2019 ANNUAL REPORT

South Carolina
ALZHEIMER’S DISEASE REGISTRY

ARNOLD SCHOOL OF PUBLIC HEALTH
UNIVERSITY OF SOUTH CAROLINA

As noted within, data included in this report covers January 1, 2015 through December 31, 2015, the most current years with available and comprehensive data.
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ALZHEIMER’S DISEASE REGISTRY ANNUAL REPORT

We are pleased to present the 2019 Annual Report of the South Carolina Alzheimer’s Disease Registry. This report is issued by the Office for the Study of Aging at the University of South Carolina’s Arnold School of Public Health.

The following pages reflect the significant and multifaceted impact of Alzheimer’s disease and related dementias (ADRD) on our state. ADRD affect 11% of the population of South Carolina aged 65 years and older and 45% of those over age 85. Caring for someone with ADRD imposes a major burden for caregivers and other family members.

The South Carolina Alzheimer’s Disease Registry is one of only three statewide population-based registries of ADRD in the United States and is the oldest and most comprehensive. Data have been collected on South Carolinians with ADRD since 1988. The Registry was established and is maintained by the Office for the Study of Aging with the invaluable support of the South Carolina Department of Health and Human Services and the Revenue and Fiscal Affairs Office. In this Annual Report you will also find a wide range of research, evaluations, programs, and trainings that address the needs of older South Carolinians and their families.

The Office for the Study of Aging is proud to provide services that strive to improve the quality of life of our older adult population, their families and their caregivers. We hope you will visit our website at http://sph.sc.edu/osa.

If you have any questions about the Alzheimer’s Registry or our Office’s activities, please contact Dr. Maggi Miller, Registry Manager (803-777-0214 or chandlmj@mailbox.sc.edu).

Best Regards,

Daniela B. Friedman, MSc, PhD
Joseph Lee Pearson, MS, DrPH
Co-Directors

Mindi Spencer, MA, PhD
Associate Director of Research

Maggi C. Miller, MS, PhD
Registry Manager

Office for the Study of Aging ■ Arnold School of Public Health ■ University of South Carolina
Executive Summary

The Office for the Study of Aging (OSA) at the University of South Carolina (UofSC) Arnold School of Public Health, in cooperation with the South Carolina Department of Health and Human Services (SCDHHS), the South Carolina Department of Mental Health, the UofSC School of Medicine, and the South Carolina Revenue and Fiscal Affairs Office, maintains a statewide Registry of South Carolina residents diagnosed with Alzheimer’s disease and related dementias (ADRD).

This report is published in fulfillment of the requirement of South Carolina Code of Law Section 44 36 10 and Section 44 36 50 which established the registry for the people of South Carolina and tasked the Arnold School of Public Health and OSA with its upkeep, management, and the dissemination of an annual report.

This report uses the abbreviation ADRD to indicate “Alzheimer’s disease and related dementias.” The term “related dementias” refers to dementias associated with vascular disease, mixed dementia and with other medical conditions such as Parkinson’s disease. Where the report refers specifically to “Alzheimer’s disease” (AD), analysis is limited to individuals with AD only.

Since January 1, 1988, the Registry has identified 264,854 cases of ADRD in South Carolina.

Registry Goals:

• Maintain the most comprehensive and accurate state registry of ADRD in the nation
• Provide disease prevalence estimates to enable better planning for social and medical services
• Identify differences in disease prevalence among demographic groups
• Help those who care for individuals with ADRD
• Foster research into risk factors for ADRD

Other Activities of OSA:

In addition to maintaining the Registry and conducting research using this valuable state resource, OSA works to promote broader research, training and other collaborative activities that enhance quality of life for our state’s older adult population. Specifically, OSA’s activities include the following:

• Provide education on ADRD management
• Develop training on long-term care issues
• Contribute technical assistance for programs for older South Carolinians
• Develop programs including Dementia Dialogues®
• Evaluate programs for South Carolina’s aging population
• Conduct research on aging and public health issues
Acknowledgments

The South Carolina Alzheimer’s Disease Registry has developed into one of the nation’s most important and premier resources for understanding ADRD. The growth and development of the Registry and the related research and training programs at OSA have been due to the support of many organizations and agencies. The leadership and staff of OSA want to acknowledge the particular contributions of:

• The **Arnold School of Public Health** at UofSC, for core support;

• The **SC Revenue and Fiscal Affairs Office Health and Demographics Section**, for its extensive cooperation in maintaining the Registry;

• The **UofSC School of Medicine** (Department of Medicine, Division of Geriatrics), for providing collaboration;

• The **SC Department of Mental Health**, for access to data;

• The **SC Department of Health and Human Services**, for core support and access to data;

• The **SC Public Employee Benefit Authority**, for access to data;

• The **SC Department of Health and Environmental Control, Vital Records and Public Health Statistics**; for access to data; and

• The **SC Department on Aging**, for its continued collaboration.
Introduction

Someone in America develops Alzheimer’s every 65 seconds; by mid-century someone will develop Alzheimer’s every 33 seconds.¹

In 1988, the U.S. Census Bureau estimated that there were 474,073 people 65 years of age and older living in South Carolina, and the state was ranked 25th among other states with regard to the percentage of persons aged 65 years and older. In 2010, there were 631,784 people 65 years of age and older living in South Carolina, and the state was ranked 23rd. Since that time, the older adult population in South Carolina has grown at a rapid rate. In fact, by 2030, the U.S. Census Bureau projects that South Carolina will be home to 1.1 million people ages 65 years and older, potentially propelling South Carolina to a ranking of 15th in the nation for the percentage of residents over 65 years of age.¹

ADRD represent an ever-increasing area of concern for families and the healthcare community. An estimated 5.7 million people in the United States are currently living with AD. By 2025, this estimate is expected to reach 7.1 million; by 2050, the number of people age 65 and older with AD may nearly triple, from 5.8 million to a projected 13.8 million.² With increasing age as a leading risk factor for AD, South Carolina’s rapidly growing population of persons aged 65 years and older presents a challenge to families, communities and those who plan and deliver services for the state.

This report covers data from calendar year 2015. Registry cases in this report are defined as AD, vascular, mixed dementias (mixed) and ADRD in other medical conditions (other). Registry cases are also identified by location of residence; either in a facility (nursing facilities or residential care facilities), in the community (home or adult day care) or in an unknown location. Exclusions of some demographic information are due to the voluntary method of data collection. It should be noted that many cases may be identified at a late stage of the disease rather than at onset. This affects the time from entry into the Registry until death.

