



# 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 3 key tools public health can apply to the Alzheimer's disease epidemic
- Describe surveillance/monitoring and how public health can apply it in response to Alzheimer's disease
- Name the 2 BRFSS modules that pertain to cognitive decline and caregiving
- Describe primary prevention and how public health can apply it to Alzheimer's disease
- Explain why it is important to promote early detection of Alzheimer's disease



# COMPETENCIES

## **Association for Gerontology in Higher Education (AGHE):**

- 1.2.4 Recognize common late-life syndromes and diseases and their related bio-psycho-social risk and protective factors.

## **Association of Schools and Programs of Public Health (ASPPH):**

- Domain 2: Describe how the methods of epidemiology and surveillance are used to safeguard the population's health.
- Domain 3: Endorse lifestyle behaviors that promote individual and population health and well-being.

## **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.
- 8A4. Contributes to development of a vision for a healthy community (e.g., emphasis on prevention, health equity for all, excellence and innovation).



# COMPETENCIES CONT.

## **National Association of Chronic Disease Directors (NACDD):**

- Domain 7: Identify relevant and appropriate data and information sources for chronic disease.
- Domain 7: Articulate evidence-based approaches to chronic disease prevention and control.

## **National Commission for Health Education Credentialing, Inc. (NCHEC):**

- 1.7.4 Identify emerging health education needs.
- 7.1.1 Identify current and emerging issues that may influence health and health education.



# INTRODUCTION: DEMENTIA & ALZHEIMER'S DISEASE

- Dementia is a decline in mental ability severe enough to interfere with daily life
  - Caused by damage to brain cells, primarily affects older adults
- Alzheimer's disease is the most common type of dementia
  - Progressive loss of memory and brain function, behavior and personality changes
  - No cure and limited treatment options
  - Caregivers provide increasing assistance
- Huge impact on individuals, families, caregivers, and the health care system
- Public health plays important role in addressing Alzheimer's disease through surveillance, prevention, detection, and support of dementia capable systems

# ALZHEIMER'S: A PUBLIC HEALTH CRISIS

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



# ALZHEIMER'S: EPIDEMIC (U.S.)

- Over 5 million adults
- 1 in 9 adults age  $\geq 65$
- 1 in 3 adults age  $\geq 85$
- By 2050, expected to reach 13.8 million





# ALZHEIMER'S IMPACT: COSTS

- Significant costs to Medicare, Medicaid, individuals, caregivers
- Annual costs of care over \$200 billion
- Most expensive disease in the U.S.



# ALZHEIMER'S: DISPROPORTIONAL IMPACT

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



<sup>4</sup> Alzheimer's Association. *2016 Alzheimer's Disease Facts and Figures*.



# ALZHEIMER'S: CAREGIVING BURDEN

- Requires increasing levels of caregiving (paid or unpaid)
- Over 15 million caregivers
- 18 billion hours of unpaid care annually
- Hardships: health, emotional, financial

<sup>5</sup> Alzheimer's Association. *2016 Alzheimer's Disease Facts and Figures*.

# ALZHEIMER'S: HEALTH CARE BURDEN

- Disproportionate use of health care resources
  - Hospitalized 2-3 times more often
  - Represents 64% of Medicare beneficiaries living in nursing homes
- Workforce shortage
- Inadequate training



<sup>6</sup> Alzheimer's Association. (2013) *Combating Alzheimer's Disease: A Public Health Agenda*.

<sup>7</sup> Alzheimer's Association. *2016 Alzheimer's Disease Facts and Figures*.

<sup>8</sup> U.S. Department of Health and Human Services. *National Plan to Address Alzheimer's Disease: 2013 Update*.

# PUBLIC HEALTH: TOOLS & TECHNIQUES

3 key public health intervention tools:

- Surveillance/monitoring
- Primary prevention
- Early detection and diagnosis



<sup>9</sup> Alzheimer's Association. (2013) *Combating Alzheimer's Disease: A Public Health Agenda*.



# TOOL #1: SURVEILLANCE

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



# SURVEILLANCE & PUBLIC HEALTH

- Compile data on a population level including:
  - Prevalence of certain diseases
  - Health risk factors
  - Health behaviors
  - Burden of diseases
- Little state-level data on Alzheimer's and dementia

# BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS)

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





# BRFSS: COGNITIVE DECLINE MODULE

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

<sup>12</sup> Alzheimer's Association. (2014) *Data Collection and Behavioral Risk Factor Surveillance System (BRFSS)*.

<sup>13</sup> Centers for Disease Control and Prevention. *Behavioral Risk Factor Surveillance System (BRFSS) 2015 Cognitive Decline Module*. Accessed June 10, 2015 from website: <http://www.cdc.gov/aging/healthybrain/brfss-faq.htm>



# BRFSS: CAREGIVER MODULE

- Comprised of questions about:
  - Prevalence of caregiving and caregiving activities
  - Caregiver age, gender, relationship to care recipient
  - Scope of caregiving
  - Caregiver challenges
- 40 states/territories have used at least once

<sup>14</sup> Alzheimer's Association. (2014) *Data Collection and Behavioral Risk Factor Surveillance System (BRFSS)*.



## DISCUSSION QUESTION



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

# PUBLIC HEALTH: SURVEILLANCE DATA

- Develop strategies to reduce risk
- Design interventions to alleviate burden
- Inform public policy
- Guide research
- Evaluate programs and policies
- Educate public and health care community



<sup>15</sup> Alzheimer's Association. (2014) *Data Collection and Behavioral Risk Factor Surveillance System (BRFSS)*.

<sup>16</sup> Centers for Disease Control and Prevention. *The CDC Healthy Brain Initiative: Progress 2006 – 2011*.

