(n=1518). Those with missing predictors were excluded (n=92; final n=1426). Predictors were age, years of education, stroke, diabetes, depressive symptoms, difficulty with individual activities of daily living (IADL), and body mass index (BMI). The DSI point system was applied: age 65 years is 0 points, 1 point per year for ages 66 to 79 years; <12 years of education, 9 points; stroke, 6 points; diabetes, 3 points; depression, 6 points; IADL difficulty, 10 points; and BMI<18.5, 8 points. Per the DSI, a cut point of ≥22 points stratified subjects into high- and low-risk groups. Sensitivity, specificity, and positive (PPV) and negative predictive values (NPV) of the DSI were calculated. **Results:** The DSI correctly identified 21/278 high-risk subjects (PPV=7.6%) and 1141/1148 low-risk subjects (NPV=97.6%). Sensitivity was 43.8% and specificity was 81.3%. **Conclusions:** Although only 8% of DSI-classified high-risk patients developed dementia over 6 years, 98% of individuals classified as low-risk, and, therefore, not in need of cognitive screening, remained dementia-free. We validated that physicians can risk-stratify patients using the DSI and do not need to recommend low-risk adults for cognitive screening. This would save, on average, $250/cognitive screen in addition to other time- and cost-savings for patients, physicians, Medicare, and healthcare systems.

O1-07-02 RISK STRATIFICATION AND COGNITIVE SCREENING: PREPARING FOR ALZHEIMER'S DISEASE-MODIFYING MEDICATIONS

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Background: When a disease-modifying therapy for Alzheimer's disease (AD) becomes available, many researchers and industry leaders believe that the U.S. health care system will lack the capacity to provide patients with access to treatment within a reasonable timeframe. Access to care begins with effective identification of those patients appropriate for disease-modifying treatment. Risk stratification capacity can be expanded by employing validated cognitive self-assessments in the home setting, enabling patients to bring screening data to their health care professionals. Utilizing cognitive self-assessment screens as a first step toward effective risk stratification has potential to identify older adults who would benefit from a disease-modifying treatment. However, few self-assessments have been validated that are sensitive to mild cognitive impairment (MCI) or early AD. **Methods:** We conducted a national online survey of geriatric health care professionals on the potential use of self-assessment cognitive screening for MCI and AD to address these future health care needs. Next, we developed a rapid self-assessment screen (*myMemCheck*) designed for older adults who have concerns about their cognitive function. The psychometric properties of this instrument were investigated in two separate Maryland, USA nursing home and assisted living samples (Study 1, N = 63; Study 2, N = 200). **Results:** The instrument evidenced adequate reliability and strong construct validity across both studies. Receiver operating characteristic analysis yielded an optimal cut score for identifying older adults with MCI or early AD. **Conclusions:** We discuss implications of using a reliable and valid self-assessment for determining whether a comprehensive test or evaluation for MCI or AD is indicated. Wider detection of MCI and AD by accurate at-home cognitive self-assessments could reduce the screening burden on primary care physicians.

O1-07-03 IMPROVING KNOWLEDGE AND PRACTICE THROUGH MASSIVE OPEN ONLINE DEMENTIA EDUCATION: THE UNDERSTANDING DEMENTIA AND PREVENTING DEMENTIA MOOCS

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Background: There is a documented need and growing demand for evidence-based consumer-friendly education to enable more effective dementia care and wider adoption of strategies to prevent dementia. The Wicking Dementia Research and Education Centre developed the Understanding Dementia Massive Open Online Course (UD-MOOC) to increase knowledge of dementia and person-centered care practices, particularly for those providing care. The Centre's Preventing Dementia MOOC (PD-MOOC) was developed to educate people on the scientific basis of dementia risk reduction, both those interested in reducing their own risk, and those providing related services. **Methods:** The 9-week UD-MOOC examined how the brain is affected by diseases that cause dementia, symptoms, diagnosis, stages, management, and perspectives of those affected and caregivers. The 5-week PD-MOOC explored non-modifiable and modifiable risk factors, myths about dementia risk and causes, and barriers and enablers of health-behaviour change. MOOC completion was defined as a passing grade of 70% on 3 quizzes. To assess MOOC impact, completing participants were asked how they had applied knowledge gained and a natural-language processing algorithm was used to identify common themes. **Results:** Six iterations of the UD-MOOC from 2013 to 2017 attracted a total of 119,611 enrolments, with 47,793 (40%) completing the course. Two offerings of the PD-MOOC in 2016 and 2017 attracted 27,048 enrolments and 13,778 (51%) completed. 76% of 2017 UD-MOOC and 75% of 2017 PD-MOOC feedback survey respondents agreed they had already applied the knowledge gained from the MOOC. Thematic analyses revealed UD-MOOC completers were applying a more person-centered approach to care, changing work practices, and sharing knowledge with others, and had improved understanding of dementia, and more empathy for and confidence in supporting people experiencing dementia. PD-MOOC completers specified they were increasing physical, social and cognitive activity, improving their diet, losing weight, having check-ups for vascular risk factors, more motivated to reduce their risk, and sharing knowledge with others. **Conclusions:** The large enrolments and high completion rates for Wicking's dementia MOOCs highlight the scale of demand for accessible quality dementia education. Participant feedback demonstrates that the MOOCs are improving both knowledge and practice, with potential large-scale impacts for dementia care and prevention.

