Alzheimer's Disease and Related Dementias



HARBORVIEW MEDICAL CENTER

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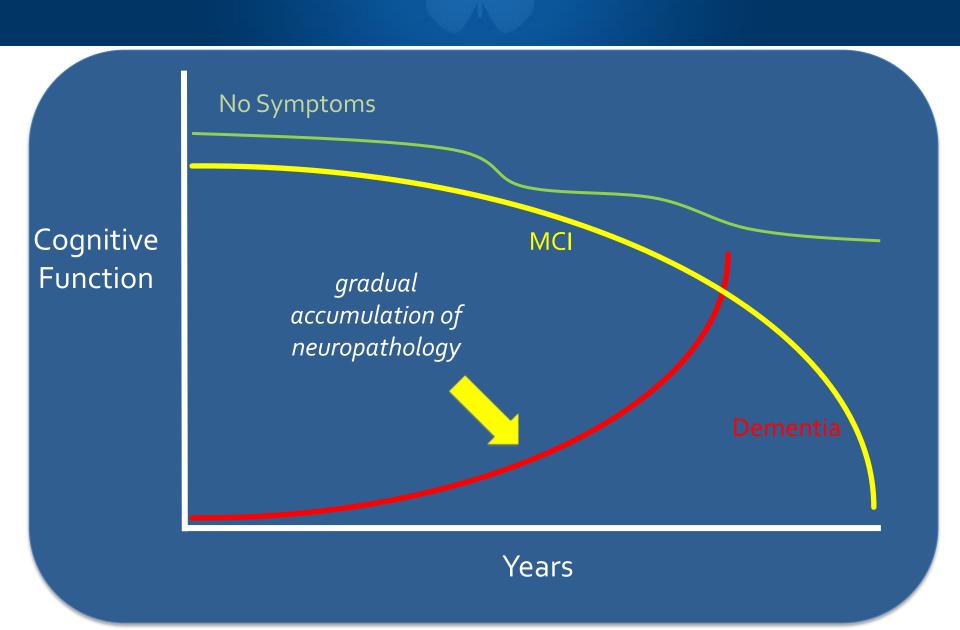
Harborview Medical Center/University of Washington School of Medicine

Tribal-ALTSA-HCS-AAA Spring Summit
May 19th, 2021

Presentation Overview

- Context
 - What's Normal, What's Not?
 - Trends
 - Health and Health Care Disparities
- Treatment
 - Prevention
 - Non-pharmacological
- Programs and Services Update
 - Project ECHO
 - Virtual and In-Person Resources

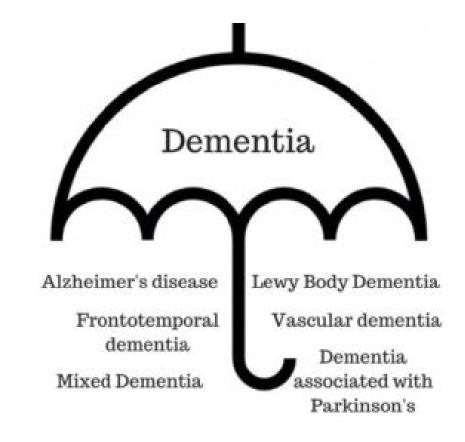
What's Normal, What's Not?



Alzheimer's and Dementia

Dementia is not a "disease" itself – it is a general term that describes a set of symptoms caused by a variety of diseases or conditions.

Alzheimer's is the most common disease causing dementia.



Dementia: What are the Differences?

	Alzheimer's Disease	Vascular Dementia	Dementia with Lewy bodies	Frontotemporal Dementia
Prevalence	60–80%	15-30%	12-20%	10-15%
Early Symptoms	Memory loss Executive dysfunction Aphasia Apraxia Apathy/Depression Poor insight	Slow processing speed Poor attention Less memory impairment Poor acquisition/learning Apathy/Depression	Visual hallucinations Muscle rigidity Parkinsonism Tremors Fluctuating cognition Visuospatial problems Memory loss	Behavioral issues Personality change Attention problems Executive dysfunction Language problems
Cortical Changes	Temporal (medial) Parietal Frontal	Cortical Subcortical Lesion-specific	Parietal/Occipital Frontal Temporal	Frontal Temporal (anterior)
Course	Progressive, gradual	Progressive, gradual or stepwise	Progressive, fluctuations	Progressive, rapid
Associated Factors	Beta-amyloid (plaques) Tau (tangles)	Microvascular ischemic Hemorrhagic infarct Ischemic infarct Hypoprofusion	Alpha-synuclein (Lewy bodies)	Tau TDP-43

Alzheimer's and Dementia Worldwide

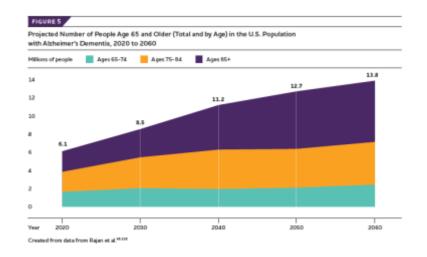
(Population = 7.6 billion)

- 46.8 million people worldwide living with dementia in 2015
 - 50 million people in 2017
 - 75 million in 2030
 - 131.5 million in 2050.
- 9.9 million new cases of dementia each year worldwide
 - One case every 3.2 seconds
 - 345,600 since Monday
- 58% in low and middle income countries
 - 68% in 2050
- 75% are undiagnosed
 - 55% in the US
 - 90% in India



