

# Carolina Center on Alzheimer's Disease and Minority Research

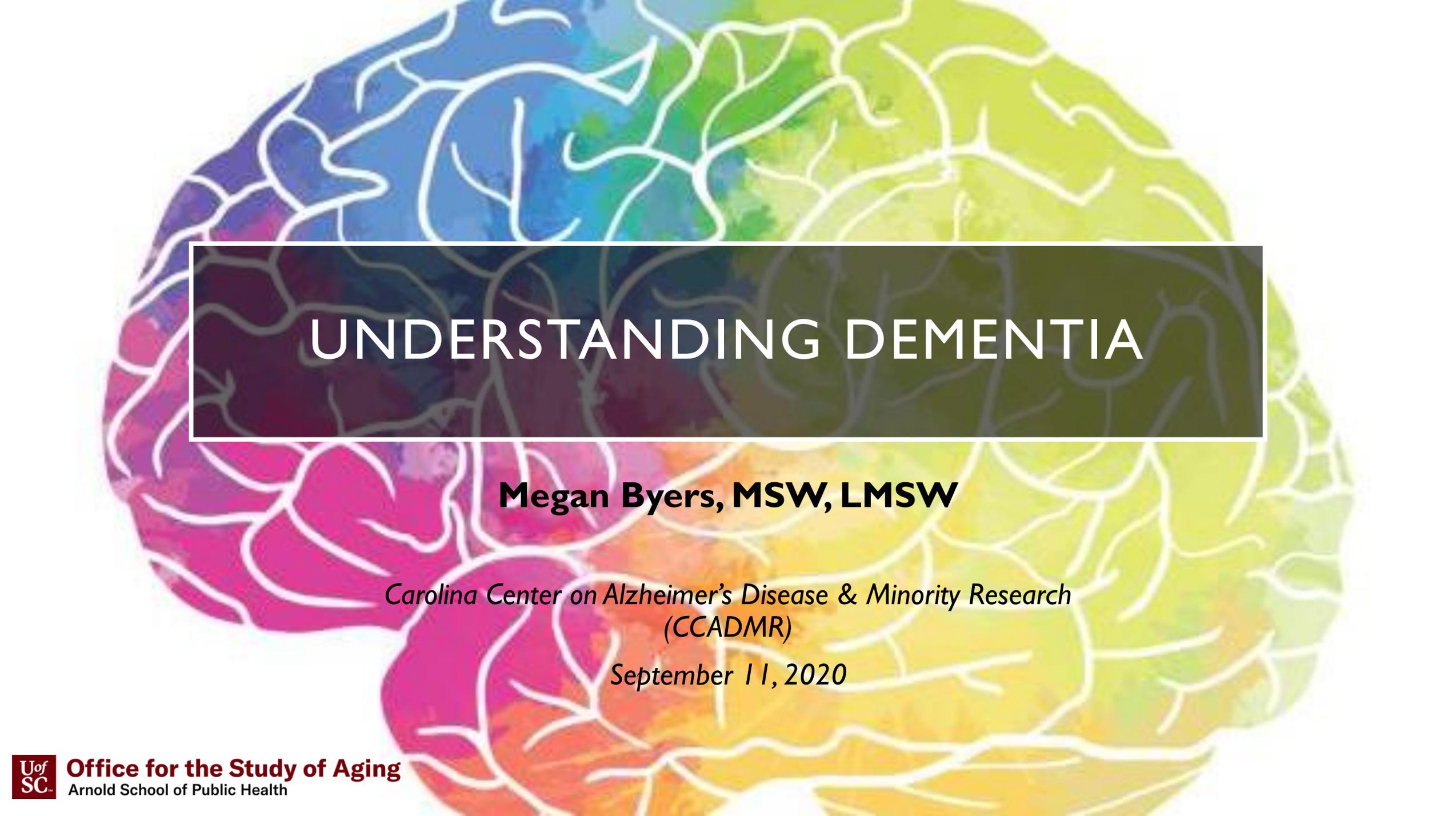
## Understanding Dementia

September 11, 2020

# TODAY'S SPEAKER

**Megan Byers, MSW, LMSW, Program Coordinator for the Office for the Study of Aging at the Arnold School of Public Health, University of South Carolina**