O1-07-04 INTEGRATING RESEARCH ON ALZHEIMER'S AND OTHER DEMENTIAS INTO POPULATION HEALTH MODELS: OVERCOMING BARRIERS AND EMBRACING NEW OPPORTUNITIES

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Background: Population Health models have become an increasingly valuable approach for understanding how individual health outcome are related to individual care, the overall healthcare system and the social, economic, and environmental context within

which individual and population health outcomes evolve. Population Health is a "conceptual framework for thinking about why some populations are healthier than others" which lends itself to the study of lifecourse transitions that lead to cognitive change such as Alzheimer's and other dementias. **Methods:** This presentation will review emerging opportunities to incorporate cognitive change in later life within a Population Health framework. Working within the generalized framework as described in Figure 1, the presentation describes available databases within each information vector that can be used to measure cognitive change across time and be incorporated into Population Health models. The presentation will also discuss new tools emerging from the NACDA Program on Aging at the University of Michigan that will allow researchers to link confidential EHRs to contextual data, which provides insight on community and environmental impacts on the risk of cognitive health concerns. **Results:** The presentation shows that the Population Health framework is a very useful model to employ when describing cognitive change across individuals and population groups. While barriers do exist in terms of access to confidential and individual level health records, new approaches will allow researchers to incorporate contextual resources into health outcomes analysis of cognitive change in treatment. **Conclusions:** The use of Population Health models are becoming more common research framework across health research disciplines. The routine incorporation of this framework into the study of cognitive change will greatly enhance our understanding of this phenomenon at both the individual and population level.

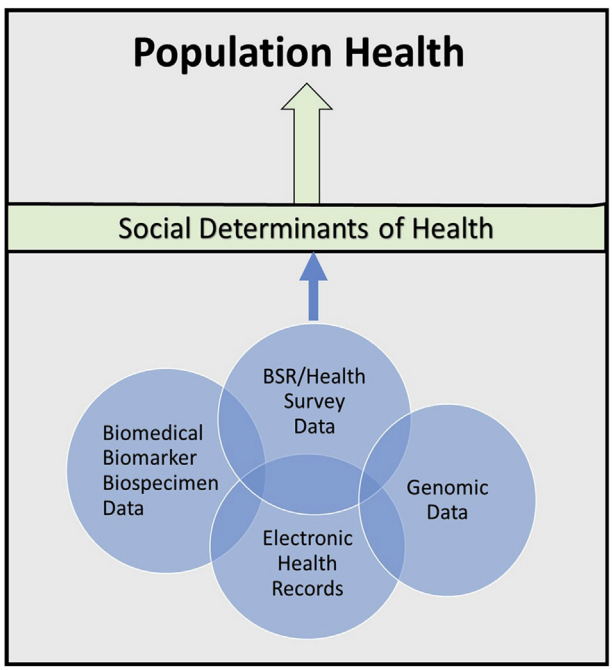

Figure 1. Building a Population Health Framework: The Perspective of a Data Repository.

O1-07-05 CLINICAL ASSESSMENT OF MOBILITY IN DEMENTIA: A SCOPING REVIEW AND FEASIBILITY ANALYSIS

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Background: Mobility decline is a symptom of advanced dementia that impacts function, safety, caregiving, and quality of life. The causes of mobility decline in dementia are multi-factorial, including cognitive, physical, and neurological changes. Many of these factors are progressive in nature, leading to a loss of independent mobility and increased numbers of falls. Monitoring mobility status is essential for preventing excess disability in people with dementia however, the cognitive and behavioral symptoms of dementia present unique challenges for mobility assessment. The goals of this review were to identify and describe existing measures of mobility for people with dementia and to determine their feasibility for use in advanced stages of the disease. **Methods:** Electronic searches of Medline, Embase, CINAHL and PsychInfo databases were conducted using key words related to dementia, mobility, measurement, and validation. Descriptive characteristics (e.g. tool purpose, type, reporting method, number of items) were extracted and measures coded for elements of mobility targeted. Study features such as setting and disease severity were also charted. Tools were evaluated for feasibility of use in advanced dementia according to practical details including the need for communication, attention, motivation, and complex motor skills. Tools deemed feasible were screened for psychometric strength. **Results:** 38 measures were included. 36% of studies included people with advanced dementia. 68% of tools were performance-based. Elements of mobility evaluated were walking (53% of measures), postural transitions (42%), standing (40%), mobility-related behavioral/psychological symptoms (24%), transfers (10%), bed mobility (5%) and wheeled mobility (3%). Only 18% of tools received high scores for feasibility. Four of the 14 tools screened for psychometric strength showed both good reliability and good external validity. **Conclusions:** Existing measures provide only partial information regarding mobility and few target elements that become relevant as dementia progresses. Most tools are not feasible for individuals with advanced dementia and the psychometric evaluation of these tools is limited. More work is needed to develop a comprehensive, dementia-specific, assessment tool that considers the unique symptoms of dementia. Importantly, such a tool should be designed to identify transitions in mobility through the progression of the disease.

O1-07-06 EATING BEHAVIORS IN RELATION TO FOOD AND FLUID INTAKE IN NURSING HOME RESIDENTS WITH DEMENTIA: COMPUTER-ASSISTED BEHAVIORAL ANALYSIS OF MEALTIME VIDEOS

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Background: Institutionalized persons with dementia commonly experience low food and fluid intake leading to negative nutritional and functional outcomes. While the role of multilevel personal and environmental factors are examined, there is lack of evidence for the role of specific eating behaviors, probably due to lack of feasible and reliable tools to capture the complexity of eating processes. The