2021 US Facts and Figures

- 6,200,000 Americans with Alzheimer's
- 5,000,000 with MCI
 - 50% due to AD
- 15,000,000 with SCI
- 11.3% general risk after age 65
 - -65-74=5.3%
 - 75-84 = 13.8%
 - -82 + = 34.6%



- 45% with a diagnosis
 - <50% disclosed</p>
 - <50% of providers with standard protocols</p>

Differential Risk Factors

- Significant gender disparities
 - ~66% of PlwD are women
 - 1 in 5 for women, 1 in 10 for men
 - Biological?
 - Survival bias?
 - APOE-4 and estrogen?
 - Education, occupation and health behaviors?
- Significant racial and ethnic disparities
 - 2:1 for older Blacks
 - 1.5:1 for older Hispanics
 - ?:1 for American Indian/Alaska Natives
 - Issues of "ethnic gloss"
 - Importance of comorbid conditions, socioeconomic, health care literacy, access, adversity, discrimination, poverty, stress, structural and institutional racism

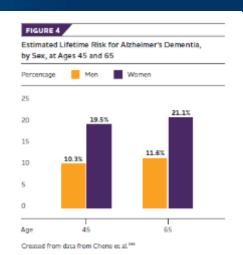
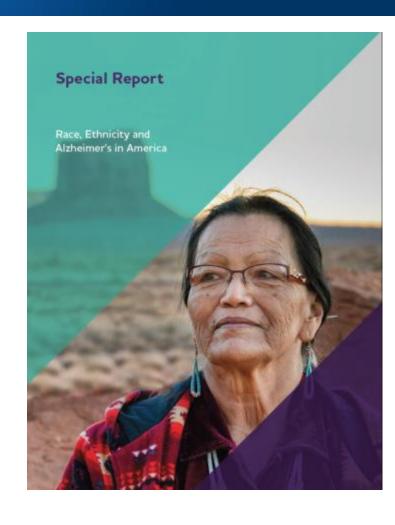


TABLE 3						
Percentage of African Americans and European Americans with Specified APOE Pairs						
APOE Pair	African Americans*	European Americans*				
e3/e3	45.2	63.4				
e3/e4	28.6	21.4				
e3/e2	15.1	10.2				
e2/e4	5.7	2.4				
e4/e4	4.5	2.4				
e2/e2	0.7	0.2				

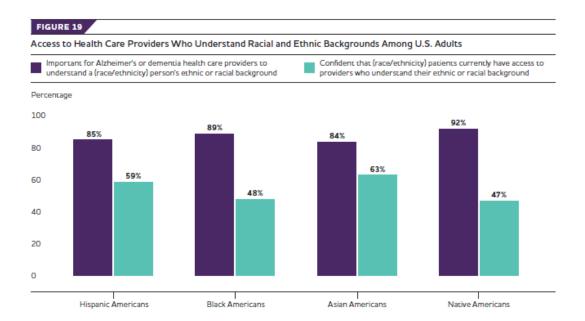
Race, Ethnicity and Alzheimer's in America

- Health vs. health care disparities
- Social determinants of health
 - Housing uncertainty
 - Food insecurity
- Implicit bias
- Language barriers
- Low health literacy
- Undermined trust and access to clinical care and research



Race, Ethnicity and Alzheimer's in America

- 40% of Native Americans perceive race/ethnicity as a barrier to care
- 63% of Native caregivers have experienced discrimination in health care
 - 9% regularly, 33% from time to time
 - Feeling not listened to (31%)
 - Provider acted like you were not smart (43%)
- 53% believe that cognitive impairment is a normal part of aging
- 35% of Native Americans believe they will not live long enough



Addressing Disparities

- Cultural Competence, implicit bias
 - Education/Training
 - Staff, providers, systems
- Increasing Diversity in Dementia Care
 - Start in medical school
 - Improving representation in primary care
 - Low in specialties such as geriatrics and neurology
- Increasing Diversity in Clinical Trials
- Building relationships to restore trust
 - Partnerships with community based organizations
 - Community stakeholders
 - HBI Road Map for Indian Country
 - Improve culturally appropriate materials and outreach
 - Bi-directional learning







