



A PUBLIC HEALTH APPROACH TO ALZHEIMER'S AND OTHER DEMENTIAS

**ALZHEIMER'S DISEASE – WHAT IS
THE ROLE OF PUBLIC HEALTH?**



Emory Centers
for Training and
Technical Assistance



LEARNING OBJECTIVES

- List 4 key ways that public health can respond to the Alzheimer's disease epidemic
- Describe surveillance/monitoring and how public health can apply it in response to Alzheimer's
- Name the 2 BRFSS modules that pertain to cognitive decline and caregiving
- Describe risk reduction and how public health can apply it to Alzheimer's
- Explain why it is important to promote early detection of Alzheimer's



INTRODUCTION: DEMENTIA & ALZHEIMER'S DISEASE'

- Dementia is a decline in mental ability that interferes with daily life
- Alzheimer's disease is the most common form of dementia
 - Progressive loss of memory and brain function
 - Requires increasing aid and assistance
 - No cure and limited treatment options
- Huge financial and emotional burden
- Public health plays important role in addressing Alzheimer's disease



ALZHEIMER'S: A PUBLIC HEALTH CRISIS

- Historically viewed as a medical or aging issue
- Growing recognition of public health crisis:
 - Large and growing epidemic
 - Significant impact
 - Ways to intervene

ALZHEIMER'S: EPIDEMIC (U.S.)²

- Nearly 6 million adults
- 1 in 10 adults age ≥ 65
- 1 in 3 adults age ≥ 85
- By 2050, expected to reach 13.8 million





ALZHEIMER'S IMPACT: COSTS³

- Significant costs to Medicare, Medicaid, individuals, caregivers
- Annual costs of care nearly \$300 billion
- Most expensive disease in the U.S.



ALZHEIMER'S: DISPROPORTIONAL IMPACT⁴

- Women: 2/3 of affected population
- African-Americans: 2 times more likely
- Hispanics: 1.5 times more likely



ALZHEIMER'S: CAREGIVING BURDEN⁵

- Requires increasing levels of caregiving (paid and unpaid)
- Over 16 million caregivers
- 18 billion hours of unpaid care annually
- Hardships: health, emotional, financial



ALZHEIMER'S: HEALTH CARE BURDEN⁶

- Disproportionate use of health care resources
 - Hospitalized twice as often
 - 7 in 10 residents in assisted living have some form of cognitive impairment
- Workforce shortage
- Inadequate professional training



PUBLIC HEALTH: POISED FOR IMPACT⁷

- 4 key ways public health can have an impact:
 - Surveillance/monitoring
 - Risk reduction
 - Early detection and diagnosis
 - Safety and quality of care





PUBLIC HEALTH IMPACT: SURVEILLANCE & MONITORING

ALZHEIMER'S DISEASE – WHAT IS THE ROLE OF PUBLIC HEALTH?

SURVEILLANCE & PUBLIC HEALTH⁸

- Compile data on a population level, including:
 - Prevalence of certain diseases
 - Health risk factors
 - Health behaviors
 - Burden of diseases
- State-level data on Alzheimer's and dementia growing; yet data gaps remain



BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS)⁹

- Behavioral Risk Factor Surveillance System (BRFSS) – CDC
 - Health-related risk behaviors
 - Chronic health conditions
 - Use of preventive services
- State-based data
- Cognitive Decline module, Caregiver module





BRFSS: COGNITIVE DECLINE MODULE^{10,11}

- Comprised of questions about:
 - Confusion or memory loss
 - Impact on daily activities
 - Need for assistance and caregiving
 - Discussions about memory with health care professional
- 52 states/territories have used at least once

BRFSS AND SUBJECTIVE COGNITIVE DECLINE^{12,13}

- About 80% have at least one other chronic condition
- More than 1/3 said cognitive issues interfered with ability to work, volunteer, engage socially
- Over 50% have not talked to a health care provider about memory problems





BRFSS: CAREGIVER MODULE¹⁴

- Comprised of questions about:
 - Prevalence of caregiving and caregiving activities
 - Caregiver relationship to care recipient and health condition necessitating care
 - Scope of caregiving
 - Caregiver challenges
- 49 states/territories have used at least once

BRFSS: CAREGIVER MODULE FINDINGS¹⁵

- Typical dementia caregiver is a middle-aged woman, usually daughter/daughter-in-law, often still employed
- Nearly 1/3 provide 20+ hours of care per week
- Majority of care is personal care tasks
- Caregivers' mental or physical health can be negatively impacted by strain of long-term caregiving





DISCUSSION QUESTION I



How could the **Cognitive Decline** and **Caregiver** data be used by state and local public health?



USE OF SURVEILLANCE DATA¹⁶

- Understand impact and burden of Alzheimer's on state level
- Develop strategies to reduce risk
- Design interventions to alleviate burden
- Inform public policy and planning
- Evaluate programs and policies
- Educate the public and the health care community
- Guide research





PUBLIC HEALTH IMPACT: RISK REDUCTION & PRIMARY PREVENTION

ALZHEIMER'S DISEASE – WHAT IS THE ROLE OF PUBLIC HEALTH?