# UNDERSTANDING DEMENTIA

**Megan Byers, MSW, LMSW**

*Carolina Center on Alzheimer's Disease & Minority Research  
(CCADMR)*

*September 11, 2020*

# OBJECTIVES



**Define** dementia and Alzheimer's disease



**Discover** types of dementia



**Identify** signs and symptoms of dementia



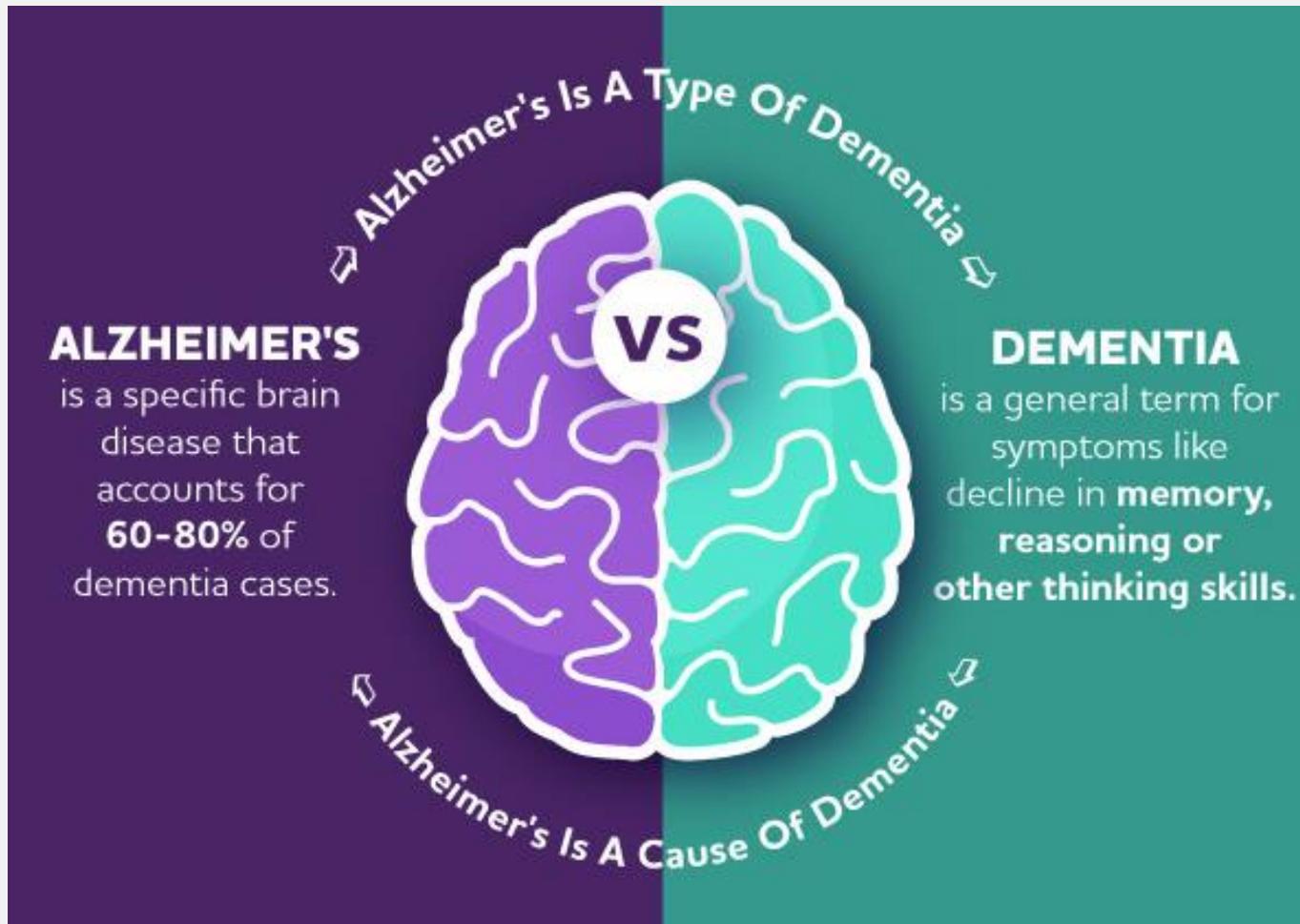
**Learn** treatment strategies



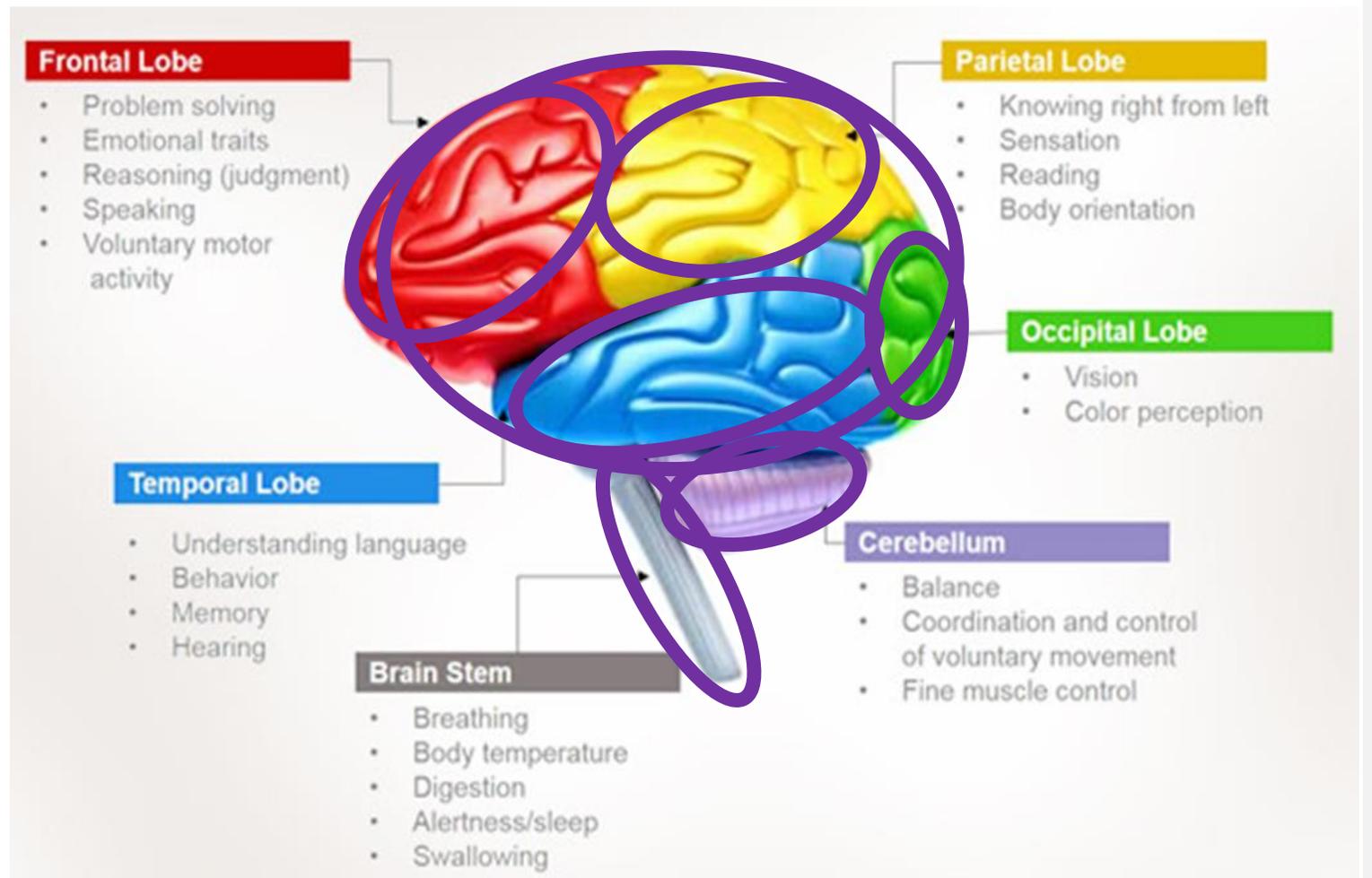
**Recognize** the prevalence of dementia

## DEMENTIA VS ALZHEIMER'S

- Not a normal part of aging.
- An irreversible brain disease.
- Caused by damaged brain cells.



# HEALTHY BRAIN FUNCTIONS





The **cerebrum** fills up most of your skull. It is involved in remembering, problem solving, thinking, and feeling. It also controls movement.



The **cerebellum** sits at the back of your head, under the cerebrum. It controls coordination and balance.

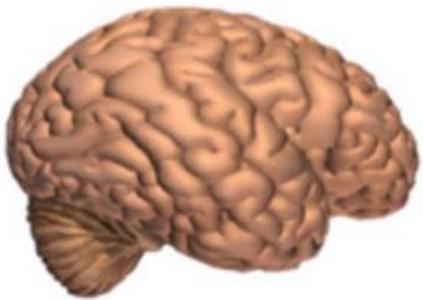


The **brain stem** sits beneath your cerebrum in front of your cerebellum. It connects the brain to the spinal cord and controls automatic functions such as breathing, digestion, heart rate and blood pressure.