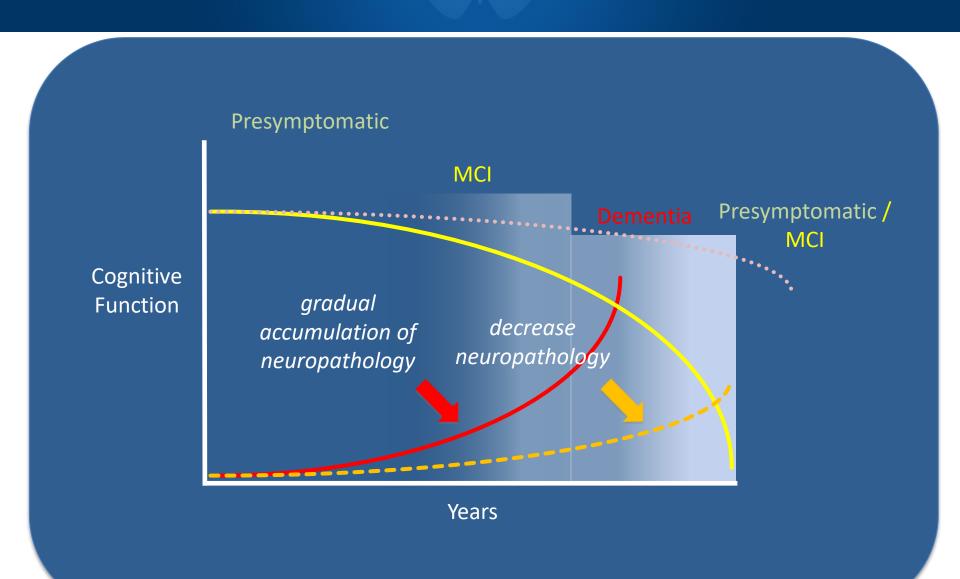
Alzheimer's in Washington State

- 120,000 cases in WA
 - 16.7% increase by 2025
- 3rd leading cause of death
 - 8th highest rate in the US
 - Mortality rate= 47.1
 - 16% increase during COVID-19



- Who provides care?
 - 295,000 unpaid caregivers
 - 132 geriatricians (399 needed to serve 10% of those 65+)
 - 426,000,000 hours = \$9.6 billion
 - \$250 million in additional health care costs

Treatment Targets



Prevention and Interventions

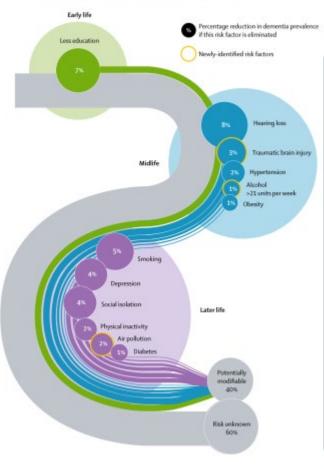
- Treatment of Modifiable Risk Factors
 - Cardiovascular
 - Sedentary lifestyle
 - Sleep disorders/disruption
 - Alcohol
- Medications
- Cardiovascular Exercise
- Cognitive Activation and Rehabilitation
- Dietary Interventions
- Meditation/Mindfulness-Based Stress Reduction
- Community Engagement and Socialization

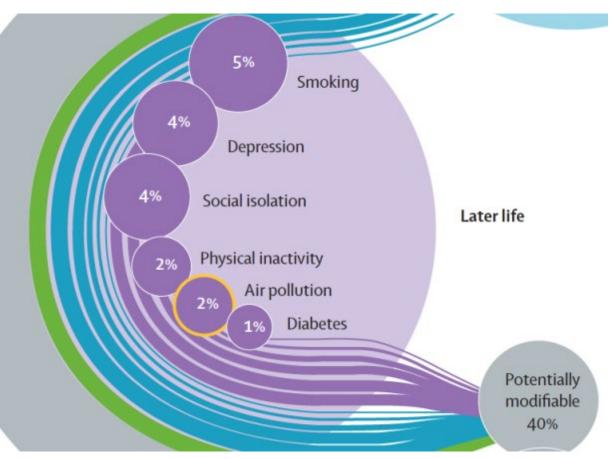
Lancet Commission

Dementia Prevention, Intervention, and Care Livingston et al., 2020

Risk factors for dementia

An update to the Lancet Commission on Dementia prevention, intervention, and care presents a life-course model showing that 12 potentially modifiable risk factors account for around 40% of worldwide dementias





Livingston G, Huntley J, Sommerlad A, et al. Dementia prevention, intervention, and care: 2020 report of the Longet Commission. The Lancet 2020:

The Importance of Lifestyle

- Combining multiple healthy lifestyle factors may be more impactful for reducing dementia risk
 - Healthy diet
 - Moderate to vigorous physical activity
 - Light to moderate alcohol intake
 - Smoking
 - Cognitive stimulation
- 4 or 5 = 59% lower risk of Alzheimer's dementia
- 2 or 3 = 39% lower risk
- May even offset risk associated with genetics

Programs and Services

- Support groups/educational events
- Dementia Friendly Communities
- Momentia
 - Zoo/Garden walks
 - Alzheimer's cafes
 - Arts events
- Dementia Friends
- Intergenerational programs



Programs and Services











UW Memory and Brain Wellness Center Programs and Services

UW Medicine
MEMORY & BRAIN
WELLNESS CENTER



ABOUT - / NEWS - / PROGRAMS - / RESOURCES - / RESEARCH - / CLINIC - / BE INVOLVED - / THE MEMORY HUB - / ECHO -

Community Events & Programs

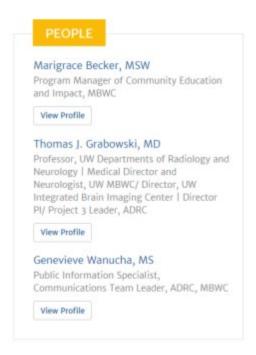
As part of our mission to promote the well-being of persons living with memory loss and their families, the Memory & Brain Wellness Center offel Dementia Action Collaborative) events and programs. Note that during the COVID-19 outbreak, we are offering virtual support, education and engagement opportunities, offered by video or phone. Our in-person programs are temporarily on hold. For more information, please contact program manager Marigrace Becker at mbecker:@uw.edu or (206) 744-2190.