In this report, ADRD is an umbrella term that encompasses many types of neurocognitive disorders. The Diagnostic and Statistical Manual of Mental Disorders - 5th Edition (DSM-5) states that AD can be diagnosed with a level of certainty if there is 1) clear evidence of decline in memory and learning and at least one other cognitive domain (based on detailed history or serial neuropsychological testing), 2) steadily progressive, gradual decline in cognition, without extended plateaus, and 3) no evidence of mixed etiology (i.e., absence of other neurodegenerative or cerebrovascular disease, or another neurological, mental, or systemic disease or condition likely contributing to cognitive decline). AD is a type of ADRD with an insidious onset and gradual progression of cognitive and behavioral symptoms.³ Other types of ADRD include those related to stroke, mixed dementia (with both Alzheimer’s and vascular dementia), and dementias associated with medical conditions such as Parkinson’s disease, Huntington’s disease, dementia with Lewy Bodies (DLB), frontotemporal, AIDS, and alcohol or drug abuse.

² Alzheimer’s Association, 2019 Alzheimer’s Disease Facts and Figures.
³ American Psychiatric Association, 2013, Diagnostic and statistical manual of mental disorders (5th ed.), Washington, DC.
ADRD in South Carolina

The prevalence of AD in the United States is currently estimated to be 10% among persons aged 65 and older.\(^1\) In 2017, there were 864,190 South Carolina residents 65 years and older, representing 17.2% of the total population, a 75% increase since the Registry began in 1988.\(^2\)

The total number of persons with ADRD in South Carolina is not known with certainty. National estimates of ADRD prevalence vary widely from one study to another. Individuals who have mild forms of the disease, but lack a diagnosis, do not appear in the Registry data. Previous research suggests that the number of individuals with ADRD may be nearly 50% greater than the number with diagnosed ADRD.\(^3\) With that being said, the South Carolina Alzheimer's Disease Registry is the oldest and most comprehensive population-based Registry of ADRD in the country. There are only two other such registries in existence. One, is located in West Virginia and began collecting data in 2008 and the second is in Georgia and began collecting data in 2014.\(^4,5\)

Individuals with ADRD are usually identified when they (or their family members) seek provider services. Since no single system identifies all newly diagnosed patients with ADRD, cases in the Registry are collected from several sources (see Figure 1). This ensures that the Registry captures as many diagnoses as possible.

![Figure 1: Registry Data Sources](South Carolina Alzheimer's Disease Registry, 2015)

CMHC = Community Mental Health Center; MHRC = Mental Health and Rehabilitation Clinics; PACE = Program of All-inclusive Care for the Elderly

*Duplicates occur because individuals often use more than one name, social security number, or other identifying information when using health or social services.

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4 West Virginia Alzheimer’s Disease Registry. www.wvadr.hsc.wvu.edu/Pages/. Accessed January 31, 2019
### History of the Registry

**1988**
The Alzheimer’s Disease Registry was established in 1988 to record specific information about South Carolinians who develop ADRD.

**1990**
On May 31, 1990, Governor Carroll A. Campbell, Jr. signed a state law authorizing the Registry. This law (R653, H4924) amended Title 44, Code of Laws of South Carolina 1976, relating to health, by adding Chapter 36 establishing a voluntary Statewide Alzheimer’s Disease and Related Dementias Registry located within the School of Public Health at UofSC. The law has strict confidentiality requirements but does allow Registry staff to contact the families and physicians of persons diagnosed as having ADRD to collect relevant data and provide information about public and private health care resources available to them.

**1993**
From July 1993 to May 1996, the Registry was moved to the James F. Byrnes Center for Geriatric Medicine, Education, and Research, a geriatric research hospital jointly sponsored by the UofSC School of Medicine and the South Carolina Department of Mental Health.

**1997**
The Registry was moved back to the Arnold School of Public Health at UofSC, where it continues to be maintained by the Office for the Study of Aging. It provides prevalence data to public and private entities for planning and fosters research on risk factors for ADRD, including the risk of institutionalization.

**2008**
The Registry celebrated its 20th anniversary in 2008.

**2015**
The 25th Registry report was published, with a celebration of the 25th anniversary of the legislation authorizing the Registry being signed into law.

**2018**
The 30th Anniversary celebrating the establishment of the Registry, which continues to receive widespread support and interest from the academic community, support groups, state agencies, and other public and private organizations as part of a statewide effort to study the growing impact of ADRD on the health and welfare of South Carolinians.

### Alzheimer's Disease Registry Timeline

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1988</td>
<td>The Alzheimer’s Disease Registry was established to record specific information about South Carolinians who develop ADRD.</td>
</tr>
<tr>
<td>1990</td>
<td>On May 31, 1990, Governor Carroll A. Campbell, Jr. signed a state law authorizing the Registry.</td>
</tr>
<tr>
<td>1993</td>
<td>The Registry was located at the James F. Byrnes Center for Geriatric Medicine, Education, and Research until May 1996.</td>
</tr>
<tr>
<td>1997</td>
<td>The Registry was moved back to the School of Public Health at UofSC.</td>
</tr>
<tr>
<td>2008</td>
<td>The Alzheimer’s Disease Registry celebrated its 20th anniversary.</td>
</tr>
<tr>
<td>2015</td>
<td>25th anniversary of the legislation authorizing the Registry being signed into law.</td>
</tr>
<tr>
<td>2018</td>
<td>The 30th Anniversary celebrating the establishment of the Registry.</td>
</tr>
</tbody>
</table>
Registry Procedures

A definitive diagnosis of ADRD is difficult, especially in the early stages. The Registry staff is not directly involved in diagnosis; the physician’s diagnosis is collected from the individual’s medical records through codes using the International Classification of Diseases, 10th revision, Clinical Modification (ICD-10-CM, 2010). An individual is then classified into four general categories for reporting purposes as shown in Table 1.

Individuals with ADRD are usually identified when they or their family members seek provider services. Since no single system identifies all newly diagnosed patients with ADRD, cases are collected from several sources (see Figure 1, page 6).