HEALTHY BRAIN CONTINUED

# ALZHEIMER'S DISEASE & THE BRAIN

## PLAQUES & TANGLES



A brain without the disease.



A brain with advanced Alzheimer's.



How the two brains compare.

## BRAIN COMPARISON

- *Alzheimer's Disease*
- *Vascular*
- *Lewy Body*
- *Frontotemporal*
- *Parkinson's Disease  
Dementia*
- *Mixed*

# TYPES OF DEMENTIA

## TYPES OF DEMENTIA: **ALZHEIMER'S DISEASE**

- Most common (60 – 80%).
- Approximately 200,000 have early-onset Alzheimer's (<65 years)
- A degenerative brain disease that is caused by complex brain changes following cell damage.
- Gradually worsens over a number of years.

## TYPES OF DEMENTIA: **VASCULAR DEMENTIA**

- 2<sup>nd</sup> most common (5 – 10%).
- Decline in thinking skills caused by conditions that block or reduce blood flow to the brain.
- Inadequate blood flow can damage and kill brain cells.

## TYPES OF DEMENTIA: **LEWY BODY DEMENTIA**

- 3<sup>rd</sup> most common (5 – 10%).
- Progressive dementia that leads to a decline in thinking, reasoning, and independent function.
- Lewy bodies are also found in other brain disorders.
- This overlap in symptoms suggest that Lewy body dementia, Parkinson's disease, and Parkinson's disease dementia may be linked.

## TYPES OF DEMENTIA: **FRONTOTEMPORAL**

- 60,000 individuals between ages 45 to 65 have frontotemporal dementia (FTD).
- Formally known as Pick's Disease
- Refers to a group of disorders caused by progressive nerve cell loss in the frontal or temporal lobes.
- Leads to a loss of function in the lobes.

## TYPES OF DEMENTIA: **PARKINSON'S DISEASE DEMENTIA**

- A decline in thinking and reasoning.
- Develops in many people living with Parkinson's at least a year after diagnosis.
- 50 – 80% living with Parkinson's may experience dementia.

## TYPES OF DEMENTIA: **MIXED DEMENTIA**

- Characteristics of more than one type occur simultaneously.
- Also referred to as “dementia – multifactorial” by physicians.
- Unknown percentage of cases.

## **WARNING SIGNS OF DEMENTIA**

---

Memory loss that disrupts daily life.

---

Challenges in planning or problem solving.

---

Difficulty completing familiar tasks.

---

Confusion with time or place.

---

Trouble understanding visual images and spatial relationships.

---

New problems with words in speaking or writing.

---

Misplacing things and losing the ability to retrace steps.

---

Decreased or poor judgement.

---

Withdraw from work or social activities.

---

Changes in mood and personality.

## DEMENTIA VS. TYPICAL AGE-RELATED CHANGES

Signs of Dementia	Typical Age-Related Changes
Poor judgment and decision-making.	Making a bad decision once in a while.
Inability to manage a budget.	Missing a monthly payment.
Losing track of the date or season.	Forgetting which day it is and remembering it later.
Difficulty having a conversation.	Sometimes forgetting which word to use.
Misplacing things and being unable to retrace steps to find it.	Losing things from time to time.

- Age
- Family history
- Genetics (heredity)
- Other:
  - *Head injury*
  - *Heart-head connection*
  - *Overall healthy aging → healthy diet, staying physically, mentally and socially active, avoiding tobacco and excess alcohol.*



**RISK  
FACTORS:  
ALZHEIMER'S  
DISEASE**

# DIAGNOSIS OF DEMENTIA

- Evaluation of all body systems.
- Brain autopsy.



- **Professional:**
  - Medical history
  - Physical exam & diagnostic testing
  - Neurological exam
  - Mental Status tests
  - Genetic testing
  - Brain imaging
- **Home Screening Tests:**
  - None have been scientifically proven to be accurate.

