SafetyLit October 23, 2016

Ability of self-reported frailty components to predict incident disability, falls, and all-cause mortality: results from a population-based study of older Briitish men

Papachristou E, Wannamethee SG, Lennon LT, Papacosta O, Whincup PH, Iliffe S, Ramsay SE.

J. Am. Med. Dir. Assoc. 2016; ePub(ePub): ePub.

Affiliation: Department of Primary Care and Population Health, UCL Medical School, London, United Kingdom.

DOI 10.1016/j.jamda.2016.08.020 **PMID** 27742583

Abstract

BACKGROUND: Frailty is a state of increased vulnerability to disability, falls, and mortality. The Fried frailty phenotype includes assessments of grip strength and gait speed, which are complex or require objective measurements and are challenging in routine primary care practice. In this study, we aimed to develop a simple assessment tool based on self-reported information on the 5 Fried frailty components to identify older people at risk of incident disability, falls, and mortality.

METHODS: Analyses are based on a prospective cohort comprising older British men aged 71-92 years in 2010-2012. A follow-up questionnaire was completed in 2014. The discriminatory power for incident disability and falls was compared with the Fried frailty phenotype using receiver operating characteristic-area under the curve (ROC-AUC); for incident falls it was additionally compared with the FRAIL scale (fatigue, resistance, ambulation, illnesses, and loss of weight). Predictive ability for mortality was assessed using age-adjusted Cox proportional hazard models.

RESULTS: A model including self-reported measures of slow walking speed, low physical activity, and exhaustion had a significantly increased ROC-AUC [0.68, 95% confidence interval (CI) 0.63-0.72] for incident disability compared with the Fried frailty phenotype (0.63, 95% CI 0.59-0.68; P value of ΔAUC = .003). A second model including self-reported measures of slow walking speed, low physical activity, and weight loss had a higher ROC-AUC (0.64, 95% CI 0.59-0.68) for incident falls compared with the Fried frailty phenotype (0.57, 95% CI 0.53-0.61; P value of ΔAUC < .001) and the FRAIL scale (0.56, 95% CI 0.52-0.61; P value of ΔAUC = .001). This model was also associated with an increased risk of mortality (Harrell's C = 0.73, Somer's D = 0.45; linear trend P < .001) compared with the Fried phenotype (Harrell's C = 0.71; Somer's D = 0.42; linear trend P < .001) and the FRAIL scale (Harrell's C = 0.71, Somer's D = 0.42; linear trend P < .001).

CONCLUSIONS: Self-reported information on the Fried frailty components had superior discriminatory and predictive ability compared with the Fried frailty phenotype for all the adverse outcomes considered and with the FRAIL scale for incident falls and mortality. These findings have important implications for developing interventions and health care policies as they offer a simple way to identify older people at risk of adverse outcomes associated with frailty.

PDF Y Endnote Y

Age-friendly communities initiative: public health approach to promoting successful aging

Citation

Jeste DV, Blazer DG, Buckwalter KC, Cassidy KK, Fishman L, Gwyther LP, Levin SM, Phillipson C, Rao RR, Schmeding E, Vega WA, Avanzino JA, Glorioso DK, Feather J.

Am. J. Geriatr. Psychiatry 2016; ePub(ePub): ePub.

Affiliation: Grantmakers in Aging, Arlington, VA.

DOI 10.1016/j.jagp.2016.07.021 **PMID** 27742528

Abstract
Older adults consistently prefer aging in place, which requires a high level of community support and services that are currently lacking. With a rapidly aging population, the present infrastructure for healthcare will prove even more inadequate to meet seniors' physical and mental health needs. A paradigm shift away from the sole focus on delivery of interventions at an individual level to more prevention-focused, community-based approaches will become essential. Recent initiatives have been proposed to promote healthy lifestyles and preventive care to enable older adults to age in place. Prominent among these are the World Health Organization's Global Age-Friendly Communities (AFC) Network, with 287 communities in 33 countries, and AARP's Network of AFCs with 77 communities in the United States. In an AFC, older adults are actively involved, valued, and supported with necessary infrastructure and services. Specific criteria include affordable housing, safe outdoor spaces and built environments conducive to active living, inexpensive and convenient transportation options, opportunities for social participation and community leadership, and accessible health and wellness services. Active, culture-based approaches, supported and developed by local communities, and including an intergenerational component are important. This article provides a brief historical background, discusses the conceptualization of the AFC, offers a list of criteria, narrates case studies of AFCs in various stages of development, and suggests solutions to common challenges to becoming age-friendly. Academic geriatric psychiatry needs to play a major role in the evolving AFC movement to ensure that mental healthcare is considered and delivered on par with physical care.