Virtual Support, Education & Engagement during the time of COVID-19

Virtual Coffee Chats for persons with memory loss/dementia

Make a cup of coffee or tea, and come together for an informal social time with others living with memory loss or dementia. Share how you're coping in the midst of COVID-19, and reflect on a different theme each week. Participate online or by phone, with a free application called "Zoom." Facilitated by program manager Marigrace Becker. Join for just one session, or multiple. Space is limited; sign up by the day before.

Tuesday, June 2, 10 - 11 a.m. Tuesday, June 9, 10 - 11 a.m. Tuesday, June 16, 10 - 11 a.m. Tuesday, June 23, 10 - 11 a.m. Tuesday, June 30, 10 - 11 a.m. Sign Up Here



https://depts.washington.edu/mbwc/events/community-events-programs

UW Memory and Brain Wellness Center Programs and Services

Virtual versions of our in-person programs

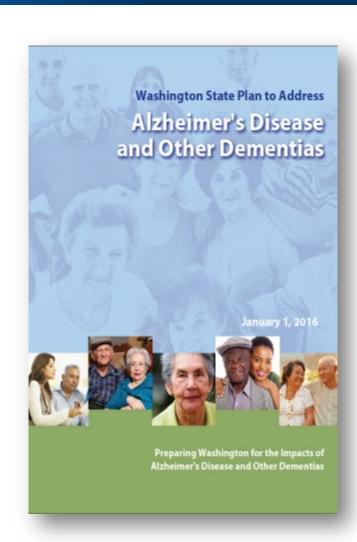
- Coffee Chats for people living with memory loss/dementia
- Caregiver Forums
- Community Wellness Talks
- Memory Loss: A Guide to Next Steps
- Powerful Tools for Caregivers
- Garden Discovery Walks
- Healthy Brain Aging Seminars

Phasing in in-person programs

- Resource and Education Days
- Strength for the Journey
- SOAR (Shared Outdoor Adventures for Resilience)

Alzheimer's Washington State Plan

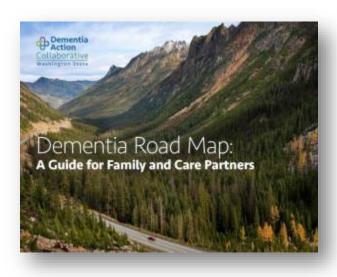
- October 2013—Governor's Aging Summit
- February 2014—SSB6124
- July 2014—Alzheimer's Disease Working Group
- January 2016—Plan released
- February 2016—Plan accepted by Senate
- April 2016—Dementia Action Collaborative
- January 2017- Bree Collaborative Working Group
- November 2018- Budgetary "ask"
- July 2019 Multiple projects funded



Accomplishments: 2016 - 2020

- Convened an expert panel to identify evidence-based best practices
- Guidelines for diagnosis by primary care
- Dementia Road Map
- Safety toolkit
- Dementia-friendly community toolkit
- Alzheimer's Café Model: A How-To Guide
- Info for Asian Americans and African Americans
- Website "point of access" portal
 - <u>www.memorylossinfowa.org</u>
- Over \$1 million in state funding!
- Legal Planning toolkit
- COVID-19 resources
- Project ECHO- Dementia

Dementia Road Map: A Guide for Family and Care Partners





- Comprehensive yet simple to follow guidance document
- Online PDF version
- Print version disseminated nearly 75,000 already
- Section on MCI
- Recently translated into Spanish

DAC COVID-19 Resources

DAC Info Sheet Dementia Caregivers Covid-19

May 1, 2021



Resources for Family Caregivers of People with Dementia during the COVID-19 Outbreak

Alzheimer's Association - Tips for Dementia Care

- · Tips for dementia caregivers at home
- Residential facility has an incidence of COVID-19
- Tips for individuals receiving home-based services
- Staying healthy
- Tips for caregivers of individuals in a residential care setting

More info available at: Covid-19 Tips for Dementia Care

COVID-19 Vaccine: Answers for Dementia Caregivers and People Living with Alzheimer's

Upcoming webinars -

Community education programs are now online! Learn from the comfort and safety of your own home. Each free webinar is held live with time for Q&A. Full program descriptions and registration is <u>available</u> on their website. Or call 800.272.3900.

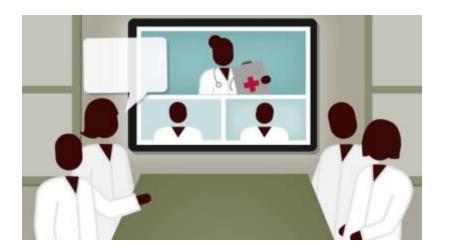
- Understanding Alzheimer's and Dementia May 3, 1 2:30 pm, May 19, 2 3:30 pm
- Healthy Living for Your Brain and Body May 4, 1 2:30 pm
- When Living at Home is No Longer an Option May 5, 3 4:30 pm
- Living with Alzheimer's: For People with Alzheimer's Part 1: May 6, 1 3 pm; Part 2: May 20, 1
 3 pm
- Understanding & Responding to Dementia-Related Behavior May 6, 9 10:30 am; May 24, 3 4:30 pm
- 10 Warning Signs of Alzheimer's May 10, 3 4:30 pm; May 13, 1 2:30 pm
- Legal and Financial Planning for Alzheimer's Disease May 11, 9:30 am 12:00 pm; May 18, 4 –
 5:30 pm; Part 1: May 19, 1 1:45 pm; Part 2: May 26, 1 1:45 pm
- Dementia Conversations: Driving Doctor Visits, Legal & Financial Planning May 14, 11 am 12:30 pm
- Effective Communication Strategies May 17, 3 4:30 pm; May 26, 10 11:30 am
- Living with Alzheimer's: For Younger Onset Alzheimer's May 27, 1 2:30 pm

