



CONTACT: Alzheimer's Association Media Line, 312.335.4078, media@alz.org
AAIC 2021 Press Office, aaicmedia@alz.org

HIGHLIGHTS FROM THE ALZHEIMER'S ASSOCIATION INTERNATIONAL CONFERENCE 2021

DENVER, JULY 29 — Research presented at the [Alzheimer's Association International Conference](#)[®] (AAIC[®]) 2021 suggests COVID-19 is associated with long-term cognitive dysfunction and acceleration of Alzheimer's disease pathology and symptoms. These studies were among several pieces of groundbreaking research featured at AAIC 2021.

“These new data point to disturbing trends showing COVID-19 infections leading to lasting cognitive impairment and even Alzheimer's symptoms,” said Heather Snyder, Ph.D., Alzheimer's Association vice president of medical and scientific relations. “With more than 190 million cases and over 4 million deaths worldwide, COVID-19 has devastated the entire world. It is imperative that we continue to study what this virus is doing to our body and brain.”

Other new data reported at AAIC 2021 included:

- Improving air quality may reduce dementia risk.
- Global prevalence of dementia is expected to nearly triple to more than 152 million by 2050.
- Transgender and gender nonbinary adults in the United States are more likely to report worsening memory and thinking, functional limitations and depression than cisgender individuals.
- Communities of color, historically underrepresented in dementia research, are more willing to participate if they are invited, want to contribute to the study's goal or have a family member with dementia.

With FDA-accelerated approval of aducanumab (Aduhelm, Biogen/Eisai) for mild cognitive impairment (MCI) and mild Alzheimer's, there is new energy and interest in other treatments in the Alzheimer's/dementia therapeutic pipeline. Reports at AAIC 2021 included new data and analyses of the furthest advanced investigational anti-amyloid drugs — donanemab (Eli Lilly) and lecanemab (Biogen/Eisai) — plus a wide variety of other approaches, including anti-tau strategies, anti-inflammatory targets, and neuroprotection and regenerative medicine.

“As the leading voluntary health organization in Alzheimer's research, care and support, the Alzheimer's Association believes we're living in a new era of advancement. We're seeing at AAIC this year dozens of novel treatment approaches that are gaining momentum in clinical trials,” said Maria C. Carrillo, Ph.D., Alzheimer's Association chief science officer. “Alzheimer's is a complex brain disease, and very likely will need multiple treatment strategies that address the disease in several different ways along the length

of its course. These treatments, once discovered and approved, may then be combined into powerful combination therapies.”

AAIC is the premier annual forum for presentation and discussion of the latest Alzheimer’s and dementia research. This year’s hybrid conference event took place both virtually and in-person in Denver and attracted over 11,000 attendees and more than 3,000 scientific presentations.

COVID-19 Associated with Long-Term Cognitive Dysfunction, Acceleration of Alzheimer’s Symptoms

Much has been learned about SARS-CoV-2, the virus that causes the novel coronavirus, since the beginning of the COVID-19 pandemic. However, questions remain about the long-term impact of the virus on our bodies and brains. New data presented at AAIC 2021 from Greece and Argentina suggest older adults frequently suffer long-term cognitive impairment, including persistent lack of smell, after recovery from SARS-CoV-2 infection.

These new data are the first reports from an international consortium — including the Alzheimer’s Association and teams from nearly 40 countries — who are researching COVID-19’s long-term effects on the central nervous system.

Improving Air Quality Reduces Dementia Risk, Multiple Studies Suggest

Improving air quality may improve cognitive function and reduce dementia risk, according to several studies reported at AAIC 2021. Among the key findings are:

- Reduction of fine particulate matter (PM2.5) and traffic-related pollutants (NO2) over 10 years was associated with 14% and 26% reductions, respectively, in dementia risk and slower cognitive decline in older U.S. women, according to results from the Women’s Health Initiative Memory Study-Epidemiology of Cognitive Health Outcomes (WHIMS-ECHO).
- In a French study, reduction of PM2.5 concentration over 10 years was associated with a 15% reduced risk of all-cause dementia and 17% reduced risk of Alzheimer’s.
- Long-term exposure to air pollutants was associated with higher beta amyloid levels in a large U.S. cohort, showing a possible biological connection between air quality and physical brain changes that define Alzheimer’s disease, according to a team at University of Washington.

