

# **UW-Madison School of Medicine and Public Health: Wisconsin studies yield new insights on Alzheimer's disease; presented at international conference**

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**Madison, Wis.** - Hearing loss, highly stressful life events, speech and where you live could all be risk factors for cognitive decline, according to University of Wisconsin-Madison research presented this week at the 2017 Alzheimer's Association International Conference (AAIC) in London.

It's the largest international meeting dedicated to dementia science.

These studies gleaned data from the long-running Wisconsin Registry for Alzheimer's Prevention (WRAP) which has been following 1,500 participants, many of them adult children of people with Alzheimer's disease.

- **Megan Zuelsdorff**, a post-doctoral trainee in the Health Disparities Research Scholar program at the UW School of Medicine and Public Health, and her group looked at lifetime stressful events and racial disparities in cognitive health. Results showed African-Americans experienced over 60 percent more stressful events than whites over their lifetimes, and these experiences were one of the strongest predictors of poorer memory and thinking skills in older age. In African-Americans, each stressful event was equivalent to approximately four years of cognitive aging. Stressful events included

experiences such as growing up with a parent who abused alcohol or drugs, being fired from a job, the death of a child, and experiencing combat.

- **Dr. Amy Kind**, associate professor of medicine (geriatrics) at University of Wisconsin School of Medicine and Public Health, and her research group found that living in a disadvantaged neighborhood—defined as a neighborhood challenged by poverty, low education, unemployment, and substandard housing—may account for some of the observed differences in Alzheimer’s disease risk among people of different racial backgrounds and income levels. The results of this study could help target dementia-focused intervention and research programs to the areas that will be helped most.
- **Taylor Fields**, a doctoral student in the Neuroscience Training Program within the UW School of Medicine and Public Health, and her group in the Binaural Hearing and Speech Lab directed by Dr. Ruth Litovsky, professor of communication sciences and disorders, looked at the potential correlation between hearing loss and mild cognitive impairment. Researchers analyzed data from five years of clinical tests of cognitive function in order to track volunteers’ progression to mild cognitive impairment. Volunteers who self-reported being diagnosed with a hearing loss at the beginning of the study were more likely to perform more poorly on future cognitive tests and were also over twice as likely to be characterized as having mild cognitive impairment. This study suggests that hearing loss could be an early indicator of worsening cognitive performance in older adults, and that identifying and treating hearing loss could have value for interventions aimed at reducing the risk of cognitive decline.
- **Kimberly Mueller**, associate researcher at the Wisconsin Alzheimer’s Institute at the UW School of Medicine and Public Health, and her group looked at changes in everyday speech. . The research showed that subtle changes in everyday speech, such as the use of short sentences, more pronouns, and pauses like “um” and “ah,” correlated with a preclinical condition (early mild cognitive impairment, or eMCI). Further studies are needed, but the results of this research indicate that speech analysis may be a valuable cognitive marker to add to clinical assessments of cognitive function in the future.

The WRAP study began in 2001, when Wisconsin Alzheimer’s Institute began enrolling middle-aged people at risk of developing Alzheimer’s disease. It currently has about 1,500 participants, who come for regular tests of cognitive skills, as well

as brain scans, cerebral spinal fluid draws and other testing.