PDF Endnote Y

Ageing, chronic disease and injury: a study in Western Victoria (Australia)
Sajjad MA, Holloway KL, Kotowicz MA, Livingston PM, Khasraw M, Hakkennes S, Dunning TL, Brumby S, Page RS, Pedler D, Sutherland A, Venkatesh S, Brennan-Olsen SL, Williams LJ, Pasco JA.
J. Public Health Res. 2016; 5(2): e678.
Affiliation: Deakin University , Geelong.

DOI 10.4081/jphr.2016.678 **PMID** 27747201
Abstract
BACKGROUND: An increasing burden of chronic disease and associated health service delivery is expected due to the ageing Australian population. Injuries also affect health and wellbeing and have a long-term impact on health service utilisation. There is a lack of comprehensive data on disease and injury in rural and regional areas of Australia. The aim of the Ageing, Chronic Disease and Injury study is to compile data from various sources to better describe the patterns of chronic disease and injury across western Victoria.
DESIGN: Ecological study.
METHODS: Information on demographics, socioeconomic indicators and lifestyle factors are obtained from health surveys and government departments. Data concerning chronic diseases and injuries will be sourced from various registers, health and emergency services, local community health centres and administrative databases and compiled to generate profiles for the study region and for sub-populations within the region. Expected impact for public health: This information is vital to establish current and projected population needs to inform policy and improve targeted health services delivery, care transition needs and infrastructure development. This study provides a model that can be replicated in other geographical settings.
PDF Y Endnote Y

Associations of potentially inappropriate medicine use with fall-related hospitalisations and primary care visits in older New Zealanders: a population-level study using the updated 2012 Beers Criteria

Narayan SW, Nishtala PS.

Drugs Real World Outcomes 2015; 2(2): 137-141.

Affiliation: School of Pharmacy, University of Otago, PO Box 56, Dunedin, 9054, New Zealand. prasad.nishtala@otago.ac.nz.

DOI 10.1007/s40801-015-0020-y **PMID** 27747763

Abstract

BACKGROUND: Identifying potentially inappropriate medicines (PIMs) leading to adverse drug events may reduce the risk of morbidity and mortality in older people.

OBJECTIVE: The aim of this study was to examine the relationship between exposure to PIMs and risk of Fall-related hospitalisations (FRH) and frequency of primary care visits in older New Zealanders.

METHODS: Pharmaceutical collections (2011), diagnostic (2007-2011) and events (2012) information derived from the National Minimum Datasets were used to extract demographics, medication and diagnostic information for 537,387 individuals aged ≥65 years. Prescription and diagnostic information were matched through unique National Health Index numbers. The updated Beers 2012 criteria were used to identify PIMs. Polypharmacy was defined as five or more medicines dispensed concurrently for ≥90 days.

RESULTS: Individuals exposed to one or more PIMs had an increased risk of FRH with an incidence rate ratio (IRR) of 1.45 (95 % confidence interval [CI] 1.37-1.52) and a greater number of primary care visits (IRR 1.15; 95 % CI 1.15-1.16). Individuals exposed to polypharmacy had an IRR of 1.41 (95 % CI 1.33-1.50) for FRH and an IRR of 1.14 (95 % CI 1.13-1.15) for primary care visits.

CONCLUSION: PIMs identified by the 2012 Beers criteria showed an increased risk of FRH and a greater number of primary care visits. Age ≥85 years and female sex were identified as significant predictors of FRH and primary care visits.

PDF Y Endnote Y

Effect of pedometer use and goal setting on walking and functional status in overweight adults with multimorbidity: a crossover clinical trial

Takahashi PY, Quigg SM, Croghan IT, Schroeder DR, Ebbert JO.

Clin. Interv. Aging 2016; 11: 1099-1106.

Affiliation: Division of Primary Care Internal Medicine.

DOI 10.2147/CIA.S107626 **PMID** 27621602

Abstract

BACKGROUND: Walking can improve functional status, and a pedometer and goal setting can increase walking and, potentially, gait speed. The efficacy of pedometer use and goal setting for increasing step counts among overweight and obese adults with multiple comorbid conditions has not been evaluated.