Global Dementia Cases Forecasted to Triple by 2050

Positive trends in global education access are expected to decrease dementia prevalence worldwide by 6.2 million cases by the year 2050. Meanwhile, anticipated counter-trends in increased smoking, high body mass index and high blood sugar are predicted to increase prevalence by nearly the same number: 6.8 million cases. A team from the University of Washington modeled these projections on health data collected and analyzed by a worldwide consortium of researchers between 1990 and 2019 as part of the Global Burden of Disease study. Also reported at AAIC 2021:

- Each year, an estimated 350,000 individuals develop early onset dementia (prior to age 65) globally, according to researchers in the Netherlands. To address the need for services for this population, the Alzheimer’s Association helped launch the [Longitudinal Early-Onset Alzheimer’s Disease Study \(LEADS\)](#) to look at early onset disease progression.
- From 1999 to 2019, the U.S. mortality rate from Alzheimer’s in the overall population significantly increased from 16 to 30 deaths per 100,000, an 88% increase, according to

researchers at Emory University. Among all areas of the U.S., mortality rates for Alzheimer's were highest in rural areas in the East South-Central region of the U.S., where the death rate from Alzheimer's is 274 per 100,000 in those over 65. Lowest Alzheimer's mortality was found in the Mid-Atlantic region.

Transgender Adults More Likely to Experience Subjective Cognitive Decline, Depression

Transgender and gender nonbinary adults in the United States are more likely to report worsening memory and thinking, functional limitations and depression compared to cisgender (non-transgender) adults, according to two studies reported at AAIC 2021. Key findings include:

- Transgender adults — individuals who identify with a gender different than the one assigned to them at birth — were nearly twice as likely to report worsening confusion or memory loss (subjective cognitive decline, or SCD) and more than twice as likely to report SCD-related functional limitations, such as reduced ability to work, volunteer or be social, according to researchers at Emory University.
- Prevalence of depression was significantly higher for transgender and gender nonbinary adults (individuals who identify outside the male/female binary) (37%) compared to cisgender adults (19.2%), according to a team at University of Wisconsin.
- Little is known about dementia and cognitive impairment among transgender individuals. However, transgender adults experience a greater number of health disparities considered risk factors for dementia, including cardiovascular disease, depression, diabetes, tobacco/alcohol use and obesity. Social inequities may also play a role in increasing risk of cognitive impairment.

Addressing Diversity in Alzheimer's Clinical Trials

At AAIC 2021, the National Institute on Aging (NIA), part of the U.S. National Institutes of Health, launched a new online tool, Outreach Pro, to help researchers and clinicians increase awareness and participation in clinical trials on Alzheimer's disease and other dementias, especially among traditionally underrepresented communities. Other key findings reported first at AAIC 2021 include:

- Historically under-represented individuals are most willing to volunteer for a clinical trial if they are invited to participate (85%), want to contribute to the goal of research (83%) or have a family member with the disease (74%), according to a team at University of Wisconsin.
- They also found that African American, Hispanic/Latino and American Indian respondents are significantly more likely to volunteer if asked by a person of the same race, and are more concerned than Whites about disruption of work and family responsibilities and availability of transportation and childcare.
- Commonly used Alzheimer's clinical trial exclusion criteria have the potential to disproportionately affect African Americans and Hispanics/Latinos, which may play a role in their reduced enrollment in research, according to NIA researchers.

About the Alzheimer's Association International Conference (AAIC)

The Alzheimer's Association International Conference (AAIC) is the world's largest gathering of researchers from around the world focused on Alzheimer's and other dementias. As a part of the Alzheimer's Association's research program, AAIC serves as a catalyst for generating new knowledge about dementia and fostering a vital, collegial research community.

AAIC 2021 home page: www.alz.org/aaic/

AAIC 2021 newsroom: www.alz.org/aaic/pressroom.asp

AAIC 2021 hashtag: #AAIC21

About the Alzheimer's Association

The Alzheimer's Association is a worldwide voluntary health organization dedicated to Alzheimer's care, support and research. Our mission is to lead the way to end Alzheimer's and all other dementia — by accelerating global research, driving risk reduction and early detection, and maximizing quality care and support. Our vision is a world without Alzheimer's and all other dementia®. Visit alz.org or call 800.272.3900.

###