### Table 1

**Classification of ADRD by ICD-10-CM Codes**

*South Carolina Alzheimer’s Disease Registry, 2015*

<table>
<thead>
<tr>
<th>Category</th>
<th>Codes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ALZHEIMER’S DISEASE</strong></td>
<td>F03.90 – F03.91, G30.0 – G30.9</td>
<td>Senile or presenile dementia, Alzheimer’s Disease</td>
</tr>
<tr>
<td><strong>VASCULAR DEMENTIA</strong></td>
<td>F01.50 – F01.51, G45.0 – G45.9, I67.0-I67.9, I69.00-I69.998</td>
<td>Arteriosclerotic dementia, Cerebrovascular disease (with a dementia code*), Other cerebral degeneration</td>
</tr>
<tr>
<td><strong>MIXED DEMENTIA</strong></td>
<td></td>
<td>Both Alzheimer’s disease and Vascular dementia</td>
</tr>
<tr>
<td><strong>DEMENTIA IN OTHER MEDICAL CONDITIONS</strong></td>
<td></td>
<td>Alcohol dementia, Drug-induced dementia, Dementia with other conditions, Dementia with Lewy bodies, Pick’s Disease, Frontotemporal dementia</td>
</tr>
<tr>
<td></td>
<td>F10.27 – F10.97, F19.97, F04-F09, F48.2, F07.81, G31.83, G31.01, G31.09</td>
<td>Alcohol dementia, Drug-induced dementia, Dementia with other conditions, Dementia with Lewy bodies, Pick’s Disease, Frontotemporal dementia</td>
</tr>
<tr>
<td></td>
<td>A81.00-A81.09, F04-F09, F48.2, F07.81, G31.83, G31.01, G31.09</td>
<td>Creutzfeldt-Jakob disease, Organic brain syndrome, Frontotemporal dementia</td>
</tr>
<tr>
<td></td>
<td>G91.0-G91.9, G21.11-G21.8, B20 HIV</td>
<td>Other cerebral degeneration, Parkinson’s disease, Huntington’s disease, HIV</td>
</tr>
</tbody>
</table>

*NOTE:* In the case where a person’s record contains multiple indicators of the above categories, Alzheimer’s disease and vascular dementia take precedence, except in the case where there are indications of both Alzheimer’s disease and vascular dementia. In this case, the person is classified as having mixed dementia. Those classified with dementia in other medical conditions have no indications of Alzheimer’s disease or vascular dementia.

*One of the following dementia codes must also be present: F03.90 – F03.91, G30.0 – G30.9, F01.50 – F01.51, F10.27 – F10.97, F19.97, F02.80-F02.81, G31.83*
Registry Core Data Items

The registry core data set consists of case-identifying data (for matching purposes only), diagnostic data (ICD 9 + 10 CM codes), the place from which the records were obtained, location of case (facility or community), gender, race, and age. Other information collected, if available, includes other medical diagnoses, educational status, marital status, and name and location of caregiver/contact person for follow up.
South Carolina Alzheimer’s Disease Registry Report

South Carolina Population Prevalence of ADRD

- In 2015 the Registry maintained information on 95,899 individuals living with ADRD.
- Based on the Registry and 2015 population estimates from the United States Census:
  - 11% of South Carolinians age 65 or over have ADRD;
  - 45% of South Carolinians age 85 or over have ADRD;
  - ADRD prevalence rates vary notably among SC counties; and
  - African Americans are at notably higher risk of an ADRD diagnosis than are non-Hispanic whites. At ages 65 and older, for example, African American South Carolinians are 64% more likely to have ADRD as are non-Hispanic whites.

Registry Overview:

Of South Carolinians with diagnosed ADRD in 2015:

- 63% have AD;
- 11% have a dementia due to stroke;
- 23% have a dementia related to other chronic conditions;
- 24% live in an institution at the time of diagnosis;
- 63% are women;
- 22% are African American; and
- 45% of those with AD are 85 years or older.

ADRD Prevalence across South Carolina Counties

Figure 2 shows the percentage of individuals age 50 or over with ADRD in 2015. The county prevalence rates vary from a low of about 2.6% to a high of about 7.3%. This county variation provides an important starting point for epidemiological studies of ADRD. It should be noted that counties with a larger older adult population are likely to have greater percentages of individuals with ADRD. This is because the risks of ADRD rise dramatically at older ages. The map is useful because it illustrates where the greatest service needs are for the oldest old, who are more likely than others to require institutional care.

Figure 2

ADRD Prevalence in South Carolina, 2015

Data from SC Alzheimer’s Disease Registry (2015) and Census Annual County Population Estimates (2010-2016)
Characteristics of ADRD in South Carolina

Since 1988, 264,854 cases of ADRD have been identified in South Carolina. This report describes demographic characteristics and medical information for the 95,899 cases that were alive on January 1, 2015 displayed by type of ADRD.

Type of ADRD

Among the 95,899 Registry cases in 2015, 63% had a diagnosis of AD and 11% had a diagnosis of vascular dementia, which is often associated with stroke. In the event of records showing both AD and vascular dementia, the case was reported in a mixed dementia category (3% of all Registry cases). The additional 23% for the total number of “Other Conditions” had a dementia related to other medical conditions, such as Parkinson’s disease (see Table 3 for complete listing). The diagnosis shown represents the most current diagnosis in the data received.

Location

As shown in Figure 3, more Registry cases resided in the community (70%) than in a nursing facility (24%) or unknown locations (6%). The distribution of the types of ADRD was similar in the community and in nursing facilities (Table 2, Figure 4).

Table 2

<table>
<thead>
<tr>
<th>Dementia Type</th>
<th>Community</th>
<th>Nursing Facility</th>
<th>Unknown</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Alzheimer’s disease</td>
<td>41,238</td>
<td>62</td>
<td>15,256</td>
<td>65</td>
</tr>
<tr>
<td>Vascular dementia</td>
<td>7,189</td>
<td>11</td>
<td>2,917</td>
<td>13</td>
</tr>
<tr>
<td>Mixed dementia</td>
<td>1,890</td>
<td>3</td>
<td>998</td>
<td>4</td>
</tr>
<tr>
<td>Other conditions</td>
<td>16,213</td>
<td>24</td>
<td>4,158</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>66,530</td>
<td>70</td>
<td>23,329</td>
<td>24</td>
</tr>
</tbody>
</table>

*Mixed dementia = both Alzheimer’s and Vascular dementia; Other conditions = dementia in other medical conditions.
Dementia in Other Medical Conditions

In addition to AD, the Registry tracks dementias that are associated with other medical conditions, such as Parkinson’s disease, alcohol and drug abuse, and HIV/AIDS. In the 2015 Registry, there were 20,626 persons with a dementia associated with one of these conditions who did not also have a diagnosis of AD or vascular dementia. Four percent had dementia associated with Parkinson’s disease and 33% had an indication of dementia associated with some other medical condition (Table 3 footnote). The percentages in the table are not mutually exclusive due to the fact that some records indicate more than one medical condition.