METHODS: We recruited and randomly assigned obese or overweight adults with multimorbidity to immediate pedometer use with goal setting or delayed pedometer use, using a crossover design. The primary outcome of interest was step count, with secondary outcomes of gait speed and grip strength, with comparison between the intervention and delayed pedometer groups.

RESULTS: Mean (standard deviation [SD]) age of the 130 participants was 63.4 (15.0) years. At 2 months, mean (SD) steps for the immediate pedometer use group (n=64) was 5,337 (3,096), compared with 4,446 (2,422) steps in the delayed pedometer group (n=66) (P=0.08). Within-group step count increased nonsignificantly, by 179 steps in the immediate pedometer group and 212

steps in the delayed pedometer group after 2 months of intervention, with no significant difference between the groups. Gait speed significantly increased by 0.08 m/s (P<0.05) and grip strength significantly increased by 1.6 kg (P<0.05) in the immediate pedometer group.
CONCLUSION: Pedometer use and goal setting did not significantly increase step count among overweight and obese adults with multimorbidity. The absolute step count was lower than many reported averages. Gait speed and grip strength increased with immediate pedometer use. The use of pedometers and goal setting may have an attenuated response in this population.
PDF Y Endnote Y

Fall risk and its associated factors among older adults without home-help services in a Swedish municipality
Hammarlund CS, Hagell P, Westergren A.
J. Community Health Nurs. 2016; 33(4): 181-189.
Affiliation: The PRO-CARE Group , Kristianstad University , Kristianstad , Sweden.

DOI 10.1080/07370016.2016.1227211 **PMID** 27749090
Abstract
During preventive home visits, the purpose of this study was to identify the prevalence of fall risk and any associated factors. Participants (n = 1471) were cognitively sound community-dwelling older adults (≥ 70 years) without home-help service, living in a Swedish municipality. The Downton Fall Risk Index and nine single items were used. Tiredness/fatigue, age ≥ 80, inability to walk 1 hr, inability to climb stairs and worrying were significantly associated with fall risk. Preventive home visits incorporating fall-risk screening proved valuable, providing information for interventions aimed at preventing falls, maintaining independence, and facilitating health among community dwelling participants.
PDF Y Endnote Y

Mobility limitations and fear of falling in non-English speaking older Mexican-Americans
James EG, Conatser P, Karabulut M, Leveille SG, Hausdorff JM, Cote S, Tucker KL, Barton B, Bean JF, Al Snih S, Markides KS.
Ethn. Health 2016; ePub(ePub): epub.
Affiliation: Department of Preventive Medicine and Community Health , University of Texas Medical Branch , Galveston , TX , USA.

DOI 10.1080/13557858.2016.1244660 **PMID** 27741576
Abstract
OBJECTIVE: To determine whether older Mexican-Americans who cannot speak and/or understand spoken English have higher rates of mobility limitations or fear of falling than their English-speaking counterparts.
DESIGN: We conducted a cross-sectional analysis of 1169 community-dwelling Mexican-Americans aged 72-96 years from the 2000-2001 wave of the Hispanic Established Population for the Epidemiological Study of the Elderly. Mobility limitations were defined as having a Short Physical Performance Battery score ≤9, and fear of falling by participant report of being somewhat, fairly, or very afraid of falling. We determined the rates and odds ratios, for having mobility limitations and fear of falling as a function of English ability in those who were 72-96, <80, and ≥80 years of age.
RESULTS: Among participants who were unable to speak and/or understand spoken English 85.7% had mobility limitations and 61.6% were afraid of falling, compared to 77.6% and 57.5%, respectively, of English speakers. Before adjusting for covariates, participants who did not speak and/or understand spoken English were more likely to have mobility limitations (odds ratio: 1.7; 95% CI: 1.3-2.4) but not fear of falling, compared to English speakers. Among those aged ≥80 years, but not those <80 years, who did not speak or understand English were more likely to have mobility

limitations (odds ratio: 4.8; 95% CI:2.0-11.5) and fear of falling (odds ratio: 2.0; 95% CI:1.3-3.1).
CONCLUSION: Older Mexican-Americans who do not speak or understand spoken English have a higher rate of mobility limitations and fear of falling than their English-speaking counterparts.
PDF Y Endnote Y

Non-tricyclic and non-selective serotonin reuptake inhibitor antidepressants and recurrent falls in frail older women
Naples JG, Kotlarczyk MP, Perera S, Greenspan SL, Hanlon JT.
Am. J. Geriatr. Psychiatry 2016; ePub(ePub): ePub.
Affiliation: Department of Medicine, Division of Geriatrics, School of Medicine, University of Pittsburgh, Pittsburgh, PA; Department of Pharmacy and Therapeutics, School of Pharmacy, University of Pittsburgh, Pittsburgh, PA; Center for Health Equity Research and Promotion, Geriatric Research Education and Clinical Center, Veterans Affairs Pittsburgh Healthcare System, Pittsburgh, PA. Electronic address: jth14@pitt.edu.

