

# A PUBLIC HEALTH APPROACH TO ALZHEIMER'S AND OTHER DEMENTIAS

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









### 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



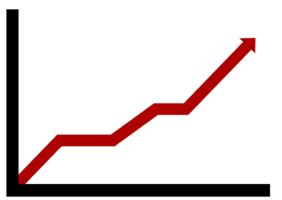
#### **ALZHEIMER'S: A PUBLIC HEALTH CRISIS**

- 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.)<sup>2</sup>

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





#### **ALZHEIMER'S IMPACT: COSTS<sup>3</sup>**

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





#### ALZHEIMER'S: DISPROPORTIONAL IMPACT

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





#### ALZHEIMER'S: CAREGIVING BURDEN<sup>5</sup>

- 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 BURDEN<sup>6</sup>**

- 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 IMPACT

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





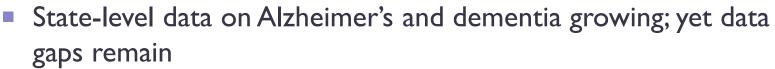
### PUBLIC HEALTH IMPACT: SURVEILLANCE & MONITORING

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



#### SURVEILLANCE & PUBLIC HEALTH<sup>®</sup>

- Compile data on a population level, including:
  - Prevalence of certain diseases
  - Health risk factors
  - Health behaviors
  - Burden of diseases







# BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS)<sup>9</sup>

- 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 I/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 MODULE<sup>14</sup>

- 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 FINDINGS<sup>15</sup>

- Typical dementia caregiver is a middle-aged woman, usually daughter/daughter-in-law, often still employed
- Nearly I/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 DATA<sup>16</sup>

- 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 PREVENTION<sup>17</sup>

- 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<sup>24,25</sup>

- 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<sup>26,27</sup>

- 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 INTERVENTIONS<sup>28</sup>

- 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<sup>34,35</sup>

- 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<sup>36,37</sup>

- 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 KNOW<sup>38</sup>

- 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 DIAGNOSIS<sup>39</sup>

- 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 CARE®

- 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/

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#### COMPETENCIES

#### Academy for Gerontology in Higher Education (AGHE):

 I.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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