Dementia with Lewy Bodies

Dementia with Lewy Bodies (DLB) is a progressive brain disease characterized by abnormal round structures in the areas of the brain that control thinking and movement. Hence, DLB causes symptoms similar to those commonly associated with both AD and Parkinson’s disease. Like AD, it can cause confusion, memory loss, and depression, while other possible symptoms are slowed movement, rigid muscles, and tremors, symptoms normally found in those with Parkinson’s disease. Persons with DLB may also have hallucinations and experience day-to-day changes in their symptoms. Currently, there is no cure for DLB. Medications used to treat AD, Parkinson’s disease, and depression are typically used to manage DLB symptoms. National estimates suggest that DLB accounts for approximately 10-25% of all dementia cases.1 In the South Carolina Registry, DLB accounted for 11% of the dementia in other medical conditions category and only 2% of all dementia cases.

### Table 3

**Dementia with Other Medical Conditions by Age Group**

*South Carolina Alzheimer’s Disease Registry, 2015*

<table>
<thead>
<tr>
<th>Condition</th>
<th>Under 65</th>
<th>65–74</th>
<th>75–84</th>
<th>85+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol dementia</td>
<td>24%</td>
<td>11%</td>
<td>4%</td>
<td>2%</td>
<td>1,784</td>
</tr>
<tr>
<td>Drug-induced dementia</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>60</td>
</tr>
<tr>
<td>Organic brain syndrome</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>110</td>
</tr>
<tr>
<td>Other cerebral degenerations</td>
<td>51%</td>
<td>71%</td>
<td>71%</td>
<td>51%</td>
<td>12,674</td>
</tr>
<tr>
<td>Parkinson’s disease</td>
<td>3%</td>
<td>7%</td>
<td>13%</td>
<td>9%</td>
<td>1,736</td>
</tr>
<tr>
<td>Huntington’s disease</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>29</td>
</tr>
<tr>
<td>HIV/AIDS dementia</td>
<td>4%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>210</td>
</tr>
<tr>
<td>Dementia with Lewy Bodies</td>
<td>3%</td>
<td>10%</td>
<td>17%</td>
<td>11%</td>
<td>2,275</td>
</tr>
<tr>
<td>Frontotemporal dementia</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>211</td>
</tr>
<tr>
<td>Pick’s disease</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>63</td>
</tr>
<tr>
<td>Creutzfeldt-Jakob disease</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>6</td>
</tr>
<tr>
<td>Traumatic Brain Injury Dementia</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>121</td>
</tr>
<tr>
<td>Chronic Traumatic Encephalopathy</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>30</td>
</tr>
<tr>
<td>Dementia with other conditions*</td>
<td>27%</td>
<td>25%</td>
<td>38%</td>
<td>38%</td>
<td>6,717</td>
</tr>
</tbody>
</table>

**Total (N)**  
3,731 5,191 5,706 5,998 20,626

**NOTE:** The percentages in the table are not mutually exclusive due to the fact that some records indicate more than one medical condition.

*Dementia with other conditions includes those with an ICD-10-CM code F02.80 - F02.81 (dementia in conditions classified elsewhere) on their medical record. This code is listed along with the ICD-10-CM code of the dementia-causing condition. However, the dementia-causing condition may not be identifiable from the record, and therefore, may not be in the above table.*
Age and ADRD in South Carolina

Table 4 shows that in 2015, 45% of persons with AD were 85 years of age or older. Figure 5 shows this information graphically for all dementias included in ADRD, with 40% of persons over 85 years of age. Figure 6 indicates that for people with ADRD, 70% of those 75 - 84 years of age were being cared for in the community at the time of diagnosis. Living in the community is most often the location of choice for the individual with ADRD and the family. However, as Figure 6 indicates, with age comes an increase in the numbers of those who reside in nursing facilities.

Table 4
Registry Cases by Age Group and Dementia Type

South Carolina Alzheimer's Disease Registry, 2015*

<table>
<thead>
<tr>
<th>Age</th>
<th>AD N</th>
<th>%</th>
<th>Vascular N</th>
<th>%</th>
<th>Mixed N</th>
<th>%</th>
<th>Other N</th>
<th>%</th>
<th>Total N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 65</td>
<td>3,368</td>
<td>6</td>
<td>1,412</td>
<td>14</td>
<td>139</td>
<td>5</td>
<td>3,745</td>
<td>18</td>
<td>8,664</td>
<td>9</td>
</tr>
<tr>
<td>65 – 74</td>
<td>10,564</td>
<td>18</td>
<td>2,365</td>
<td>23</td>
<td>576</td>
<td>19</td>
<td>5,197</td>
<td>25</td>
<td>18,702</td>
<td>20</td>
</tr>
<tr>
<td>75 – 84</td>
<td>18,410</td>
<td>31</td>
<td>3,043</td>
<td>29</td>
<td>965</td>
<td>32</td>
<td>5,707</td>
<td>28</td>
<td>28,125</td>
<td>31</td>
</tr>
<tr>
<td>85 +</td>
<td>26,147</td>
<td>45</td>
<td>3,480</td>
<td>34</td>
<td>1,313</td>
<td>44</td>
<td>6,002</td>
<td>29</td>
<td>36,942</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>58,489</td>
<td>63</td>
<td>10,300</td>
<td>11</td>
<td>2,993</td>
<td>3</td>
<td>20,651</td>
<td>23</td>
<td>92,433</td>
<td>100</td>
</tr>
</tbody>
</table>

*3,466 records for individuals have missing values for the variables required for inclusion in this table or have ages either less than 50 or greater than 110.

AD=Alzheimer’s disease; Vascular=vascular dementia; Mixed=both Alzheimer’s disease and vascular dementia; Other=dementia with other medical conditions.
Gender and ADRD in South Carolina

Table 5 shows Registry cases by gender, ADRD type, and age group. For each dementia type, the number of women was notably larger than the number of men in all but the youngest age category. In particular, among those age 85 or over, the number of women with ADRD was almost three times the number of men with ADRD. More women than men in this population were diagnosed with ADRD (Figure 7). This is likely due to the larger number of women alive after age 75. The differences in the ADRD diagnoses by gender are shown graphically in Figure 8.

