primary care (PC). The current PC practice of body mass index (BMI) calculation to screen for disease risk lacks specificity to the older adult habitus. Guided by the Health Belief Model, this study utilized a one-way analysis of covariance to examine the effect of experimental cues, WC measurement and central obesity disease risk education, compared to control cues, BMI and obesity classification, on older adults’ health beliefs (perceived susceptibility and health benefits) and behaviors (diet and exercise) 6 weeks post cues/intervention. Of the 99 participants (control group [N=49]; experimental group [N=50]) 92% reported ‘never’ having WC measurement and 76% reported ‘never’ having BMI calculation in PC. Both groups reported high levels of perceived susceptibility and exercise at baseline. Changes in perceived susceptibility, diet, and exercise were non-significant in either group. There was a significant increase in perceived health benefits of WC measurement (p=0.01) and BMI calculation (p=0.01) in the experimental group compared to the control group. Willingness to exercise (p=0.007) significantly increased in the experimental group compared to the control group. The lack of BMI experience in both groups may have caused control cues to function as experimental cues in both groups. Thus, this study provides evidence that combined use of WC measurement, central obesity health risk education, BMI calculation, and obesity classification increase perceived benefits of body measurements and motivate physical activity in older adults over BMI and obesity classification alone.

EFFECTS OF MEDICARE DRUG SUBSIDIES ON ADHERENCE FOR DIABETICS: EVIDENCE FROM A REGRESSION DISCONTINUITY DESIGN
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Out-of-pocket prescription drug costs are rapidly rising, particularly for insulin, which is a life-saving drug used by 3.1 million diabetics on Medicare. High out-of-pocket costs place an accentuated financial strain on older adults with diabetes, many of whom have low incomes, and may impede medication adherence, leading to poor health outcomes. The Medicare Part D Low-Income Subsidy (LIS) program limits drug co-pays to under $8.50 per prescription and caps out-of-pocket drug costs for lowest-income recipients (<135% Federal Poverty Level, FPL), resulting in pronounced differences in out-of-pocket costs for those with marginally different incomes. Using detailed income data from the Health and Retirement Study linked to Medicare claims (2008-2016), we employed a regression discontinuity (RD) design to isolate the effects of differences in out-of-pocket costs at eligibility thresholds for the LIS. Diabetic beneficiaries whose income exceeded the LIS eligibility threshold had lower Part D spending (~$945/year, p=0.03, n=2,367) and adherence to oral antidiabetic drugs (~8%, p=0.02). We conducted secondary analyses at the eligibility threshold for Medicaid, as individuals whose income exceeds the eligibility limit for Medicaid (100% of FPL in most states) are significantly less likely to receive the LIS. Above the Medicaid eligibility threshold (n=2,295), annual spending on insulin was $395 lower (p=0.002) and proportion of insulin use was 6% lower (p=0.04). These results suggest low-income Medicare beneficiaries who are not shielded from out-of-pocket costs via the LIS are particularly sensitive to drug costs. Policy proposals to limit out-of-pocket costs could improve medication adherence to high-cost drugs for vulnerable beneficiaries.

ENVIRONMENTAL INFLUENCES OF EXTREME HEAT ON THE HEALTH OF OLDER ADULTS: A RETROSPECTIVE STUDY
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Studies have suggested that extreme weather events have differential effects by age. By leveraging electronic medical records, we aim to analyze the environmental influence of extreme heat on the health of older adults. From our healthcare system’s de-identified data warehouse, we extracted a retrospective cohort of 108,192 patients who were ≥65 years of age as of 1/1/2018 with pre-existing chronic conditions including diabetes, COPD, cardiovascular disease, or kidney disease. Extreme heat event period was defined as 5/1/2018 to 9/1/2018 (79 days with temperature ≥90°F; 15 days of moderately poor/poor air quality index (AQI) [≥75] values) and the comparison period was defined as 5/1/2019 to 9/1/2019 (51 days with temperature ≥90°F; 0 days with moderately poor/poor AQI values) in the Kansas City area. We randomly partitioned the study cohort into two sets and demonstrated the two patient sets were statistically similar (p=0.05) with respect to their demographic and underlying health conditions. Finally, we compared the respiratory, cardiovascular, and renal health outcomes between the 2018 and the 2019 cohorts. Most patients were Caucasians, female and had comorbid conditions. Results showed significantly higher number of all-cause emergency department visits (p=0.04) and outpatient visits (p=<.001) during the extreme heat event period in 2018. Analyses also showed significantly higher number of outpatient visits due to upper respiratory diseases (p=0.008) and acute renal failure (p=0.01) in 2018. In conclusion, extreme heat increased use of healthcare services in older adults with chronic conditions.