- Virtual support groups
- Dementia education webinars
- Online resources
- Resources for staying active
- WA Family Caregiver Support Program
- Hearing loss and COVID-19
- Local, state, regional, national level resources and programs

UW Project ECHO - Dementia



- Moving knowledge, not people or providers
- Hub and spoke model
- All teach, all learn
- Case based & didactic
- Best practices
 - Medical
 - Programs and services
- Can be used for other best practices and programs
- Launched 6/12/20



UW Project ECHO - Dementia





We've provided 280
Instructional hours
June 2020 –May 2021

More than half of survey Respondents plan to change practice based on learnings.

Current community

- 24 Sites
- 70 Providers



To find out more or to sign up, please contact Allyson Schrier, Program Coordinator: allysons@uw.edu https://depts.washington.edu/mbwc/resources/echo

Resources

- Memory Loss Info WA
 - memorylossinfowa.org
- Dementia Action Collaborative/State Plan
 - www.dshs.wa.gov/altsa/dementia-action-collaborative
- Alzheimer's Association
 - Taking Action workbook:
 http://www.alz.org/mnnd/documents/15 ALZ Taking Action Workbook.pdf
 - Living Well workbook:
 http://www.alz.org/mnnd/documents/15 ALZ Living Well Workbook Web.pdf
- Momentia Seattle
 - www.momentiaseattle.org
- Department of Health
 - https://www.doh.wa.gov/YouandYourFamily/HealthyAging/AlzheimersDiseaseandDementia

"I have a good life"

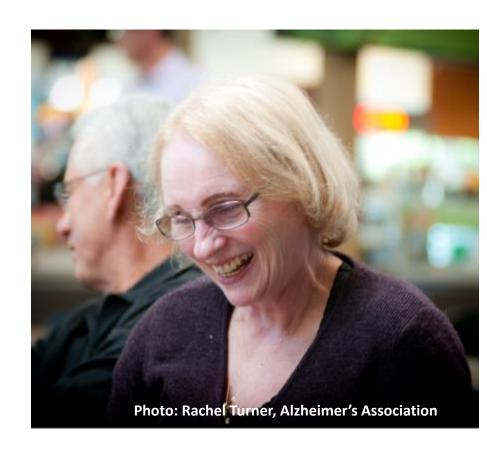
"After hearing the news, I just felt totally lost. But you know what, I have a good life. That sounds crazy, but I do!

I get out, I have fun, and I don't worry about Alzheimer's. Because if you can't fix it, then you have to find a way to live with it.

I've got a group of people who love me, and who stand by me, and that is what life is supposed to be.

I just want all the happiness I can have, and that's what I go for."

~Alice P. Bellevue, WA



Thank you for your attention!



Questions?

Contact Information

Memory and Brain Wellness Center

https://depts.washington.edu/mbwc/

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325 9th Ave., 3rd Floor West Clinic

Seattle, WA 98104

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Fax 206-744-5030

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- Alzheimer's Association. 2021 Alzheimer's Disease Facts and Figures. Alzheimers Dement 2021;17(3).
- Beaudreau, S. A., and O'Hara, R. (2008). Late-life anxiety and cognitive impairment: a review. Am. J. Geriatr. Psychiatry 16, 790–803
- Benson, H., Greenwood, M. M., and Klemchuk, H. (1975). The relaxation response: psychophysiologic aspects and clinical applications. Int. J. Psychiatry Med. 6, 87–98
- Brookmeyer, R., Johnson, E., Ziegler-Graham, K., and Arrighi, H. M. (2007). Forecasting the global burden of Alzheimer's disease. Alzheimers Dement. 3, 186–191
- Chien, L. Y., Chu, H., Guo, J. L., Liao, Y. M., Chang, L. I., Chen, C. H., et al. (2011). Caregiver support groups in patients with dementia: a meta-analysis. Int. J. Geriatr. Psychiatry 26, 1089–1098.
- Chiesa, A., Calati, R., and Serretti, A. (2011). Does mindfulness training improve cognitive abilities? A systematic review of neuropsychological findings. Clin. Psychol. Rev. 31, 449–464.
- Davidson, R.J. & McEwen, B.S. (2012) Social influences on neuroplasticity: stress and interventions to promote well-being. Nature Neuroscience 15, 689–695
- Dopson, L. (2005). Spirituality and Alzheimer's. Nurs. Older People 17, 39.
- Epel, E., Daubenmier, J., Moskowitz, J. T., Folkman, S., and Blackburn, E. (2009). Can meditation slow rate of cellular aging? Cognitive stress, mindfulness, and telomeres. Ann. N. Y. Acad. Sci. 1172, 34–53.
- Forette, F., Seux, M. L., Staessen, J. A., Thijs, L., Birkenhager, W. H., Babarskiene, M. R., et al. (1998). Prevention of dementia in randomised double-blind placebo-controlled systolic hypertension in Europe (Syst-Eur) trial. Lancet 352, 1347–1351.
- Gauthier, S., Cummings, J., Ballard, C., Brodaty, H., Grossberg, G., Robert, P., et al. (2010). Management of behavioral problems in Alzheimer's disease. Int. Psychogeriatr. 22, 346–372.
- Germer, C. K., Siegel, R. D., and Fulton, P. R. (2005). Mindfulness and Psychotherapy. New York: Guilford Press.
- Grant, J. A., Courtemanche, J., Duerden, E. G., Duncan, G. H., and Rainville, P. (2010). Cortical thickness and pain sensitivity in Zen meditators. Emotion 10, 43–53.
- Grant, J. A., Duerden, E. G., Courtemanche, J., Cherkasova, M., Duncan, G. H., and Rainville, P. (2013). Cortical thickness, mental absorption and meditative practice: possible implications for disorders of attention. Biol. Psychol. 92, 275–281.
- Grossman, P., Niemann, L., Schmidt, S., and Walach, H. (2004). Mindfulness-based stress reduction and health benefits. A meta-analysis. J. Psychosom. Res. 57, 35–43.