Table 5
Registry Cases by Gender, Age Group and ADRD Type
South Carolina Alzheimer's Disease Registry, 2015*

<table>
<thead>
<tr>
<th></th>
<th>AD</th>
<th>Vascular</th>
<th>Mixed</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 65</td>
<td>1,503</td>
<td>8</td>
<td>780</td>
<td>18</td>
<td>2,261</td>
</tr>
<tr>
<td>65 – 74</td>
<td>4,323</td>
<td>23</td>
<td>1,165</td>
<td>27</td>
<td>2,691</td>
</tr>
<tr>
<td>75 – 84</td>
<td>6,521</td>
<td>34</td>
<td>1,301</td>
<td>3</td>
<td>2,532</td>
</tr>
<tr>
<td>85 +</td>
<td>6,813</td>
<td>35</td>
<td>1,053</td>
<td>25</td>
<td>1,967</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 65</td>
<td>1,861</td>
<td>5</td>
<td>628</td>
<td>11</td>
<td>1,480</td>
</tr>
<tr>
<td>65 – 74</td>
<td>6,232</td>
<td>16</td>
<td>1,178</td>
<td>20</td>
<td>2,501</td>
</tr>
<tr>
<td>75 – 84</td>
<td>11,873</td>
<td>30</td>
<td>1,720</td>
<td>29</td>
<td>3,164</td>
</tr>
<tr>
<td>85 +</td>
<td>19,277</td>
<td>49</td>
<td>2,402</td>
<td>40</td>
<td>4,002</td>
</tr>
</tbody>
</table>

*3,687 records for individuals have missing values for gender or have ages either less than 50 or greater than 110.
AD=Alzheimer’s disease or senile dementia; Vascular=Vascular dementia; Mixed=both Alzheimer’s disease and Vascular dementia; Other=dementia in other medical conditions.
Race and ADRD in South Carolina

Compared with whites, African Americans, who comprise approximately 20% of the South Carolina population 65 years and older, were over-represented in vascular dementia (38%) and in the overall Registry (28%; Table 6, Figure 9). At ages 65 and older, for example, African American South Carolinians were 64% more likely to have ADRD as were non-Hispanic whites.* Seventy-four percent of African Americans with ADRD resided in the community compared to 68% of whites (Figure 10).

Table 6
Registry Cases by Race and ADRD Type
South Carolina Alzheimer's Disease Registry, 2015*

<table>
<thead>
<tr>
<th>Race</th>
<th>AD N</th>
<th>Vascular N</th>
<th>Mixed N</th>
<th>Other N</th>
<th>Total N</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>39,293</td>
<td>5,673</td>
<td>1,797</td>
<td>13,551</td>
<td>60,314</td>
</tr>
<tr>
<td>African-American</td>
<td>15,294</td>
<td>3,989</td>
<td>925</td>
<td>6,406</td>
<td>26,614</td>
</tr>
<tr>
<td>Hispanic</td>
<td>273</td>
<td>53</td>
<td>13</td>
<td>129</td>
<td>468</td>
</tr>
<tr>
<td>All Others</td>
<td>5,635</td>
<td>861</td>
<td>308</td>
<td>1,699</td>
<td>8,503</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>60,495</td>
<td>10,576</td>
<td>3,043</td>
<td>21,785</td>
<td>95,899</td>
</tr>
</tbody>
</table>

*AD=Alzheimer's disease or senile dementia; Vascular=Vascular dementia; Mixed=both Alzheimer's disease and Vascular dementia; Other=dementia in other medical conditions.

Deaths Among Individuals in the Registry

The individual’s first date of diagnosis may not be known to the Registry in every instance. For example, if an individual is first diagnosed during a physician office visit, then that diagnosis is not available to the Registry. The Registry uses the first date that a person entered one of the systems reporting to us as their entry date. The Alzheimer’s Disease Registry data are linked with death certificates to summarize the deaths occurring among persons in the Registry. Of those people identified with ADRD since 1988, 168,954 have died. Table 7 illustrates the number of years from entry into the Registry to death.

* Odds ratio was calculated comparing prevalence of ADRD in 65+ African Americans and Whites.
Table 7
Length of Time in Registry by ADRD Type
South Carolina Alzheimer’s Disease Registry, 2015*

<table>
<thead>
<tr>
<th></th>
<th>AD</th>
<th>Vascular</th>
<th>Mixed</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in Registry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 2 years</td>
<td>51,980</td>
<td>47</td>
<td>10,641</td>
<td>52</td>
<td>4,184</td>
</tr>
<tr>
<td>2–5 years</td>
<td>4,115</td>
<td>9</td>
<td>7,099</td>
<td>34</td>
<td>3,738</td>
</tr>
<tr>
<td>5 + years</td>
<td>16,054</td>
<td>15</td>
<td>2,892</td>
<td>14</td>
<td>1,217</td>
</tr>
<tr>
<td>Total</td>
<td>109,193</td>
<td>65</td>
<td>20,632</td>
<td>12</td>
<td>9,139</td>
</tr>
</tbody>
</table>

AD=Alzheimer’s disease or senile dementia; Vascular=Vascular dementia; Mixed=both Alzheimer’s disease and Vascular dementia; Other=dementia in other medical conditions.

Table 8 lists the top 10 underlying causes of death for persons 65 years of age or older in the Registry who died during 2015. The #1 underlying cause of death for these persons was attributed to senility and organic mental disorders. This category includes AD and many other dementing illnesses. Nationally, the leading causes of death for persons ages 65 years and older were heart disease, cancer, chronic lower respiratory diseases, cerebrovascular disease, AD, diabetes, accidents, influenza and pneumonia, nephritis, and septicemia. As can be seen in Table 8, the underlying causes of death for those with ADRD in the Registry closely mirror the national trend.

Table 8
Top 10 Underlying Causes of Death Among Registry Cases 65 Years or Older
South Carolina Alzheimer’s Disease Registry, 2015*

<table>
<thead>
<tr>
<th>Rank</th>
<th>Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Senility and organic mental disorders</td>
</tr>
<tr>
<td>2</td>
<td>Acute cerebrovascular disease</td>
</tr>
<tr>
<td>3</td>
<td>Coronary atherosclerosis and other heart disease</td>
</tr>
<tr>
<td>4</td>
<td>Chronic obstructive pulmonary disease and bronchiectasis</td>
</tr>
<tr>
<td>5</td>
<td>Congestive heart failure; nonhypertensive</td>
</tr>
<tr>
<td>6</td>
<td>Parkinson’s disease</td>
</tr>
<tr>
<td>7</td>
<td>Acute myocardial infarction</td>
</tr>
<tr>
<td>8</td>
<td>All external causes of injury and poisoning</td>
</tr>
<tr>
<td>9</td>
<td>Cancer of bronchus; lung</td>
</tr>
<tr>
<td>10</td>
<td>Septicemia</td>
</tr>
</tbody>
</table>

*Only includes persons who died during the 2015 calendar year.

