to recruit 150 older (>55 years) participants through the African Immigrant Health Study and community-based organizations serving African immigrants. We will use the PROMIS physical function measure to assess functional disability, the Everyday Discrimination scale and the Psychological Acculturation scale will be used to measure discrimination and acculturation respectively. Higher scores indicate greater severity. RESULTS/ANTICIPATED RESULTS: We have recruited 12 participants so far. The mean age is 57 years and mean length of stay in the United States is 23 years. Mean disability score is 6.5 (range 1–38). Mean discrimination is 8.2 (range 4–15). The prevalent acculturation strategy of these participants (7) is marginalization (neither identified with the American nor African cultures). DISCUSSION/SIGNIFICANCE OF IMPACT: Preliminary results indicate pervasive discrimination and marginalization of study participants. Exploring these experiences can inform preventive strategies of coping and health behaviors that can decrease the negative effects of discrimination, acculturation and functional disability in African immigrants.

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Factors associated with dual use of VA and civilian healthcare among U.S. National Guard and Reserve soldiers

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OBJECTIVES/SPECIFIC AIMS: Approximately 25%–45% of veterans are dual users of VA and civilian healthcare. In order to maximize patient outcomes, understanding factors related to dual use is important. This study examined mental and physical health factors related to dual use of VA and civilian healthcare among U.S. National Guard and Reserve (NG/R) soldiers. METHODS/STUDY POPULATION: NG/R soldiers and their partners (n = 411 couples) participated in an electronic survey assessing health and health behaviors. Logistic regression models were used to examine the relationship between mental health (anxiety, depression, PTSD, anger), general health, and VA disability status at baseline, with usage of both VA and civilian healthcare among male soldiers (n = 109) at the second year follow-up, controlling for age and race. RESULTS/ANTICIPATED RESULTS: In the final adjusted models, of the mental health conditions, only anxiety was related to dual use (OR: 1.08, 1.01–1.16, $p < 0.05$). Having a VA disability rating (OR: 4.00, 1.22–13.18; $p < 0.05$) was also related to being a dual user. General health was not related to dual use. DISCUSSION/SIGNIFICANCE OF IMPACT: While research has identified demographic characteristics (e.g., rurality, race, income) related to dual healthcare use, our results indicate that mental health, particularly anxiety, may also be related to dual use. Further study is needed to tease out the prime drivers of dual use to identify future care delivery mechanisms that will maximize treatment outcomes and minimize duplicative care.

2400

How have characteristics of end-of-life family caregiving changed from 1999 to 2015? Preliminary results from two waves of nationally representative data

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OBJECTIVES/SPECIFIC AIMS: Family members are often critical in the delivery of hands-on care and decisions about care for persons approaching end-of-life (EOL). Prompted by concerns about the poor quality and high costs of care at the EOL, recent delivery reform efforts—such as the growth of hospice and palliative care—have been directed at improving EOL care for both patients and family. Trends of the characteristics of EOL family caregivers and care recipients over time have not been well described. The goal of this study is to evaluate changes in EOL family caregiving from 1999 to 2015. METHODS/STUDY POPULATION: This study uses reconciled data from two nationally representative surveys and their linked caregiver surveys: the 1999 wave of the National Long-Term Care Survey (NLTCS) and the Informal Care Survey (ICS), and the 2015 wave of the National Health and Aging Trends Study (NHATS) and the National Survey of Caregiving (NSOC). RESULTS/ANTICIPATED RESULTS: Crude analysis shows that older adults living in the community and receiving help from family caregivers in the last year of life were significantly better educated (72% with greater than 12 years of education vs.

46%), and more diverse (78% White vs. 89%) in 2015 compared with 1999. Family caregivers in the last year of life were less likely to be female in 2015 compared with 1999 (74% vs. 68%, NS) and significantly less likely to be spouses (45% vs. 38%) in 2015. In 2015, a significantly greater proportion of older adults received help with five or more activities of daily living (47% vs. 34%), but family caregivers reported significantly lower levels of caregiving-associated distress: financial strain (80% reporting none in 2015 vs. 53%), emotional (51% vs. 39%), and physical strain (70% vs. 45%). In addition, a significantly greater proportion of EOL family caregivers used respite care in 2015 compared to 1999 (15% vs. 4%). DISCUSSION/SIGNIFICANCE OF IMPACT: Changes in the experience of EOL family caregiving may be impossible to capture in studies of single interventions, but tracking nationally representative trends can be used as an indicator of broader changes that take place cumulatively over time. Although studies of this nature cannot identify causal mechanisms of change, they are important to monitor long-term impact of program implementation and to guide future research, policy, and resource allocation.