SMOKING, BUT NOT OTHER ENVIRONMENTAL EXPOSURES, INCREASES RISK FOR ADVANCED BRAIN AGING
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Exposure to harmful substances and chemicals such as tobacco smoke, chemicals (e.g., herbicides, pesticides, Agent Orange) and metal dust has been associated with increased risk of developing cancer, cardiovascular disease, and other diseases that contribute to shorter life expectancy. Associations with brain health in relation to these exposures are less well studied. We examined the relationship between brain health and prolonged exposure to different harmful substances in 498 male participants average age 68 (range 61 to 73) from the Vietnam Era Twin Study of Aging
A SYSTEMATIC REVIEW OF OBSERVATIONAL DYADIC PERSONS LIVING WITH DEMENTIA: CAREGIVER COMMUNICATION INSTRUMENTS

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To facilitate social interaction and providing quality care in persons living with dementia (PLWD), an effective means of evaluating communication quality between PLWD and their caregiver is needed. However, there is no systematic review of current instruments to assess dyadic PLWD-caregiver interactions in various care settings. The purpose of this review was to critically evaluate existing dyadic observational communication instruments used to provide recommendations. A systematic review using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Guideline was conducted. Literature that were published by May 2019 in English were searched from CINAHL, AgeLine, PsychINFO, Communication and Mass Media Complete, ProQuest Dissertations and Theses Global, and Scopus. Keywords were “communication strategy,” “communication,” “caregivers,” “dementia,” and any combination of these terms or MeSH terms. Data were extracted including development process, operational concept, target population and setting, items/scoring format, psychometric properties, and research/clinical use. A total of 3042 articles were identified and 15 instruments from 29 studies were evaluated by the scoring of 12 psychometrics: participants/items ratio, reliability (internal consistency, intra-rater, inter-rater), and validity (content, concurrent, predictive, known group difference, divergent/discriminant, convergent, structural). The total score was ranged from 0 to 22 (high quality: 16-22, moderate: 8-15, low: 0-7). There was no instrument with high quality assessing dyadic interaction. Only one instrument was evaluated as moderate quality (modified Behavioral Observation Scoring System, BOSS). While existing instruments are still in the early stages of development and testing, they demonstrate potential evidence that may require further testing before application in research and clinical practice.

ACCELERATED DECLINE IN SENSE OF PURPOSE IN LIFE YEARS PRIOR TO DEMENTIA DIAGNOSIS

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Research has pointed to sense of purpose in life as an important individual difference that promotes successful aging, predicting greater psychological wellbeing, physical functioning, and cognitive health in older adulthood. Despite such benefits, it is unclear how major life challenges such as the onset of cognitive impairment may impact the sense of purpose of older adults. Building on this, the present study examined long-term change in sense of purpose in a longitudinal sample of older adults who would later develop dementia. Data were from 341 participants without dementia at study intake who were subsequently diagnosed with dementia during the follow-up period (Mage = 81.92 years at intake, Mage = 89.19 years at diagnosis, 72.72% female). Participants completed annual assessments of purpose in life up to 17 years prior to dementia diagnosis (M = 6.99 assessments prior to diagnosis). Piecewise growth modeling