- Hoge, E. A., Chen, M. M., Orr, E., Metcalf, C. A., Fischer, L. E., Pollack, M. H., et al. (2013). Loving-Kindness Meditation practice associated with longer telomeres in women. Brain Behav. Immun. 32, 159–163.
- Holzel, B. K., Carmody, J., Vangel, M., Congleton, C., Yerramsetti, S. M., Gard, T., et al. (2011). Mindfulness practice leads to increases in regional brain gray matter density. Psychiatry Res. 191, 36–43.
- Holzel, B. K., Ott, U., Gard, T., Hempel, H., Weygandt, M., Morgen, K., et al. (2008). Investigation of mindfulness meditation practitioners with voxel-based morphometry. Soc. Cogn. Affect. Neurosci. 3, 55–61.
- Horrigan, B. J. (2007). New studies support the therapeutic value of meditation. Explore (NY) 3, 449–450.
- Hulme, C., Wright, J., Crocker, T., Oluboyede, Y., and House, A. (2010). Non-pharmacological approaches for dementia that informal carers might try or access: a systematic review. Int. J. Geriatr. Psychiatry 25, 756–763.
- Innes, K. E., Selfe, T. K., Brown, C. J., Rose, K. M., and Thompson-Heisterman, A. (2012). The effects of meditation on perceived stress and related indices of psychological status and sympathetic activation in persons with Alzheimer's disease and their caregivers: a pilot study. Evid. Based Complement. Altern. Med. 2012, 927509.
- Jacobs, T. L., Epel, E. S., Lin, J., Blackburn, E. H., Wolkowitz, O. M., Bridwell, D. A., et al. (2011). Intensive meditation training, immune cell telomerase activity, and psychological mediators. Psychoneuroendocrinology 36, 664–681.
- Jacobs, T. L., Shaver, P. R., Epel, E. S., Zanesco, A. P., Aichele, S. R., Bridwell, D. A., et al. (2013). Self-reported mindfulness and cortisol during a Shamatha meditation retreat. Health Psychol. 32, 1104–1109.
- Kaufman, Y., Anaki, D., Binns, M., and Freedman, M. (2007). Cognitive decline in Alzheimer disease: impact of spirituality, religiosity, and QOL. Neurology 68, 1509–1514.
- Khalsa, D. S., Amen, D., Hanks, C., Money, N., and Newberg, A. (2009). Cerebral blood flow changes during chanting meditation. Nucl. Med. Commun. 30, 956–961.
- Khanna, S., and Greeson, J. M. (2013). A narrative review of yoga and mindfulness as complementary therapies for addiction. Complement. Ther. Med. 21, 244–252.
- Khatri, D., Mathur, K. C., Gahlot, S., Jain, S., and Agrawal, R. P. (2007). Effects of yoga and meditation on clinical and biochemical parameters of metabolic syndrome. Diabetes Res. Clin. Pract. 78, e9–e10.

- Kivipelto, M., Helkala, E. L., Laakso, M. P., Hanninen, T., Hallikainen, M., Alhainen, K., et al. (2001). Midlife vascular risk factors and Alzheimer's disease in later life: longitudinal, population based study. BMJ 322, 1447–1451.
- Kivipelto, M., Ngandu, T., Fratiglioni, L., Viitanen, M., Kareholt, I., Winblad, B., et al. (2005). Obesity and vascular risk factors at midlife and the risk of dementia and Alzheimer disease. Arch. Neurol. 62, 1556–1560.
- Lakhan, S. E., and Schofield, K. L. (2013). Mindfulness-based therapies in the treatment of somatization disorders: a systematic review and meta-analysis. PLoS ONE 8:e71834.
- Lavretsky, H., Epel, E. S., Siddarth, P., Nazarian, N., Cyr, N. S., Khalsa, D. S., et al. (2013). A pilot study of yogic meditation for family dementia caregivers with depressive symptoms: effects on mental health, cognition, and telomerase activity. Int. J. Geriatr. Psychiatry 28, 57–65.
- Lazar, S. W., Kerr, C. E., Wasserman, R. H., Gray, J. R., Greve, D. N., Treadway, M. T., et al. (2005). Meditation experience is associated with increased cortical thickness. Neuroreport 16, 1893–1897.
- Lindberg, D. A. (2005). Integrative review of research related to meditation, spirituality, and the elderly. Geriatr. Nurs. 26. 372–377.
- Luders, E., Clark, K., Narr, K. L., and Toga, A. W. (2011). Enhanced brain connectivity in long-term meditation practitioners. Neuroimage 57, 1308–1316
- Luders, E., Thompson, P. M., Kurth, F., Hong, J. Y., Phillips, O. R., Wang, Y., et al. (2013a). Global and regional alterations of hippocampal anatomy in long-term meditation practitioners. Hum. Brain Mapp. 34, 3369–3375.
- Luders, E., Kurth, F., Toga, A. W., Narr, K. L., and Gaser, C. (2013b). Meditation effects within the hippocampal complex revealed by voxel-based morphometry and cytoarchitectonic probabilistic mapping. Front. Psychol. 4:398.
- Luders, E., Toga, A. W., Lepore, N., and Gaser, C. (2009). The underlying anatomical correlates of long-term meditation: larger hippocampal and frontal volumes of gray matter. Neuroimage 45, 672–678.
- Lutz, A., Slagter, H. A., Dunne, J. D., and Davidson, R. J. (2008). Attention regulation and monitoring in meditation. Trends Cogn. Sci. 12, 163–169.

