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.)

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

- 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

- 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
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?
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) – CDC

- Health-related risk behaviors
- Chronic health conditions
- Use of preventive services

State-based data

Cognitive Decline module, Caregiver module
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
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 MODULE

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
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.
How could the Cognitive Decline and Caregiver data be used by state and local public health?
USE OF SURVEILLANCE DATA

- 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?
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?
Traumatic brain injury

Risk remains for years after original injury

Prevention efforts include:

- Seat belt use
- Use of helmets
- Falls prevention
Close link between heart health and brain health

Modifying cardiovascular risk:
- Quit smoking
- Diet (DASH, Mediterranean, MIND)
- Physical activity
RISK REDUCTION: AVOIDANCE/MANAGEMENT\textsuperscript{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

- 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

- 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?  

- Access to treatment and services
- Planning
- Potentially reversible causes
- Clinical trials
Would you want to know if you had Alzheimer’s? Why or why not?
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\textsuperscript{36,37}

- Diagnostic uncertainty
- Time constraints, lack of support
- Communication difficulties
- Fear of causing emotional distress
- Reluctance to discuss with health care provider
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
What can public health do to promote early detection and diagnosis of Alzheimer’s?
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
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, 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.
REFERENCES

REFERENCES 2


REFERENCES 3