for physical activity.**



Chronic diseases, such as diabetes and hypertension, are overrepresented in Black and Hispanic populations, putting them at higher risk for developing Alzheimer’s. Another key risk factor for dementia is educational attainment; 87.2% of Black persons and 71.8% of Hispanic persons earned a high school diploma or higher, compared to 93.3% of non-Hispanic white persons. [4]

# NATIONAL ACTION



The Building Our Largest Dementia (BOLD) Infrastructure for Alzheimer’s Act was passed into law on December 31, 2018, amending the Public Health Service Act. The activities outlined in BOLD are designed to create a uniform national public health infrastructure focusing on issues such as increasing early detection and diagnosis, risk reduction, preventing avoidable hospitalizations, and supporting dementia caregiving.

CDC’s Alzheimer’s Disease Program hosts the Healthy Brain Initiative (HBI). The HBI provides data, information, and education to promote brain health, including information on ADRD, and improves understanding of brain health as a central part of public health practice. Specifically, the initiative creates and supports partnerships, collects and reports data, increases awareness of brain health, supports populations with a high burden of ADRD, and promotes the use of its Road Map series: [State and Local Public Health Partnerships to Address Dementia: the 2023–2027 Road Map](#) and the [Healthy Brain Initiative Road Map for Indian Country](#). The Road Map series provides actionable steps to promote brain health, address cognitive impairment, and address the needs of caregivers. [5]

NACDD collaborates with CDC and other national experts to implement the Integrating Alzheimer’s Messages into Chronic Disease Programs project. The project seeks to adapt chronic disease risk reduction messages to include information about how behaviors related to these topics can also reduce the risk for cognitive decline. This purpose is consistent with the HBI Road Map’s action P-5 which encourages building on existing state and local public health chronic disease, healthy aging, and disability programs and policies to address social determinants of health and improve health equity related to brain health. [5] This project promotes awareness and understanding of key risk factors for ADRD such as air pollution, alcohol, depression, diabetes, hearing loss, hypertension, less education, midlife-obesity, nutrition, physical inactivity, smoking, social isolation, and traumatic brain injury (TBI). [5,9]

# DEFINITIONS [5]

**Alzheimer’s Disease** is an irreversible, progressive brain disorder caused by damage to neurons in the brain. It is the most common cause of dementia. Early symptoms include difficulty with memory and thinking. As the disease progresses, symptoms include impaired communication and judgment, confusion, behavior changes and challenges with basic bodily functions. Symptoms usually develop slowly and worsen over time, becoming severe enough to interfere with daily tasks. Alzheimer’s disease is fatal.

**Alzheimer’s Disease and Related Dementias** (ADRD) include Alzheimer’s disease as well as vascular contributions to cognitive impairment and dementia (VCID), Lewy body dementia (LBD), frontotemporal dementia (FTD), Parkinson’s disease, hippocampal sclerosis, mixed etiology dementias (MED) and many other less common diseases, disorders and conditions that can result in dementia. This term is sometimes referenced in scientific publications.

**Brain Health** is a concept that involves making the most of the brain’s capacity and helping to reduce some risks that occur with aging. Brain health refers to the ability to draw on the strengths of the brain to remember, learn, play, concentrate, understand, and maintain a clear, active mind.

**Cognition** is the mental function involved in attention, thinking, understanding, learning, remembering, solving problems, and making decisions. Cognition is a fundamental aspect of an individual’s ability to engage in activities, accomplish goals, and successfully negotiate the world. It can be viewed along a continuum – from no clinical symptoms to mild cognitive impairment to Alzheimer’s and severe dementia.

**Cognitive Functioning** is a combination of mental processes that includes the ability to learn new things, intuition, judgment, language and remembering.

**Cognitive Health** is present when cognitive functioning is working well and making the most of the brain’s ability to remember, learn, play, concentrate, and maintain a clear, active mind.

# DEFINITIONS [5]

**Cognitive Impairment** is trouble remembering, learning new things, concentrating, or making decisions that affect everyday life.

**Dementia** is a general term for a particular group of symptoms, including difficulties with memory, language, and skills that are severe enough to interfere with daily life. Alzheimer’s disease is the most common cause of dementia. Other causes include vascular contributions to cognitive impairment and dementia (VCID), Lewy body dementia (LBD), frontotemporal dementia (FTD), Parkinson’s disease, hippocampal sclerosis, mixed etiology dementias (MED) and many other less common diseases, disorders, and conditions.