DOI 10.1016/j.jagp.2016.08.008 **PMID** 27743842
Abstract
OBJECTIVE: To determine the risk of recurrent falls associated with antidepressants other than tricyclics (TCAs) and selective serotonin reuptake inhibitors (SSRIs) among frail older women.
METHODS: This is a secondary analysis of the Zoledronic acid in frail Elders to STrengthen bone, or ZEST, trial data treated as a longitudinal cohort in 181 frail, osteoporotic women aged ≥65 years in long-term care. The primary exposure was individual non-TCA/non-SSRI antidepressants (i.e., serotonin norepinephrine reuptake inhibitors, mirtazapine, trazodone, and bupropion) at baseline and 6 months. The main outcome was recurrent (at least two) falls within 6 months after antidepressant exposure. Adjusted odds ratios (AORs) and 95% confidence intervals (CIs) were derived using a generalized estimating equations model.
RESULTS: At least 15% of women experienced recurrent falls between 0-6 and 6-12 months. At baseline and 6 months, 18.2% and 6.9% had a non-TCA/non-SSRI antidepressant, respectively. Adjusting for demographics, health status, and other drugs that increase risk of falls, non-TCA/non-SSRI antidepressant exposure significantly increased the risk of recurrent falls (AOR: 2.14; 95% CI: 1.01-4.54). Fall risk further increased after removing bupropion from the non-TCA/non-SSRI antidepressant group in sensitivity analyses (AOR: 2.73; 95% CI: 1.24-6.01).
CONCLUSIONS: Other antidepressant classes may not be safer than TCAs/SSRIs with respect to recurrent falls in frail older women.

PDF Endnote Y

Review of safety and efficacy of sleep medicines in older adults
Schroeck JL, Ford J, Conway EL, Kurtzhalts KE, Gee ME, Vollmer KA, Mergenhagen KA.
Clin. Ther. 2016; ePub(ePub): ePub.
Affiliation: VA Western New York Healthcare System, Buffalo, New York. Electronic address: kari.mergenhagen@va.gov.

DOI 10.1016/j.clinthera.2016.09.010 **PMID** 27751669
Abstract
PURPOSE: Insomnia is problematic for older adults. After behavioral modifications fail to show adequate response, pharmacologic options are used. The pharmacokinetics of agents used to treat insomnia may be altered. This review focuses on the safety and efficacy of medications used to treat insomnia.
METHODS: A literature search of Medline, PubMed, and Embase was conducted (January 1966-June

2016). It included systematic reviews, randomized controlled trials, observational studies, and case series that had an emphasis on insomnia in an older population. Search terms included medications approved by the US Food and Drug Administration for insomnia: benzodiazepines (triazolam, estazolam, temazepam, flurazepam, and quazepam), nonbenzodiazepine receptor agonists (non-BzRAs; zaleplon, zolpidem, and eszopiclone), suvorexant, ramelteon, doxepin and trazodone. Off-label drugs such as other antidepressants, antihistamines, antipsychotics, gabapentin, pramipexole, tiagabine, valerian, and melatonin were also included.
FINDINGS: Cognitive behavioral therapy and sleep hygiene are considered initial therapy for insomnia. Benzodiazepines are discouraged in the geriatric population, especially for long-term use. Although non-BzRAs have improved safety profiles compared with benzodiazepines, their side effects include dementia, serious injury, and fractures, which should limit their use. Ramelteon has a minimal adverse effect profile and is effective for sleep-onset latency and increased total sleep time, making it a valuable first-line option. Although the data on suvorexant are limited, this drug improves sleep maintenance and has mild adverse effects, including somnolence; residual daytime sedation has been reported, however. Sedating low-dose antidepressants should only be used for insomnia when the patient has comorbid depression. Antipsychotic agents, pramipexole, and tiagabine have all been used for insomnia, but none has been extensively studied in an older population, and all have considerable adverse effects. Gabapentin may be useful in patients with restless leg syndrome or chronic neuropathic pain and insomnia. Diphenhydramine should be avoided in the elderly. Valerian and melatonin are unregulated products that have a small impact on sleep latency and can produce residual sedation.
IMPLICATIONS: An ideal treatment for insomnia should help to improve sleep latency and sleep duration with limited awakenings and be without significant adverse effects such as daytime somnolence or decreased alertness. Cognitive behavioral therapy should always be first line treatment. Clinical inertia regarding previous prominent use of benzodiazepines and non-BzRAs will be a significant challenge for patients accustomed to their issuance. The future direction of insomnia treatment should have an emphasis on nonpharmacologic interventions, treating comorbid conditions, and focusing therapy on using benzodiazepines and non-BzRAs as last resorts.
PDF Y Endnote Y