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Impact of primary care physician gatekeeping on medication prescriptions for atrial fibrillation

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OBJECTIVES/SPECIFIC AIMS: Atrial fibrillation (AF) is the most commonly encountered arrhythmia in clinical practice, and has widely varying treatments for stroke prevention and rhythm management. Some of these therapies are increasingly being prescribed by primary care physicians (PCPs). We therefore sought to investigate if healthcare plans with PCP gatekeeping for access to specialists are associated with different pharmacologic treatment strategies for the disease. In particular, we focused on oral anticoagulants (OACs), non-vitamin K-dependent oral anticoagulants (NOACs), rate control, and rhythm control medications. METHODS/STUDY POPULATION: We examined a commercial pharmaceutical claims database (Truven Marketscan™) to compare the prescription frequency of OAC, rate control, and rhythm control medications used to treat AF between patients with PCP-gated health plans (where the PCP is the gatekeeper to specialist referral—i.e., HMO, EPO, POS) and patients with non-PCP-gatekeeper health plans (i.e., comprehensive, PPO, CHDP, HDHP). To control for potential confounders, we also used multivariable logistic regression models to calculate adjusted odds ratios which accounted for age, sex, region, Charlson comorbidity index, CHADS2Vasc score, hypertension, diabetes, stroke/transient ischemic attack, prior myocardial infarction, peripheral artery disease, and antiplatelet medication use. We also calculated median time to therapy to determine if there was a difference in time to new prescription of these medications. RESULTS/ANTICIPATED RESULTS: We found only small differences between patients in PCP-gated and non-PCP-gated plans regarding prescription proportion of anticoagulants at 90 days following new AF diagnosis (OAC 44.2% vs. 42%, $p < 0.01$; warfarin 39.1% vs. 37.1%, $p < 0.01$; NOAC 5.9% vs. 6.0%, $p = 0.64$). We observed similar trends for rate control agents (76.4% vs. 73.4%, $p < 0.01$) and rhythm control agents (24.4% vs. 24.6%, $p = 0.83$). We found similar odds of OAC prescription at 90 days following new AF diagnosis between patients in PCP-gated and non-PCP-gated plans (adjusted OR for PCP-gated plans relative to non-gated plans: OAC 1.006, $p = 0.84$; warfarin 1.054, $p = 0.08$; NOAC 0.815, $p = 0.001$; dabigatran 0.833, $p = 0.004$; and rivaroxaban 0.181, $p = 0.02$). We observed similar trends for rate control agents (1.166, $p < 0.0001$) and rhythm control agents (0.927, $p = 0.03$). Elapsed time until receipt of medication was similar between PCP-gated and non-gated groups [OAC 4 ± 14 days (interquartile range) vs. 5 ± 16 days, $p < 0.0001$; warfarin 4 ± 14 vs. 5 ± 14, $p < 0.0001$; NOAC 7 ± 26 vs. 6 ± 23, $p = 0.2937$; rhythm control 13 ± 35 vs. 13 ± 34, $p = 0.8661$; rate control 10 ± 25 vs. 11 ± 30, $p < 0.0001$]. DISCUSSION/SIGNIFICANCE OF IMPACT: We found that plans with PCP gatekeeping to specialist referrals were not associated with clinically meaningful differences in prescription rates or delays in time to prescription of oral anticoagulation, rate control, and rhythm control drug therapy. In some cases, PCP gatekeeping plans had very small but statistically significant lower odds of being prescribed NOACs. These findings suggest that PCP gatekeeping does not appear to be a major structural barrier in receipt of medications for AF, although non-PCP-gated plans may vary slightly favor facilitating the prescription of NOACs. Our findings that overall OAC prescriptions did not differ by PCP gating status may suggest completion of the rapid dissemination and uptake phase for most AF treatments. The small but statistically significant odds ratios favoring the non-PCP-gated populations in NOACs further suggests that in this newer drug group, the process is ongoing, with more specialists representing early adopters. Interestingly,