# TREATMENT OPTIONS FOR DEMENTIA

## PHARMACOLOGICAL

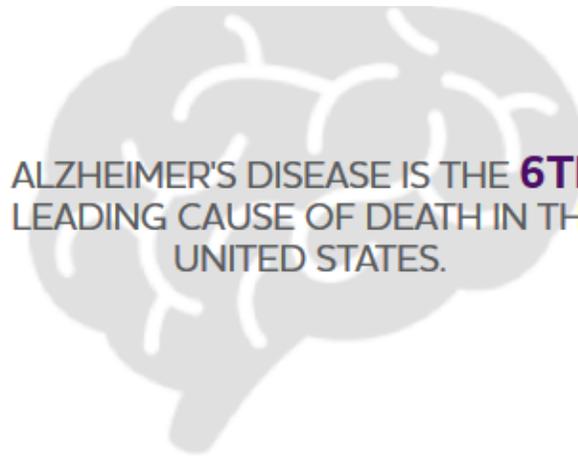
- Medications for Memory:
  - Cholinesterase Inhibitors (*Aricept, Exelon, Razadyne*) and Memantine (*Namenda*)

## NON-PHARMACOLOGICAL

- Social activities
- Adequate sleep
- Routine/ schedule
- Proper stimulation level
- Hydration
- Occupational therapy



MORE THAN **5 MILLION** AMERICANS ARE LIVING WITH ALZHEIMER'S. BY 2050, THIS NUMBER IS PROJECTED TO RISE TO NEARLY 14 MILLION.



ALZHEIMER'S DISEASE IS THE **6TH** LEADING CAUSE OF DEATH IN THE UNITED STATES.



**1 IN 3 SENIORS** DIES WITH ALZHEIMER'S OR ANOTHER DEMENTIA. IT KILLS MORE THAN BREAST CANCER AND PROSTATE CANCER COMBINED.

## PREVALENCE

*It's the only cause of death in the top 10 in the U.S. that cannot be prevented, cured, or slowed.*

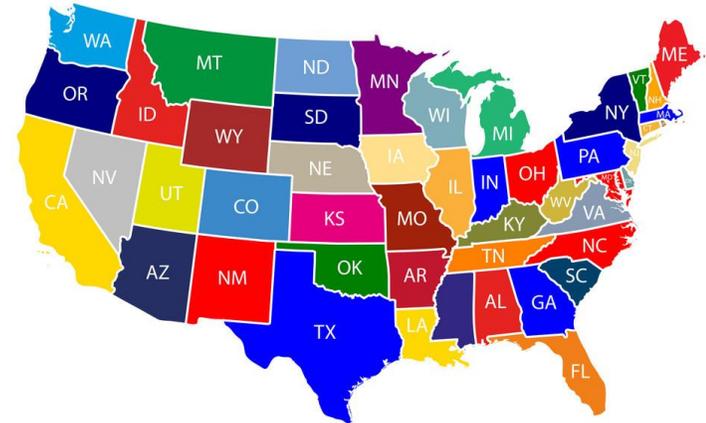


## PREVALENCE: **WORLD**

- 2019: 50 million living with the disease.
- 2050: increase to 152 million.
- Every 3 seconds a person develops dementia.
- Cost of dementia is \$1 trillion.

## PREVALENCE: UNITED STATES

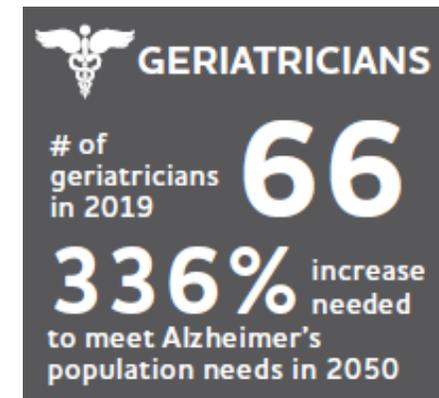
- 5.8 million living with Alzheimer's.
- 2050: increase to 13.8 million.
- 1 in 10 has Alzheimer's (65+).
- 3.6 million are women.
- 2.2 million are men.
- By 2050, projected that 13.8 million will be affected.
- 6<sup>th</sup> leading cause of death.
- Caregivers provided \$244 billion in *unpaid* care.
- Projected cost of \$305 billion, with \$206 billion in Medicare and Medicaid.