- Marciniak, R., Sheardova, K., Čermáková, P., Hudeček, D., Šumec, R., & Hort, J. (2014). Effect of meditation on cognitive functions in context of aging and neurodegenerative diseases. Frontiers in Behavioral Neuroscience, 8.
- McEwen, B.S. (2006). Protective and damaging effects of stress mediators: central role of the brain. Dialogues Clin Neurosci. 2006;8:367-381.
- Moss, A. S., Wintering, N., Roggenkamp, H., Khalsa, D. S., Waldman, M. R., Monti, D., et al. (2012). Effects of an 8-week meditation program on mood and anxiety in patients with memory loss. J. Altern. Complement. Med. 18, 48–53.
- Newberg, A., Alavi, A., Baime, M., Pourdehnad, M., Santanna, J., and d'Aquili, E. (2001). The measurement of regional cerebral blood flow during the complex cognitive task of meditation: a preliminary SPECT study. Psychiatry Res. 106, 113–122.
- Newberg, A. B., Serruya, M., Wintering, N., Moss, A. S., Reibel, D., and Monti, D. A. (2013). Meditation and neurodegenerative diseases. Ann. N. Y. Acad. Sci. 1307, 112–123.
- Newberg, A. B., Wintering, N., Khalsa, D. S., Roggenkamp, H., and Waldman, M. R. (2010a). Meditation effects on cognitive function and cerebral blood flow in subjects with memory loss: a preliminary study. J. Alzheimers Dis. 20, 517–526.
- Newberg, A. B., Wintering, N., Waldman, M. R., Amen, D., Khalsa, D. S., and Alavi, A. (2010b). Cerebral blood flow differences between long-term meditators and non-meditators. Conscious. Cogn. 19, 899–905.
- Olazaran, J., Reisberg, B., Clare, L., Cruz, I., Pena-Casanova, J., Del Ser, T., et al. (2010). Nonpharmacological therapies in Alzheimer's disease: a systematic review of efficacy. Dement. Geriatr. Cogn. Disord. 30, 161–178.
- Pagnoni, G., and Cekic, M. (2007). Age effects on gray matter volume and attentional performance in Zen meditation. Neurobiol. Aging 28, 1623–1627.
- Prakash, R., Rastogi, P., Dubey, I., Abhishek, P., Chaudhury, S., and Small, B. J. (2012). Long-term concentrative meditation and cognitive performance among older adults. Neuropsychol Dev Cogn B Aging Neuropsychol Cogn. 19, 479–494
- Prince, M., Bryce, R., Albanese, E., Wimo, A., Ribeiro, W., and Ferri, C. P. (2013). The global prevalence of dementia: a systematic review and metaanalysis. Alzheimers Dement. 9, 63e–75e.

- Reitz, C. (2013). Dyslipidemia and the risk of Alzheimer's disease. Curr. Atheroscler. Rep. 15, 307.
- Rocca, W. A., Petersen, R. C., Knopman, D. S., Hebert, L. E., Evans, D. A., Hall, K. S., et al. (2011). Trends in the incidence and prevalence of Alzheimer's disease, dementia, and cognitive impairment in the United States. Alzheimers Dement. 7, 80–93.
- Roher, A. E., Debbins, J. P., Malek-Ahmadi, M., Chen, K., Pipe, J. G., Maze, S., et al. (2012). Cerebral blood flow in Alzheimer's disease. Vasc. Health Risk Manag. 8, 599–611.
- Salthouse, T. A. (2011). Neuroanatomical substrates of age-related cognitive decline. Psychol. Bull. 137, 753.
- Schwartz, G. E., Davidson, R. J., and Goleman, D. J. (1978). Patterning of cognitive and somatic processes in the self-regulation of anxiety: effects of meditation versus exercise. Psychosom. Med. 40, 321–328.
- Tang, Y. Y., Lu, Q., Geng, X., Stein, E. A., Yang, Y., and Posner, M. I. (2010). Short-term meditation induces white matter changes in the anterior cingulate. Proc. Natl. Acad. Sci. U.S.A. 107, 15649–15652.
- Vestergaard-Poulsen, P., van Beek, M., Skewes, J., Bjarkam, C. R., Stubberup, M., Bertelsen, J., et al. (2009). Long-term meditation is associated with increased gray matter density in the brain stem. Neuroreport 20, 170–174.
- Wachholtz, A. B., and Pargament, K. I. (2005). Is spirituality a critical ingredient of meditation? Comparing the effects of spiritual meditation, secular meditation, and relaxation on spiritual, psychological, cardiac, and pain outcomes. J. Behav. Med. 28, 369–384.
- Waelde, L. C., Thompson, L., and Gallagher-Thompson, D. (2004). A pilot study of a yoga and meditation intervention for dementia caregiver stress. J. Clin. Psychol. 60, 677–687.
- Walton, K. G., Schneider, R. H., and Nidich, S. (2004). Review of controlled research on the transcendental meditation program and cardiovascular disease. Risk factors, morbidity, and mortality. Cardiol. Rev. 12, 262–266.
- Wang, D. J., Rao, H., Korczykowski, M., Wintering, N., Pluta, J., Khalsa, D. S., et al. (2011). Cerebral blood flow changes associated with different meditation practices and perceived depth of meditation. Psychiatry Res. 191, 60–67.
- Wells RE1, Yeh GY, Kerr CE, Wolkin J, Davis RB, Tan Y, Spaeth R, Wall RB, Walsh J, Kaptchuk TJ, Press D, Phillips RS, Kong J. Meditation's impact on default mode network and hippocampus in mild cognitive impairment: a pilot study. Neurosci Lett. 2013 Nov 27;556:15-9.
- Xiong, G. L., and Doraiswamy, P. M. (2009). Does meditation enhance cognition and brain plasticity? Ann. N. Y. Acad. Sci. 1172, 63–69.