**Excludes pneumonia caused by tuberculosis or sexually transmitted disease.

Additional Programs and Trainings at the OSA

A. Dementia Dialogues®

• FUNDING SOURCE: South Carolina Department of Health and Human Services,
• PRINCIPAL INVESTIGATOR: Daniela B. Friedman, MSc, PhD
• CO-INVESTIGATOR: Lee Pearson, MS, DrPH

Dementia Dialogues® is a 5-module, evidence-informed, nationally registered training course designed to educate community members and caregivers for persons who exhibit signs and symptoms of Alzheimer’s disease and related dementias.

Individuals who attend and complete all five modules of the training course will be awarded a Dementia Dialogues® Specialist Certificate. The five modules include the following:

1. The Basic Facts: An Overview of Alzheimer’s Disease and other Dementias
2. Keep the Dialogue Going: Strategies for Effective Communication
3. It’s a Different World: Understanding the Impact of the Environment & Ways to Promote Independence
4. It’s Nothing Personal: Addressing Challenging Behaviors
5. Now What Do We Do? Creative Problem Solving

Since 2001, over 21,000 individuals have been trained in at least one module and over 10,000 individuals have completed the entire course. Dementia Dialogues® is provided at no cost to participants through the Office for the Study of Aging at the Arnold School of Public Health, University of South Carolina. For further information including training materials and contact information for trainers please visit: https://sph.sc.edu/dementia_dialogues
B. Evaluation Sub-Award for the Greenville Health System – REACH (GHS – REACH) and GHS – REACH Expansion Grant

- **FUNDING SOURCE:** Administration for Community Living – Administration On Aging,
- **GHS – REACH, 2015-2018**
- **PRINCIPAL INVESTIGATOR:** Ana Teixeira, PhD
- **CO-INVESTIGATOR:** Maggi Miller, PhD
- **GHS – REACH Expansion, 2019-2020**
- **PRINCIPAL INVESTIGATOR:** Maggi Miller, PhD
- **CO-INVESTIGATOR:** Mindi Spencer, PhD

OSA serves as the evaluator for the three-year GHS-REACH Program and an 18-month REACH Expansion (PI: James Davis, MD). GHS – REACH seeks to enhance the educational and supportive services to persons with ADRD and their caregivers through the provision of caregiver coaching and education. GHS – REACH Expansion will focus specifically on high-risk patients and caregivers, including individuals who live in rural areas, those who identify as a racial/ethnic minority, or are living alone. The OSA evaluation team is responsible for designing the evaluation methodology and instruments, conducting analysis and program reporting. The evaluation aims are to assess whether program objectives were reached and develop tools for program monitoring and quality assurance. This evaluation uses a mixed-methods approach, consisting of multiple assessments pre-, during, and post-intervention.
C. Home Care Specialist Training

The Home Care Specialist course provides training on chronic disease management and is intended for Personal Care Aide (PCA) workers caring for people in their own homes. This course provides PCAs with an extra level of training about chronic disease conditions affecting their clients. PCAs learn about warning signs and symptoms of nearing health crisis and receive practical information about what to do and who to call to help prevent or better manage their clients’ health crises.

The training consists of 13 self-paced online modules:

1. Introduction to the Home Care Specialist Training
2. Congestive Heart Failure
3. Dehydration
4. Pneumonia
5. Incontinence and Urinary Tract Infections
6. Heart Attack
7. Chronic Obstructive Pulmonary Disease
8. Hypertension
9. Stroke
10. Diabetes
11. Dementia and Mental Status Change
12. The Final Phase of Life
13. Falls

The Home Care Specialist training course is provided at no cost. Upon completion, PCAs earn a Home Care Specialist certificate. This course and additional information is available online at: https://sph.sc.edu/hcs
D. South Carolina Healthy Brain Research Network (SC-HBRN) Collaborating Center

- **FUNDING SOURCE:** Centers for Disease Control and Prevention (CDC), 2014-2019
- **PRINCIPAL INVESTIGATOR:** Daniela B. Friedman, MSc, PhD
- **CO-INVESTIGATORS:** Sue E. Levkoff, ScD and Sara Wilcox, PhD
- **CONSULTANT:** Rebecca H. Hunter, MEd, University of North Carolina at Chapel Hill

UofSC was selected to serve in the role of Collaborating Center in the CDC Prevention Research Centers’ (PRC) Healthy Brain Research Network (HBRN). The SC-HBRN has three specific aims:

1. establish a research agenda concerning cognitive health and healthy aging
2. advance research in the areas of cognitive health and healthy aging, and
3. support fellowship training of students.

We share the funders goal of advancing the public health and aging agenda by making a major contribution to CDC’s Healthy Brain Research and working with other HBRN Centers and public health partners to increase their capacity to implement actions in The Public Health Road Map for State and National Partnerships, 2013–2018. The work of the SC-HBRN is aligned with the Healthy People 2020 topic area, “Dementias, including Alzheimer’s disease,” The National Plan to Address Alzheimer’s Disease, and The Public Health Road Map for State and National Partnerships, 2013–2018.

To learn more about the SC-HBRN, please contact Dr. Daniela Friedman at dbfriedman@sc.edu
E. Carolina Center on Alzheimer’s Disease and Minority Research (CCADMR)

- **FUNDING SOURCE:** National Institute on Aging, P30 Alzheimer’s disease-related Resource Center on Minority Aging Research, 2018-2023
- **PRINCIPAL INVESTIGATORS:** Sue E. Levkoff, ScD and Daniela B. Friedman, MSc PhD

The overall goal of the Carolina Center on Alzheimer’s Disease and Minority Research (CCADMR) is to increase the diversity of the research workforce focused on population health and determinants of ADRD disparities through sustained infrastructure that will support underrepresented and minority (URM) faculty focused on the health and well-being of minority elders. The Specific Aims are to:

1. increase the capacity of URM scholars to advance the science on the sociocultural, behavioral, and environmental factors that influence ADRD outcomes in order to reduce ADRD-related disparities, with a focus on African Americans, and
2. advance the science of ADRD research focused on population health and determinants of ADRD disparities through research education in population-based, secondary data analysis, interdisciplinary co-mentoring teams, well-established strategies for recruitment of AD-RCMAR Scientists, and education on Health Disparities and Minority Aging Research.

The CCADMR is a state-wide collaboration, providing mentorship and education on determinants of ADRD disparities using population-based datasets for URM faculty throughout South Carolina, at the three major research institutions, including University of South Carolina (UofSC), Medical University of South Carolina (MUSC), and Clemson University (CU), and three Historically Black Colleges and Universities (HBCUs), including Allen University, Claflin University, and South Carolina State University.
F. Graduate Scholar in Aging Research Awards Program

• **SPONSOR:** Gerry Sue and Norman J. Arnold Institute on Aging

The Arnold School of Public Health is in its second year of the annual Graduate Scholar in Aging Research Awards Program. Through the generous support of Norman and Gerry Sue Arnold, the Arnold School of Public Health is committed to developing future leaders in aging research. In response, the Arnold School has established this award which will recognize up to two outstanding graduate students who exemplify the highest standards of scholarship focused on aging.