Alzheimer's Association, 2019

## PREVALENCE: SOUTH CAROLINA

- 95,000 living with dementia
- By 2025, projected 120,000 affected
- **Place of residence:**
  - Hospital: 21.3%
  - Hospice: 20%
- **Cost of Care:**
  - Medicare: \$23,817
  - Medicaid: \$652 million.
- **Caregiving:**
  - 318,000 caregivers
  - 362 million hours of unpaid care / \$4.7 billion value



*Alzheimer's Association, 2019*

## PREVALENCE: SOUTH CAROLINA CONT.

- 95,899 individuals living with dementia.
- Type:
  - Alzheimer's Disease: 63%
  - Vascular Dementia: 11%
  - Mixed Dementia: 3%
  - Other conditions: 23%
- Race:
  - 63% White
  - 28% African American
  - <1% Hispanic
  - 9% All other
- Gender: 63% female, 37% male

### 2019 Annual Report: **South Carolina Alzheimer's Disease Registry**

 **Office for the Study of Aging**  
Arnold School of Public Health



*SC Alzheimer's Registry, 2019*

*Changes to expect as  
the disease progresses.*

# STAGES OF ALZHEIMER'S

## EARLY-STAGE ALZHEIMER'S

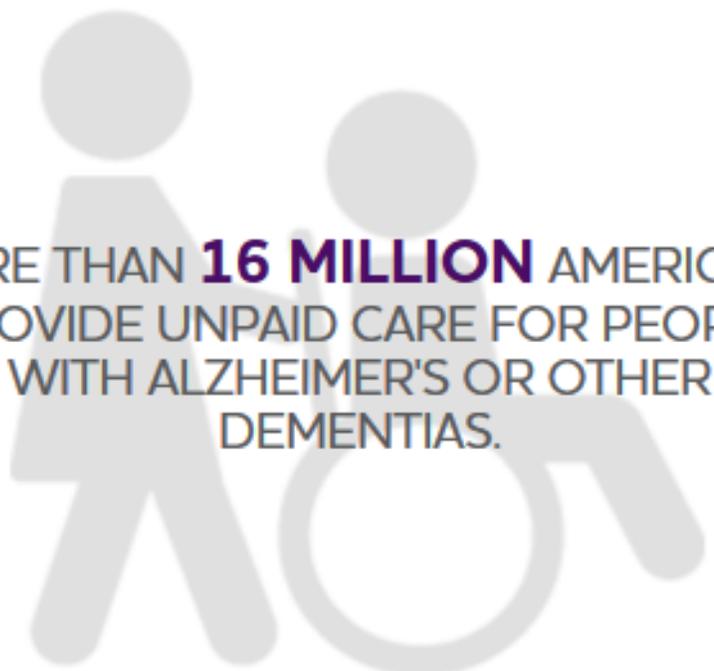
- Difficulty coming up with the right word or name
- Trouble remembering names
- Challenges performing tasks in social or work settings
- Forgetting material that one has just read
- Losing or misplacing a valuable object
- Increasing trouble with planning or organizing

## MIDDLE-STAGE ALZHEIMER'S

- Forgetfulness of events
- Feeling moody or withdrawn
- Unable to recall
- Confusion about time & place
- The need for help choosing proper clothing
- Trouble controlling bladder and bowels
- Changes in sleep patterns
- An increased risk of wandering and becoming lost
- Personality and behavioral changes

## LATE-STAGE ALZHEIMER'S

- Require around-the-clock assistance with daily personal care.
- Lose awareness of recent experiences and surroundings.
- Experience changes in physical abilities,
- Increased difficulty communicating.
- Become vulnerable to infections, especially pneumonia.

A light gray icon depicting a caregiver standing on the left and a person in a wheelchair on the right. The caregiver is a simple human figure, and the person in the wheelchair is also a simple human figure with a circular wheelchair base.

MORE THAN **16 MILLION** AMERICANS  
PROVIDE UNPAID CARE FOR PEOPLE  
WITH ALZHEIMER'S OR OTHER  
DEMENTIAS.

A light gray icon of an hourglass, symbolizing time. It has two bulbous ends connected by a narrow neck, with a horizontal bar across the top.

THESE CAREGIVERS PROVIDED AN  
ESTIMATED **18.6 BILLION** HOURS OF  
CARE VALUED AT NEARLY \$244 BILLION.

## FROM A CAREGIVERS PERSPECTIVE

*Common feelings among caregivers with caring for persons living with dementia...*

# CAREGIVER SELF AWARENESS

## SYMPTOMS OF STRESS

- Denial
- Anger
- Social withdraw
- Anxiety
- Depression
- Exhaustion
- Sleeplessness
- Irritability
- Lack of Concentration
- Health issues

## TIPS TO MANAGE STRESS

- Identify community resources
- Get help & find support
- Use relaxation techniques
- Physical activity
- Find time for yourself
- Become an educated caregiver
- Take care of yourself
- Make legal and financial plans