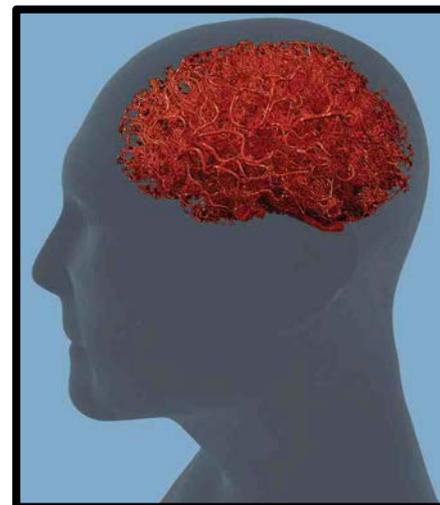


# TOOL #2: PRIMARY PREVENTION & RISK REDUCTION

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

# PRIMARY PREVENTION

- 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



What are risk factors for Alzheimer's disease that could be modified/reduced?

# RISK REDUCTION: HEAD TRAUMA

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



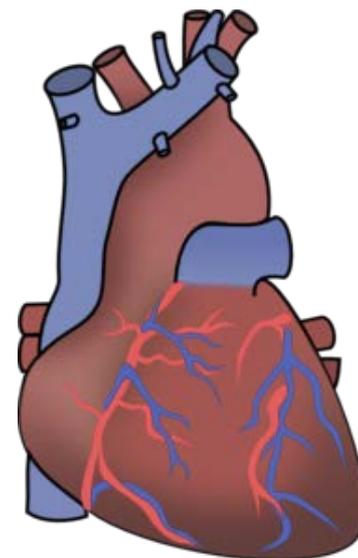
<sup>18</sup> Alzheimer's Association. (2015) *Traumatic Brain Injury*.

<sup>19</sup> Centers for Disease Control and Prevention. *Older Adults Falls: Get the Facts*. Accessed June 10, 2015 from website:

<http://www.cdc.gov/HomeandRecreationalSafety/Falls/adultfalls.html>

# RISK REDUCTION: HEART HEALTH

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



<sup>20</sup> Alzheimer's Association. (2014) *Alzheimer's and Public Health Spotlight: Heart Health and Brain Health*.

<sup>21</sup> Alzheimer's Association. *Prevention and Risk of Alzheimer's and Dementia*. Accessed July 16, 2015 from website: [http://www.alz.org/research/science/alzheimers\\_prevention\\_and\\_risk.asp](http://www.alz.org/research/science/alzheimers_prevention_and_risk.asp)

<sup>22</sup> Centers for Disease Control and Prevention, Division of Nutrition, Physical Activity, and Obesity. *Physical Activity is Essential to Healthy Aging*. Accessed September 1, 2015 from website: [http://www.cdc.gov/physicalactivity/basics/older\\_adults/](http://www.cdc.gov/physicalactivity/basics/older_adults/)

# RISK REDUCTION: AVOIDANCE/MANAGEMENT

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



# RISK REDUCTION: ACTIVE BRAIN<sup>24</sup>

- Mental stimulation:
  - Learning new information and skills
  - Volunteering
  - Reading
  - Playing challenging games
- Social connections



<sup>24</sup> National Institute on Aging. (2015) *Alzheimer's Disease: Unraveling the Mystery*.



## DISCUSSION QUESTION



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

# PUBLIC HEALTH: RISK REDUCTION

- 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



<sup>25</sup> Alzheimer's Disease International. *World Alzheimer Report 2014: Dementia and Risk Reduction, An Analysis of Protective and Modifiable Factors, Summary Sheet.*

<sup>26</sup> Alzheimer's Association and Centers for Disease Control and Prevention. (2013) *The Public Health Road Map for State and National Partnerships, 2013-2018.*



# TOOL #3: EARLY DETECTION & DIAGNOSIS

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



## DISCUSSION QUESTION



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

# WHY PROMOTE EARLY DETECTION?

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



<sup>27</sup> Alzheimer's Association. (2013) *Combating Alzheimer's Disease: A Public Health Agenda*.

<sup>28</sup> Alzheimer's Association. *Early Detection*. Accessed June 8, 2015 from website: <http://www.alz.org/publichealth/early-detection.asp>

<sup>29</sup> National Institutes on Aging. (2015) *Alzheimer's Disease: Unraveling the Mystery*.

<sup>30</sup> U.S. Health and Human Services. *National Plan to Address Alzheimer's Disease: 2015 Update*

# EARLY DETECTION: DIAGNOSIS RATES

- Most people with Alzheimer's disease have either:
  - Not been diagnosed
  - Been diagnosed but are not aware of diagnosis
- Only 35% aware of diagnosis
- Health disparities



<sup>31</sup> Alzheimer's Association. *2015 Alzheimer's Disease Facts and Figures*.

<sup>32</sup> Alzheimer's Association. (2013) *Alzheimer's and Public Health Spotlight: Race, Ethnicity & Alzheimer's Disease*.



# EARLY DETECTION: CHALLENGES

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

<sup>33</sup> Alzheimer's Association. *2016 Alzheimer's Disease Facts and Figures*.

<sup>34</sup> Alzheimer's Association. (2015) *Cognitive Data from the 2012 BRFSS*.

# EARLY DETECTION: MOST WANT TO KNOW

- 89% of Americans would want to know
- Of those age 60 and older, 95% would want to know
- 97% would want to know about a family member





# DISCUSSION QUESTION



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

# PUBLIC HEALTH: EARLY DIAGNOSIS

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



# CONCLUSION: PUBLIC HEALTH RESPONSE

- 3 key public health intervention tools:
  - Surveillance/monitoring
  - Primary prevention
  - Early detection and diagnosis



# 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 website at: <http://www.alz.org>