**Healthy Behaviors** are practices that can prevent or reduce the likelihood of a chronic disease such as not smoking, maintaining a body weight appropriate for one’s height and frame, being physically active, not drinking alcohol or drinking only in moderation, and getting sufficient sleep.

**Integrated Messages**, in the context of this guide, are the development of risk reduction messaging about brain health that can be transmitted as part of chronic disease risk reduction programs. The messaging in this communication guide is designed to assist public health practitioners to increase the public knowledge about brain health and risk factors for dementia.

**Subjective Cognitive Decline** is the self-reported experience of worsening or more frequent difficulties in thinking and memory in the past year. It is an early sign of possible cognitive impairment and can be an indicator of future risk of Alzheimer’s disease and other dementias.



# STRATEGIES

1

## Integrate Chronic Disease and Brain Health Programs

Review the **CDC data and statistics** on Alzheimer's Disease and Dementia for the U.S., your state, and specific populations.

Schedule a presentation for staff, partners, or advisory group members from a **local chapter** of the Alzheimer's Association to help them understand the link between chronic disease and dementia risk.

Review training provided in the **Brain Health Academy** on specific dementia risk factors.

Inform advisory groups of the links between selected chronic diseases and dementia risk. Obtain feedback and guidance from those partners.

2

## Assess Chronic Disease Programs

Identify and convene a discussion with potential program teams into which brain health messages can be integrated. Suggested program areas include cardiovascular disease, diabetes, nutrition, physical activity, and injury prevention.

Explore other avenues to increase awareness and use of dementia risk reduction resources, with the goal of reaching people who are at higher risk for dementia.

Use the recommendations in the Integrated Messages section of this Guide to assess the best way to integrate brain health messages into your chronic disease risk reduction programs.

3

## Leverage Partnerships

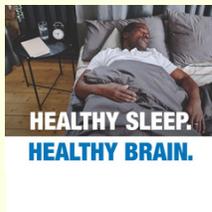
Connect with **NACDD** and the **Public Health Center of Excellence on Dementia Risk Reduction** for technical assistance and guidance.

Review **other NACDD program areas**, to identify opportunities for synergy and alignment in messaging.

As opportunities are identified, discuss cross-program messaging collaboration with colleagues and partners.

Share information or provide training about brain health and brain health messages to other chronic disease risk reduction programs and partners.

# INTEGRATED MESSAGES

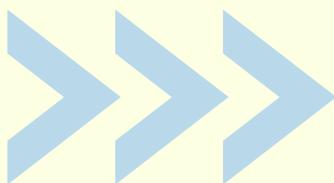


◀◀◀ **Rack Cards**  
available in English  
and Spanish at  
[chronicdisease.org](http://chronicdisease.org)

Chronic disease health messages that include information about brain health can equip people with knowledge that supports both their physical and cognitive wellbeing.

The NACDD rack cards on this page and the integrated messages guidance on the following pages are just a few examples of how public health professionals can leverage existing messages to support brain health.

Chronic disease prevention program managers, partners, and health educators can:



- Share these rack cards with public health practitioners, partners, clinicians, caregivers, and the public.
- Use these rack cards to guide risk reduction efforts and public education about dementia risk factors.
- Adapt these materials for your organization or specific populations by [making a request](#).

# PREDIABETES AND DIABETES

More than 1 in 3 adults have prediabetes, and most don't know they have it. Prediabetes is when your blood sugar level is higher than normal, but not high enough to be diagnosed as type 2 diabetes. [10]

If you have prediabetes, losing a small amount of weight if one is overweight and staying physically active can help prevent you from getting type 2 diabetes. There are other benefits too. The risk reduction activities to prevent getting type 2 diabetes (e.g., staying physically active and eating healthy foods) also help reduce the risk for developing dementia. [9,10,11] A recent study found that younger age at onset of type 2 diabetes was significantly associated with higher risk for incidence of dementia. [11]

## Here's how:

- Collaborate with National Diabetes Prevention Program suppliers to incorporate messages about the impact of blood sugar management on reducing the risk of dementia.
- Collaborate with nutrition, physical activity, and healthy communities programs to promote opportunities for a variety of physical activity.
- Collaborate with pharmacist associations to educate about the impact of diabetes self-management on reducing the risk of dementia.