**ALZ.ORG**

**24/7 HELPLINE: 800.272.3900**

alzheimer's  association®

# CONTACT INFORMATION

## **Megan Byers, MSW, LMSW**

Program Coordinator, Office for the Study of Aging

Arnold School of Public Health | University of South Carolina

Columbia, SC 29208

Tel: 803-777-5334

E-mail: [masonmd2@mailbox.sc.edu](mailto:masonmd2@mailbox.sc.edu)

OSA: [osainfo@mailbox.sc.edu](mailto:osainfo@mailbox.sc.edu)

# REFERENCES

- Alzheimer's Association. (2020). [www.alz.org](http://www.alz.org)
- Alzheimer's Disease International. World alzheimer's report 2019: Attitudes to dementia. Retrieved from <https://www.alz.co.uk/research/WorldAlzheimerReport2019-Summary.pdf>
- Centers for Disease Control and Prevention. (30, July 2019). Caregiving for family and friends – A public health issue. Retrieved from <https://www.cdc.gov/aging/caregiving/caregiver-brief.html>
- Human Brain Facts. (n.d.). Human brain functions – functioning of human brain with diagram [image]. Retrieved from <https://www.humanbrainfacts.org/human-brain-functions.php>
- Northern Brain Injury Association. (n.d.). The structure and function of the human brain. Retrieved from <http://nbia.ca/brain-structure-function/>
- Office for the Study of Aging. *2019 annual report: South carolina alzheimer's disease registry*. Retrieved from [https://sc.edu/study/colleges\\_schools/public\\_health/documents/alzheimer\\_registry\\_report\\_2019.pdf](https://sc.edu/study/colleges_schools/public_health/documents/alzheimer_registry_report_2019.pdf)
- The University of Queensland Australia. (17 July 2018). Lobes of the brain. Retrieved from <https://qbi.uq.edu.au/brain/brain-anatomy/lobes-brain>

## TODAY'S SPEAKER

**Megan Byers, MSW, LMSW,**  
Program Coordinator for the Office  
for the Study of Aging at the Arnold  
School of Public Health, University of  
South Carolina

- Ms. Byers has developed policies and training curricula, monitored legislative sessions to determine their impact on vulnerable adults, as well as educated stakeholders on issues of adult maltreatment and dementia.



Congratulations to  
our Year 3 CCADMR  
Scientists!

- **Monique Brown, PhD, MPH**

*Health Disparities in HIV, Depression, and Alzheimer's Disease in South Carolina*



- **Kaileigh Byrne, PhD**

*Identifying Racial Disparities of Dementia: The Role of Social Isolation and Social Technology Use*



- **Stephanie Ureña, PhD, MPH**

*The Impacts of Military Service on Cognitive Function and Racial Disparities*



# Thank you for participating!

Please give us your feedback about the session by answering a brief survey.

For the in-person attendees, we will have the survey available on the tablets at the end of the session, or you can use the QR code on screen to access the survey.

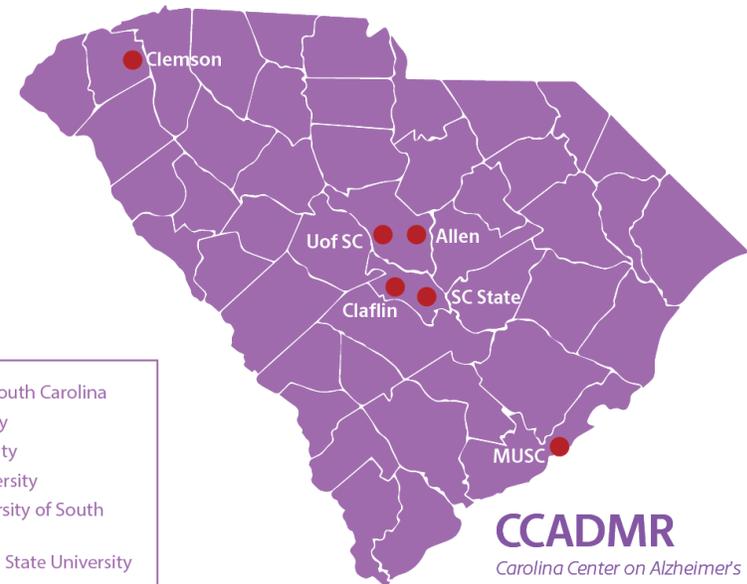
For virtual attendees, we will be emailing a survey link to all participants, you can access it through the QR code to the right or through the survey link.

The QR code appears here or it can be accessed via the [Survey Link](#).