Northwest Tribal Elders Project (NTEP)

Building Our Largest Dementia Infrastructure (BOLD)

Addressing Alzheimer's Disease and Related Dementia's (ADRD)



Project Introduction

- History of Northwest Tribal Elders Project
 - The board has had numerous projects
 - History of NW Tribal Elder's Committee
- Why did we apply for the ADRD funding
 - Education
 - Awareness
 - Tribal Support



Some Facts

- In 2015-2017, one in six Al/ANs aged 45 and older reported subjective cognitive decline (SCD), which are self-reported difficulties in thinking or remembering. Nearly two-thirds (63%) of those with SCD had to give up some day-to-day activities because of these cognitive problems.
- With dementia, it's not just the person with cognitive challenges dealing with the condition. Family members and friends feel the impact too.

- The number of older American Indians and Alaska Natives (Al/ANs) is increasing. An estimated 569,000 Al/ANs are aged 65 or older. This number is expected to triple over the next three decades.
- The number of Al/ANs living with dementia is also expected to increase. Between 2014-2060, the number of Al/ANs aged 65 and older living with dementia is projected to grow over five times.

7/1/2021 3

Project Progress

- Presented to NPAIHB Elders Committee at QBM's
 - July 2020, October 2020
- Established an Tribal Advisory Committee (TAC) to make:
 - Recommendations to project staff
 - Guide workplan activities
 - Provide input on needs assessment
 - Provide input to strategic plan design
 - Identify key partners and communication strategies



ADRD Funding

- Northwest Portland Area Indian Health Board
 - CDC's Healthy Brain Initiative for Building our Largest Dementia Infrastructure (BOLD)
 - 3 year capacity building cooperative agreement
- NEW Funding Announced from Indian Health Service
 - \$5million for 574 tribes



Year 1 Focus

- Needs Assessment and or survey Target population
 - Tribal Communities
 - Tribal Leadership
 - ADRD Patient Caregivers
 - Health Care Providers/Professionals
- Develop a strategic plan improving awareness and education of ADRD
- Build community partners through engagement
- Identify culturally relevant support, resources and services
- Identify baseline data through existing and new partners



7/1/2021

Tribal Community Outreach

- Engage with NPAIHB 43-Tribes in ID, OR, WA
- Learn about tribes level of education and awareness
- Recruit tribes for coalition
- Recruit tribal elders for public media interviews (Yr 2)
- WA Tribes Savvy Caregivers Basic Training
 - Of the 29 Tribes, 15 were identified as attending the training

Successes and Challenges

Successes

- Project Launch
- Introductions to local, state and National Alzheimer's Associations and Agencies working with ADRD
- Established TAC
- Contacted/identified 100% of NPAIHB Tribal Elder Program Coordinators
- Identify existing resources
- Identify Tribes trained in caregiving

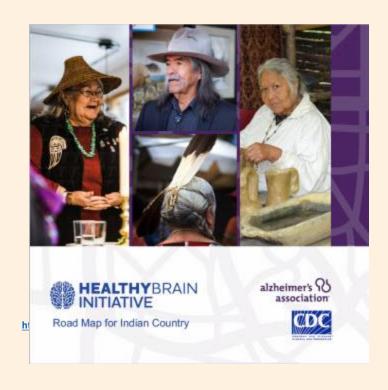
Challenges and Barriers

- COVID-19 priority
- Shelter in place/telework impact on workforce
- Lack of partners working in ADRD with Indian Country
- Access to baseline data
- Tribes are at different levels of awareness and education
- Training and caregiver certification opportunities for Tribal members

7/1/2021 8

Healthy Brain Initiative (HBI) Road Map for Indian Country (RMIC)

- Road Map Strategies for our project:
 - Educate and Empower Community Members
 - Collect and Use Data
 - Strengthen the Workforce
- Our Project workplan includes 4 of the RMIC





7/1/2021 9

Questions: Contact us



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