G. Arnold Aging Lecture Series

• **SPONSOR:** Gerry Sue and Norman J. Arnold Institute on Aging

OSA in the Arnold School of Public Health hosted two dynamic speaker to deliver the Annual Arnold Aging Lecture in 2018 and 2019, respectively. The first lecture was delivered on March 29, 2018 by Dr. Kenneth M. Langa on the topic of “Exploring the Risk of Alzheimer's Disease: Epidemiological Evidence from Around the World.” His presentation is available online at https://youtu.be/xehFQFeALTc. The second lecture was delivered by Dr. Keith Whitfield on the topic of “Biobehavioral Insights on Health and Aging Among African Americans” on March 28, 2019. Dr. Whitfield’s presentation is available online at https://youtu.be/kfRNdeM0yeE.
OSA Directory

Core Team

Daniela Friedman, Co-Director

Daniela Friedman, Professor and Chair of the Department of Health Promotion, Education, and Behavior, is the Co-Director of the Arnold School of Public Health’s OSA. She is a leader in gerontology and community-engaged health promotion in South Carolina, dedicated to improving health literacy and reducing health disparities among older adults across the state. Dr. Friedman’s federally-funded research networks, including the Centers for Disease Control and Prevention-funded South Carolina Healthy Brain Research Network and South Carolina Cancer Prevention and Control Research Network, are focused on the communication and dissemination of evidence-based health messages and programs. Dr. Friedman also directs the university-wide Certificate of Graduate Study in Health Communication.

Lee Pearson, Co-Director

Lee Pearson has more than 20 years of experience in addressing public health priorities in South Carolina, including a specific focus on the unique needs of the state’s aging population. In 2014, he helped to lead a statewide taskforce on long-term care. Dr. Pearson holds a doctor of public health degree in health promotion, education and behavior, as well as a graduate certificate in gerontology. He serves as the co-director of OSA. In that role, he works with the entire OSA team to advance the core mission and promote expanded opportunities with collaborative partners. In addition to his role with OSA, Dr. Pearson is the associate dean for operations and accreditation in the Arnold School of Public Health, and he serves on the board of the SC chapter of the Alzheimer’s Association and is a gubernatorial appointee to the Joint Legislative Committee to Study Services, Programs and Facilities for the Aging.

Mindi Spencer, Associate Director of Research

Mindi Spencer is an Associate Professor in the Department of Health Promotion, Education, and Behavior, with a joint appointment in the Institute for Southern Studies. Broadly, her research focuses on how cultural and psychosocial factors influence health in older adulthood. She also conducts research on caregiving and mental health among American Indian and African American elders. Dr. Spencer is the Principal Investigator of the “Youth Empowered Against HIV!” Project and a partner in the “Equalize Health” LGBT cultural competence training program for health care providers. Dr. Spencer serves on the Lt. Governor’s Alzheimer’s Resource Coordination Center and on the Minority Task Force of the Gerontological Society of America.

Maggi Miller, Registry Manager

Maggi Miller has over 13 years of experience in aging-related public health research and practice. She received her MS in health promotion from the University of Delaware and a PhD in epidemiology from the University of South Carolina Arnold School of Public Health. She is a research assistant professor in the Department of Epidemiology and Biostatistics. At the OSA, Dr. Miller manages the SC Alzheimer’s Disease Registry and focuses on aging research and program evaluation. Her research interests include Alzheimer’s disease and related disorders and caregivers of individuals with dementia.
Megan Mason, Program Coordinator

Megan Mason began her career in the aging field in Adult Protective Services with the West Virginia Department of Health and Human Resources, and then as an Adult Services Program Specialist for the State. She has developed and revised policies, monitored legislative session to determine its impact on vulnerable adults, and educated professionals on elder abuse, neglect, and financial exploitation. Megan is a graduate of Marietta College with a Bachelor of Arts in Psychology, and West Virginia University with a Master of Social Work and a Graduate Certificate in Gerontology. She is also a Licensed Master Social Worker in the State of South Carolina and is an advocate for building capacity in the areas of domestic violence, human trafficking, elder abuse, and social work.

Matthew Lohman, Assistant Professor

Dr. Lohman is an Assistant Professor of Epidemiology in the Department of Epidemiology and Biostatistics and is a core faculty member of the OSA. His primary research areas are in psychiatric epidemiology, gerontology, geriatric mental health services, and the epidemiology of adverse health outcomes such as falls, hospitalizations, and acquired disabilities among older adults. Dr. Lohman is particularly interested in the role of long-term care services and settings, such as nursing homes and home health care nursing, in the prevention of age-related cognitive and physical decline. He currently teaches epidemiological methods and scientific writing for masters and doctoral students.

Dana AlHasan, Doctoral Student

Dana AlHasan is a PhD student in the Department of Epidemiology and Biostatistics and an Arnold School of Public Health Graduate Scholar in Aging Research. She is interested in the role neighborhood characteristics play in influencing incidence of dementia and Alzheimer’s disease, as well as depression among dementia caregivers. As an Arnold School of Public Health Graduate Scholar, Dana is working to understand how neighborhoods can be designed to accommodate those with dementia.

Seul Ki Choi, Postdoctoral Fellow

Seul Ki Choi is a postdoctoral fellow for the Healthy Brain Research Network and at the OSA. She earned her Ph.D. in public health from the University of South Carolina. Her research interests include health policy process, health communication, health literacy, Alzheimer’s disease awareness and caregiving practices.

Chelsea Larsen, Doctoral Student

Chelsea Larsen is a PhD candidate in the Department of Exercise Science and an Arnold School of Public Health Graduate Scholar in Aging Research. She received her Master of Public Health in Physical Activity and Public Health from the University of South Carolina in 2013. Her research interests include the health of caregivers of individuals with dementia and effective technology utilization in behavioral lifestyle interventions.