Take the **prediabetes risk test** and talk to your healthcare provider about how you can keep your whole body healthy.



# HEART DISEASE, STROKE, AND BLOOD PRESSURE



High blood pressure can damage small blood vessels in the brain, affecting parts of the brain responsible for thinking and memory. A 2019 report found that patterns of hypertension in mid-to-late life can increase risk of dementia. [14]

## Here's how:

- Collaborate with nutrition, physical activity, and healthy communities programs to promote a reduced salt diet.
- Collaborate with WISEWOMAN programs to integrate messages about how nutrition, physical activity, cholesterol, and blood pressure management may also reduce the risk of dementia.

"A healthy heart ensures that enough blood is pumped to the brain, while healthy blood vessels enable the oxygen- and nutrient-rich blood to reach the brain so it can function normally." [1]

It's important to manage blood pressure to reduce the risk for heart disease, stroke, and dementia. Diabetes, smoking, and high cholesterol are also modifiable risk factors of dementia. [9]

If a stroke occurs, symptoms of cognitive decline vary depending on the area and size of the brain impacted. The disease progresses in a stepwise fashion, meaning symptoms will suddenly get worse as the individual has more strokes or mini-strokes. [12]

According to the American Heart Association, the rates of hypertension are not only higher, but also start earlier in Black persons so it's important for risk reduction efforts to support self-management information and awareness. [13]



# NUTRITION AND PHYSICAL ACTIVITY

Physical activity can improve the ability to think, learn, and problem solve. It can improve memory and reduce anxiety or depression. Engaging in physical activity, particularly leisure-time physical activity, can also reduce the risk of cognitive decline, including dementia. [15,16,17]



What people eat also has an important relationship with brain health and evidence shows that having a healthy diet, containing foods such as those found in the Mediterranean and Dietary Approaches to Stop Hypertension (DASH) diets, may improve cognitive function and reduce the risk of cognitive decline or dementia. [18]

Emphasizing nutrition and physical activity awareness among Black and Hispanic adults is especially important because both groups have a higher risk for both obesity and Alzheimer's disease than non-Hispanic white adults and non-Hispanic Asian adults. [19,20]

## Here's how:

- Promote [USDA MyPlate](#) as a resource that can help people understand how to eat a healthy diet.
- Use the [rethink your drink](#) campaign to reinforce the connection between drinking fewer sugary drinks and improved outcomes for health factors like obesity, type 2 diabetes, and cardiovascular disease associated with cognitive decline risk.
- Collaborate with [CDC's Arthritis Management and Wellbeing](#) Program's [national](#) and [state](#) awardees to encourage [physical activity](#) through proven [arthritis-appropriate, evidence-based interventions](#) as a way to reduce risk of cognitive decline. These programs are low to no cost, can be combined with other self-management programs, and are appropriate for older adults with varying levels of physical abilities.
- Use communication materials from the [Move Your Way® campaign](#) or [Active People, Healthy Nation® initiative](#) to promote physical activity.

# HEARING LOSS



Hearing loss is a risk factor for dementia. [21] When hearing loss occurs, the brain works harder to process what's being heard. As a result, the brain has less ability for thinking and memory functions. A recent study showed that using hearing aids lowers the risk of dementia for people with hearing loss to a similar risk level to people without hearing loss. [22]



It is common for hearing loss to occur with age. Hispanic adults aged 65 years and older are more likely to have difficulty hearing or have the inability to hear at all even while using hearing aids, than non-Hispanic white, Black, or Asian adults. [23]

## Here's how:

- Collaborate with injury prevention programs to incorporate messages about using ear protection when performing lawn maintenance or using power tools.
- Collaborate with healthcare provider associations to encourage their members to talk with their patients about their hearing.
- Partner with state audiologist associations and Area Agencies on Aging to increase awareness of how hearing loss in mid and late life is a modifiable risk factor for dementia. Work together to encourage hearing testing and interventions to reduce the risk of cognitive decline among older adults.