Validity of a single question to assess habitual physical activity of community-dwelling older people

Portegijs E, Sipilä S, Viljanen A, Rantakokko M, Rantanen T.
Scand. J. Med. Sci. Sports 2016; ePub(ePub): ePub.
Affiliation: Gerontology Research Center and Department of Health Sciences, University of Jyväskylä, Jyväskylä, Finland.

DOI 10.1111/sms.12782 **PMID** 27747944
Abstract
The aim is to determine concurrent validity of a single self-report habitual physical activity (PA) question against accelerometer-based PA and mobility variables, and corresponding changes in self-reported PA and mobility. Cross-sectional and longitudinal data of the "Life-space mobility in old age" (LISPE) cohort and its substudy on PA were utilized. At baseline, 848 community-dwelling, 75- to 90-year-old people living independently in central Finland participated in home-based interviews. One and 2 years later, 816 and 761 of them were reassessed by phone, respectively. Tri-axial accelerometer data over 7 days were collected following the baseline assessments in a subsample of 174. Self-reported habitual PA was assessed based on intensity and duration using a single question with seven response options (range: mostly resting to competitive sports). Mobility variables were as follows: life-space mobility, walking difficulty over 500 m, and short physical performance battery. Statistically significant correlations were found between self-reported habitual PA and mobility (Spearman correlation coefficient Rs = 0.40-0.61) and accelerometer-based PA variables [step counts

(Rs = 0.49), time in moderate (Rs = 0.49) and low intensity (Rs = 0.40) PA, and time in sedentary behavior (Rs = -0.28)]. A decline in self-reported habitual PA over time was associated with 5-10p decline in life-space mobility (PA improvement with 0-3p increase) and with developing a higher degree of walking difficulty (in 35-44% of participants). In conclusion, based on these results, the self-report question to assess habitual PA is valid and responsive to change and thus useful for epidemiological research in community-dwelling older people, also in follow-up studies.

PDF Y Endnote Y

What are the circumstances of falls and fractures in long-term care?
McArthur C, González DA, Roy E, Giangregorio L.
Can. J. Aging 2016; ePub(ePub): 1-8.
Affiliation: Department of Kinesiology,University of Waterloo.

DOI 10.1017/S0714980816000556 **PMID** 27745566
Abstract
This prospective, observational study characterizes the circumstances that led to falls in long-term care (LTC) residents and describes the characteristics of residents who fractured following a fall. Staff recorded the location of the fall, time of day, activity the participant was doing prior, and if an injury occurred. Descriptive statistics were used to describe the falls, and a generalized linear model was used to determine differences between the circumstances. Of the 101 LTC residents who participated, 41 per cent experienced at least one fall. Residents were significantly more likely to have fallen in the bedroom and while walking. Of the 17 falls resulting in fractures, most occurred in the bedroom and bathroom, during the early morning; most residents who fractured were female with cognitive impairment. To monitor falls comprehensively, ambulatory monitoring that avoids privacy issues in bedrooms or bathrooms may be needed. Interventions should target walking or the bedroom setting.
PDF Y Endnote Y

Potential risk of increased risk of falls associated with high doses of vitamin D
Tufan F, Soyluk O, Karan MA.
J. Am. Coll. Cardiol. 2016; 68(16): 1819.

DOI 10.1016/j.jacc.2016.06.071 **PMID** 27737752
Abstract Letter to Editor [Abstract unavailable]
PDF Y Endnote Y

Reply: Potential risk of increased risk of falls associated with high doses of vitamin D treatment
Byrom R, Cairns DA, Witte KK.
J. Am. Coll. Cardiol. 2016; 68(16): 1819-1820.

DOI 10.1016/j.jacc.2016.07.759 **PMID** 27737753
Abstract Reply letter to Editor [Abstract unavailable]
PDF Y Endnote Y