A PUBLIC HEALTH APPROACH TO ALZHEIMER’S AND OTHER DEMENTIAS

ALZHEIMER’S DISEASE – WHAT IS THE ROLE OF PUBLIC HEALTH?
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
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).
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

1 Alzheimer’s Association. 2015 Alzheimer’s Disease Facts and Figures.
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 ≥ 65
- 1 in 3 adults age ≥ 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

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

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

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3 key public health intervention tools:

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

TOOL #1: SURVEILLANCE

ALZHEIMER’S DISEASE – WHAT IS THE ROLE OF 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

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
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

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

15 Alzheimer’s Association. (2014) *Data Collection and Behavioral Risk Factor Surveillance System (BRFSS).*
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

RISK REDUCTION: HEART HEALTH

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

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22 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/
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

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RISK REDUCTION: ACTIVE BRAIN

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

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

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

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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

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EARLY DETECTION: CHALLENGES

- 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

- 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, please visit the Alzheimer’s Association website at: http://www.alz.org