When hearing loss occurs, the brain works harder to process what's being heard, which then impacts its thinking and memory functions. Keep your brain healthy by taking time to protect your ears. [22]

# SLEEP

Recent studies have shown that getting six to eight hours of sleep per night could lower the risk of dementia. [24] This is especially important for older adults with multiple health conditions, as they are more likely to report getting less than six hours of sleep. [25] Not getting enough sleep is linked to a number of chronic diseases, including type 2 diabetes, cardiovascular disease, obesity, and depression. [26]

Many people with dementia experience poor sleep as they wake up more often and stay awake longer during the night, causing daytime napping and drowsiness. [27] Non-Hispanic white adults, women, and people who have household incomes below the federal poverty line are more likely to experience poor sleep than others. [28]

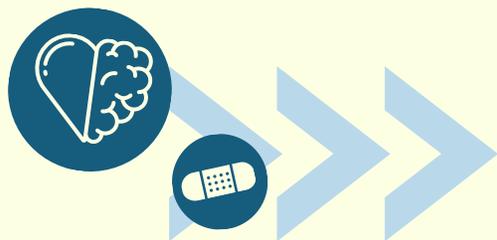


## Here's how:

- Integrate messages about healthy sleep into worksite wellness programs.
- Share tips for safe sleep with injury prevention programs.
- Promote **Sleep Awareness Week** as a call to action to recognize sleep as a crucial part of physical and brain health; coordinate this with obesity prevention programs.



Getting enough sleep can help you live a healthier life by lowering your risk for chronic conditions, including memory loss and dementia.



# TRAUMATIC BRAIN INJURY

Prevent dementia by preventing head injuries. TBI may increase the risk of developing Alzheimer's or other dementias years after an injury happens. [30]



## Here's how:

- Collaborate with injury prevention programs and their work on falls prevention.
- In partnership with WISEWOMAN and worksite wellness programs, promote exercise and strength training for older adults to reduce fall risk.
- Promote the [AARP Home Fit Guide](#) as a brain health resource.
- Implement education and awareness programs to encourage the use of helmets and seatbelts.

Falls, motor vehicle crashes, assaults, and sports injuries can all result in head injury. Hitting your head can also result in an injury to your brain. A traumatic brain injury (TBI) is an injury that can damage your brain, cause problems with your abilities to learn and think, and is a leading cause of death and disability in the U.S. [29] Repeated TBIs may increase the risk for long-term memory loss and confusion.

When a person aged 65 years and older sustains a serious TBI in a fall, direct effects of the injury may result in long-term cognitive changes, reduced ability to function, and changes in emotional health. One study found that older adults who experienced loss of consciousness after a TBI were 28% more likely to report subjective memory impairment than seniors who did not experience a TBI. TBI may increase the risk of developing Alzheimer's or other dementias years after an injury happens. [30]

## Resources

### [Alzheimer's Association](#)

### [Healthy Brain Initiative Road Map for Indian Country](#)

### [Healthy Brain Initiative Road Map for State and Local Public Health 2023-2027](#)

### [NACDD Healthy Aging Program](#)

### [National Standards for Diabetes Self-Management Education and Support](#)

### [The Lancet Report](#)

### [UsAgainstAlzheimer's](#)

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Lisa Garbarino

Janelle Gore, MPH

Lisa McGuire, PhD, FGSA, FAPA

Benjamin Olivari, MPH

### **National Association of Chronic Disease Directors**

Leslie Best, BSW

Lanae Caulfield, BA

Kim Crawford, PhD

Mara Galic, MHS, RD

Lorrie Graaf, RN

Natasha McCoy, MPH

### **Project Steering Committee**

William Benson, International Association for Indigenous Aging

Joanna Espinoza, MPH, Colorado Department of Public Health and Environment

Daniela Friedman, PhD, Arnold School of Public Health, University of South Carolina

David Hoffman, DPS, CCE, University at Albany, School of Public Health

Vivian Lasley-Bibbs, MPH, DrPH, Kentucky Department for Public Health

David Marquez, PhD, FACSM, FGSA, FSBM, University of Illinois at Chicago

Robyn Taylor, MBA, National Association of Chronic Disease Directors

Roland Thorpe, PhD, Johns Hopkins University

Tara Trujillo, MNM, Colorado Department of Public Health and Environment

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**AWARENESS >>> UNDERSTANDING >>> ACTION**

**PROMOTING HEALTH. PREVENTING DISEASE.**



Since 1988, the National Association of Chronic Disease Directors and its more than 7,000 Members have worked to strengthen state-based leadership and expertise for chronic disease prevention and control in all states, territories, and nationally.

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