PRIMARY PREVENTION¹⁷

- Designed to prevent a disease or condition from developing in a population
- Causes of Alzheimer's not fully understood
- Primary prevention for Alzheimer's:
 - Risk reduction
 - Promotion of cognitive health



DISCUSSION QUESTION 2



What are risk factors for Alzheimer's and other dementias that could be modified or reduced?



RISK REDUCTION: HEAD TRAUMA^{18,19}

- Traumatic brain injury
- Risk remains for years after original injury
- Prevention efforts include:
 - Seat belt use
 - Use of helmets
 - Falls prevention



RISK REDUCTION: HEART HEALTH^{20,21,22,23}

- Close link between heart health and brain health
- Modifying cardiovascular risk:
 - Quit smoking
 - Diet (DASH, Mediterranean, MIND)
 - Physical activity



RISK REDUCTION: AVOIDANCE/MANAGEMENT^{24,25}

- Prevent onset of or effectively manage conditions that can increase risk for Alzheimer's
 - High blood pressure (hypertension)
 - Diabetes
 - Midlife obesity



RISK REDUCTION: ACTIVE BRAIN^{26,27}

- Mental activity:
 - Learning new information and skills
 - Volunteering
 - Reading
 - Playing challenging games
- Social connections (friends, social groups, volunteering)





DISCUSSION QUESTION 3



How could public health play a role in promoting risk reduction and cognitive health?

RISK REDUCTION: PUBLIC HEALTH INTERVENTIONS²⁸

- Health education and promotion campaigns
 - Brain and cardiovascular health
 - Detection/treatment of diabetes and high blood pressure
 - Smoking cessation
- Programs and policies
 - Injury prevention
 - Cardiovascular health





PUBLIC HEALTH IMPACT: EARLY DETECTION & DIAGNOSIS

ALZHEIMER'S DISEASE – WHAT IS THE ROLE OF PUBLIC HEALTH?

WHY PROMOTE EARLY DETECTION?^{30,31,32,33}

- Access to treatment and services
- Planning
- Potentially reversible causes
- Clinical trials





DISCUSSION QUESTION 4



Would you want to know if you had Alzheimer's? Why or why not?



EARLY DETECTION: FACTORS INFLUENCING DIAGNOSIS RATES^{34,35}

- Many people with Alzheimer's and other dementias either:
 - Have not been diagnosed
 - Have a diagnosis but have not been made aware
- Fear of Alzheimer's and/or lack of knowledge about cognitive decline by individuals
- Only 35% aware of diagnosis, yet vast majority say they'd want to know
- Health care disparities



EARLY DETECTION: CHALLENGES^{36,37}

- Diagnostic uncertainty
- Time constraints, lack of support
- Communication difficulties
- Fear of causing emotional distress
- Reluctance to discuss with health care provider

EARLY DETECTION: MOST WANT TO KNOW³⁸

- 89% of U.S. adults would want to know
- Of those age 60 and older, 95% would want to know
- 97% would want to know for family member





DISCUSSION QUESTION 5



What can public health do to promote early detection and diagnosis of Alzheimer's?

PUBLIC HEALTH: EARLY DIAGNOSIS³⁹

- General education and awareness
 - “10 Early Signs” – Alzheimer’s Association
 - Benefits of early detection
- Education and training for health care providers
- Education/support for newly diagnosed and their family





PUBLIC HEALTH IMPACT: SAFETY AND QUALITY OF CARE

ALZHEIMER'S DISEASE – WHAT IS THE ROLE OF PUBLIC HEALTH?

SAFETY AND QUALITY OF CARE⁴⁰

- Workforce supply and training/development
- Safety of those with dementia and their caregivers
- Caregiver support and resources



CONCLUSION: PUBLIC HEALTH IMPACT

- 4 key ways public health can have an impact:
 - Surveillance/monitoring
 - Risk reduction
 - Early detection and diagnosis
 - Safety and quality of care



DEMENTIA CAPABLE SYSTEMS AND DEMENTIA FRIENDLY COMMUNITIES

- Dementia capable systems
 - Public health research and translation
 - Support services
 - Workforce training
- Dementia friendly communities





FOR MORE INFORMATION

For more information, please visit the Alzheimer's Association:
<http://www.alz.org>

CDC's Alzheimer's Disease and Healthy Aging Program:
<https://www.cdc.gov/aging/>





COMPETENCIES

- **Academy for Gerontology in Higher Education (AGHE):**
 - 1.6.1 Identify and explain research methodologies, interpretations, and applications used by different disciplines to study aging.
- **Council on Education for Public Health (CEPH) Foundational Competencies:**
 - 2. Locate, use, evaluate, and synthesize public health information (bachelors level)
 - 4. Interpret results of data analysis for public health research, policy, or practice (masters level)
- **Council on Linkages Between Academia and Public Health Practice:**
 - 3A8. Describes the roles of governmental public health, health care, and other partners in improving the health of a community.
 - 8A3. Describes the ways public health, health care, and other organizations can work together or individually to impact the health of a community.

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