Collin Perryman, Doctoral Student

Collin Perryman is a PhD student in Education Administration, and a predoctoral trainee/fellow with the National Institute on Minority Health and Health Disparities (NIMHD) Division of Intramural Research, National Institutes of Health. His research interests include: (1) The relationship between racism-related stress, from racial and ethnic microaggressions experienced on college and university campuses, and the risk of Alzheimer’s disease late in life. (2) The relationship between racial and ethnic microaggressions and mental health outcomes like depressive symptoms. (3) Socially supportive, culturally responsive academic and social counterspaces buffering against poor late-life health outcomes. (4) Psychometrics and methods that relate to racial and ethnic microaggressions, education, and health. He hopes that his work will contribute to educational and health policies towards Affirmative Action.
Gelareh Rahimi, Doctoral Student

Gelareh Rahimi is a doctoral candidate pursuing a major in Biostatistics. She is working with OSA as a graduate research assistant helping with statistical analysis and providing reports on the SC Alzheimer’s Disease Registry data. For her dissertation, she is currently developing a method for misreporting adjustments in count models.

Nicholas Resciniti, Doctoral Student

Nicholas Resciniti is a PhD student in the Department of Epidemiology and Biostatistics and an Arnold School of Public Health Graduate Scholar in Aging Research. He has a passion for the field of Aging and Alzheimer’s, with a focus on early life factors and bio-behavioral markers. Nicholas is also with a student researcher with OSA.

Sydney Smith, Masters Student

Sydney Smith is a first year Master of Science in Public Health student in Biostatistics at the Arnold School of Public Health. She is working with the OSA as the SC Alzheimer’s Disease Registry Assistant. She graduated from Clemson University with a B.S. in Mathematical Science with emphasis areas in statistics and financial mathematics and with a minor in Business Administration.

Masroora Tabassum, Masters Student

Masroora Tabassum is a MPH student in the Department of Health Services Policy & Management and is involved in Dr. Friedman’s team as a Healthy Brain Research Network scholar. She has also completed her BSc. and MS.in Economics prior to MPH. She is interested in qualitative research methods and passionate about research on aging and dementia.

Weizhou Tang, Doctoral Student

Weizhou Tang is a PhD candidate from the College of Social Work who works with Dr. Friedman’s team as a Healthy Brain Research Network scholar. She also completed the Certificate of Graduate Study in Health Communication from the Arnold School of Public Health in Fall 2016. Weizhou’s current research interests are around family caregivers of persons with Alzheimer’s disease. She is mostly interested in using quantitative research methods to understand caregivers’ mental health across ethnic populations, and how it relates to coping skills, perceived social support, and care recipients’ behavioral problems. In addition, she would like to promote public awareness of cognitive health through effective health communication techniques.
Affiliate Faculty

OSA is proud of its strong partnerships with faculty who represent multiple disciplines from across the UofSC campus.

Arnold School of Public Health

OFFICE OF THE DEAN

Sara Corwin, Associate Dean for Undergraduate Student Affairs

EPIDEMIOLOGY & BIOSTATISTICS

Cheryl Addy, Vice Provost and Dean of the Graduate School
Monique Brown, Assistant Professor
Jim Hussey, Clinical Associate Professor
Angela Liese, Professor
Robert Moran, Clinical Assistant Professor and Graduate Director for Biostatistics
Myriam Torres, Clinical Associate Professor

HEALTH PROMOTION, EDUCATION, AND BEHAVIOR

Katrina Walsemann, Associate Professor and Undergraduate Director
Ken Watkins, Associate Chair and Graduate Director

EXERCISE SCIENCE

Mei Sui, Assistant Professor
Delia West, Professor
Sara Wilcox, Professor

College of Social Work

Katherine Leith, Adjunct Professor
Sue Levkoff, Professor
Otis Owens, Assistant Professor

School of Medicine

Donna Ray, Clinical Assistant Professor of Internal Medicine

University Technology Services

Mike Brown, Education Technologies Specialist and BlackBoard Administrator
**Advisors**

The OSA benefits from numerous partnerships and the active input of stakeholders from across South Carolina. The key advisors listed below provide strategic guidance on the mission and overall direction of OSA.

**Community**

*Teresa Arnold*, AARP

*Darryl Broome*, Advisor on Aging Services and State Policy

*Elizabeth Ford*, SC Department on Aging

*Brenda Hyleman*, Aging Life Care Professional

*Beth Sulkowski*, Alzheimer’s Association South Carolina

*Sam Waldrep*, Advisor on Aging Services and State Policy

**Research and Clinical**

*James W. Davis*, MD, Memory Health Program, PRISMA Health Upstate Network

*Julius Fridriksson*, PhD, Arnold School of Public Health, Department of Communication Sciences and Disorders

*Victor Hirth*, MD, MPH, Palmetto Health-University of South Carolina Medical Group & Senior Primary Care Practice

*Jacobo Mintzer*, MD, MBA, Roper St. Francis
Collaborators/Partners

The OSA collaborates with many organizations and agencies to improve the lives of older adults in South Carolina. These partnerships strengthen the OSA’s ability to fulfill its mission through the sharing of resources and expertise.

Centers for Medicare and Medicaid Services
https://www.cms.gov/index.html

Clemson University Institute for Engaged Aging
https://www.clemson.edu/cbhs/centers-institutes/aging/

Healthy Brain Research Network
http://prevention.sph.sc.edu/projects/braincenter.html

Leeza’s Care Connection
http://www.leezascareconnection.org/

Palmetto Health/UofSC School of Medicine Division of Geriatric
https://sc.edu/study/colleges_schools/medicine/education/clinical_departments/internal_medicine/index.php

Real Choice System Change
https://www.medicaid.gov/medicaid/ltss/real-choice/

SC Center on Aging
https://medicine.musc.edu/departments/centers/aging

South Carolina Area Health Education Consortium
https://www.scahec.net/

South Carolina Department of Health and Environmental Control
https://www.scdhec.gov/

South Carolina Department of Health and Human Services
https://www.scdhhs.gov/

South Carolina Department of Mental Health
https://scdmh.net/

South Carolina Department on Aging
http://www.aging.sc.gov

South Carolina Institute of Medicine and Public Health
http://imph.org/

South Carolina Respite Coalition
http://www.screspitecoalition.org/

South Carolina Revenue and Fiscal Affairs Office, Health and Demographics Section
http://rfa.sc.gov/healthcare

The Carolinas Center for Medical Excellence
https://www.thecarolinascenter.org/

The FriendShip Village
http://www.thefriendship.org/

University of South Carolina College of Social Work
https://sc.edu/study/colleges_schools/socialwork/
This Annual Report is available online at http://sc.edu/publichealth/osa

Any state or local agency may request the registry staff to provide specific data summaries (without identifiers). These requests are handled on an individual basis and will be provided free of charge.

Contact Dr. Maggi Miller, Registry Manager, at chandlmj@mailbox.sc.edu for further information.