## University Partners

University of South Carolina  
Allen University  
Clafin University  
Clemson University  
Medical University of South Carolina  
South Carolina State University

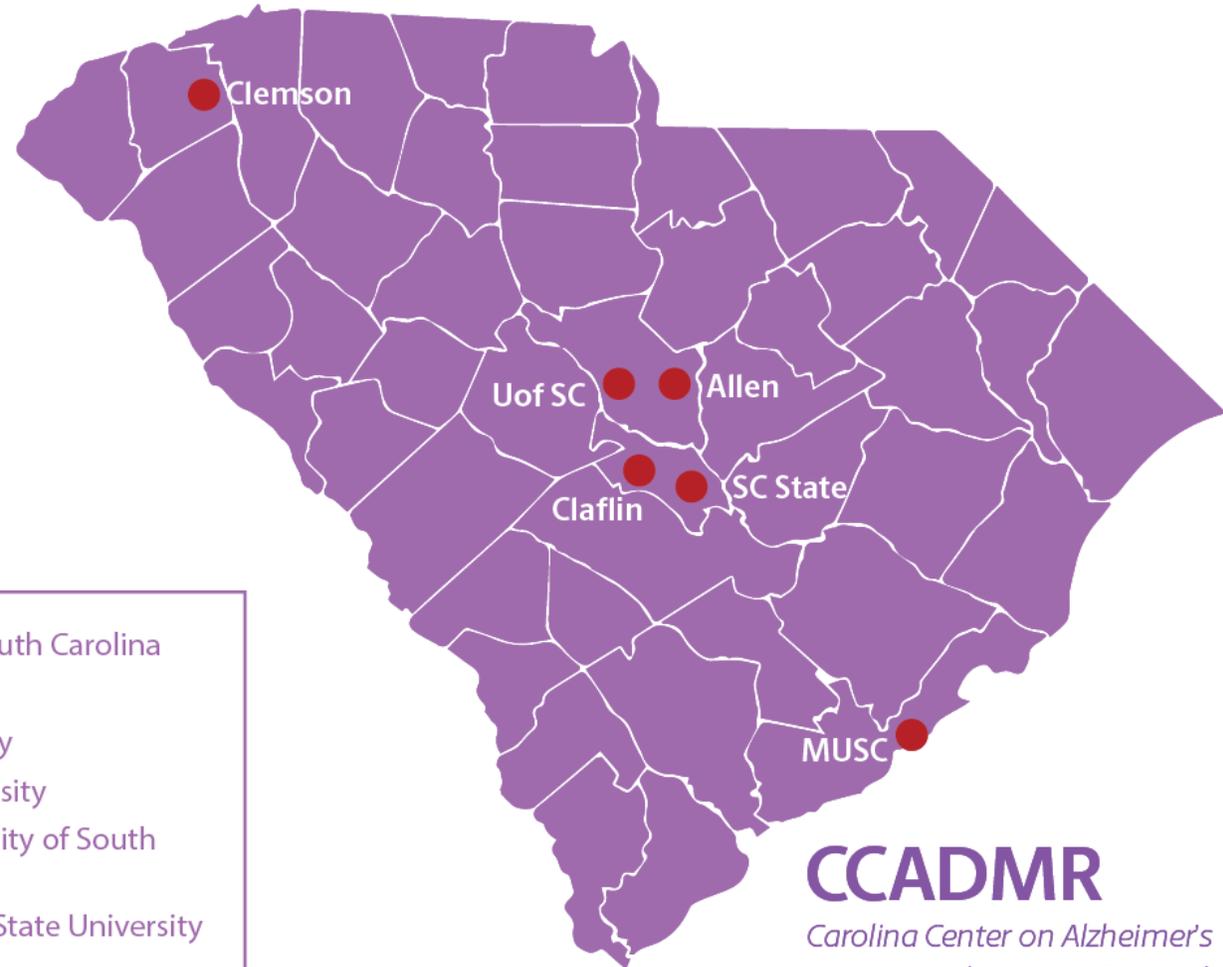


# Thank you!

If you have any questions,  
please contact Quentin  
McCollum  
[mccolluq@email.sc.edu](mailto:mccolluq@email.sc.edu) or  
Brianna Ashford- Carroll,  
[ashfordb@email.sc.edu](mailto:ashfordb@email.sc.edu).

## University Partners

University of South Carolina  
Allen University  
Claflin University  
Clemson University  
Medical University of South  
Carolina  
South Carolina State University



## CCADMR

*Carolina Center on Alzheimer's  
Disease and Minority Research*