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Polypharmacy and falls in older people: Balancing evidence-based medicine against falls risk

Citation: Postgraduate Medicine, 01 April 2015, vol./is. 127/3(330-337), 00325481

Author(s): Zia, Anam, Kamaruzzaman, Shahrul Bahyah, Tan, Maw Pin

Abstract: The term polypharmacy has negative connotations due to its association with adverse drug reactions and falls. This spectrum of adverse events widens when polypharmacy occurs among the already vulnerable geriatric population. To date, there is no consensus definition of polypharmacy, and diverse definitions have been used by various researchers, the most common being the consumption of multiple number of medications. Taking multiple medications is considered a risk factor for falls through the adverse effects of drug-drug or drug-disease interactions. Falls studies have determined that taking ≥ 4 drugs is associated with an increased incidence of falls, recurrent falls, and injurious falls. In light of existing evidence, careful and regular medication reviews are advised to reduce the effect of polypharmacy on falls. However, intervention studies on medication reviews and their effectiveness on falls reduction have been scarce. This article reviews and discusses the evidence behind polypharmacy and its association with falls among older individuals, and highlights important areas for future research.

Publication Type: journal article

Source: CINAHL

Falls prevention education: Interprofessional training to enhance collaborative practice

Citation: Journal of the American Geriatrics Society, April 2015, vol./is. 63/(S5-S6), 0002-8614 (April 2015)

Author(s): McKenzie G., Lasater K., Delander G., Neal M., Morgove M., Eckstrom E.

Abstract: Background: The gap between the complex health care needs of older adults and the availability of geriatrics-trained health care professionals is widening. Interprofessional (IP) education offers an opportunity to engage multiple professions in interactive, clinically relevant learning to achieve high quality patient-centered care. Methods: Twenty-five IP practice teams were recruited from ambulatory and long term care settings throughout the state. Teams were educated on evidence-based falls risk reduction strategies including tai chi, physical and functional assessment, environmental modification, medication review and reduction, and vitamin D supplementation. Participants were coached in teams to determine best ways to implement these strategies in their own environments. Educational measures included a pre-post 15-item knowledge survey, a post-intervention confidence survey using 5-item Likert scales, and a self-report of commitment to practice change. Analyses of surveys were performed using paired T-tests for survey results. Descriptive statistics were calculated to evaluate participants' commitment to collaborative practice change items and for process evaluation of training. Results: Ninety-five health professionals from medicine, nursing, pharmacy, and social work participated in the training. The intervention increased knowledge about falls risk reductions strategies (pre-intervention avg score 52%; post-intervention avg score 74%; $p < .001$). There were statistically significant increases in confidence for all ten evaluated skills. The largest increase in confidence scores was "confidence in recommending tai chi to my patients who are at risk of falls (2.24 to 4.46, $p < .001$). Top practice change commitments were to educate patients and other staff about tai chi (55%); to systematically screen patients for falls using the TUG or other assessments (48%); and to ensure patients received targeted medication reviews (39%). Conclusions: Community practices can support the training of IP teams across outpatient and long term care settings. Interprofessional education may be feasible and effective to enhance care of older adults in community settings.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Association between vitamin d levels and falls in patients with chronic kidney disease

Citation: Journal of the American Geriatrics Society, April 2015, vol./is. 63/(S61), 0002-8614 (April 2015)

Author(s): Win S., Shumaker N., Waqar M.A.

Abstract: Background: Falls in the elderly can have devastating consequences. One in three geriatric patients has at least one fall per year, 9% of these falls result in a visit to the ER, with 6% sustaining devastating injuries. The fear of falling leads to voluntarily limiting mobility which in turn leads to increased dependence on others, daily activity restriction, new onset of depression and development of pressure ulcers. Falls are a modifiable health problem in the elderly, and healthcare providers must evaluate all involved risk factors to ensure the patient's safety. Chronic kidney disease (CKD) contributes to falls in the elderly. Approximately 20 million adults in the United States have various stages of CKD. CKD affects the absorption, production and metabolism of vitamin D which is important in improving and maintaining bone and muscle strength and stability of posture/balance. Low vitamin D levels are a known contributor to falls. It is imperative to obtain vitamin D levels and monitor vitamin D status to prevent falls in the elderly. Methods: Retrospective Cohort Chart Review of all patients with CKD that were admitted to the Reno VA Medical Center and Community Living Center (skilled nursing unit) between 7/2013 and 4/2014 and had a fall during the stay; a total of 108 patients were included in this QI study. We reviewed vitamin D levels in these patients. Results: See in table section Conclusion: Patients with CKD that had suboptimal vitamin D levels were 1.5 times more likely to fall than patients with normal vitamin D levels. 15.9% of our study population had no information on vitamin D levels on record. In patients who had ESRD and were currently on dialysis, 60% of our study population had a normal vitamin D level. Discussion: Vitamin D deficiency is both easily diagnosed on routine blood testing and easily treated with oral supplementation. Physicians need to be proactive in obtaining and assessing Vitamin D levels in patients with CKD, regardless of their history of falls in the past. Results: Association of vitamin D levels with CKD stage in fallers: (Table presented).

Publication Type: Journal: Conference Abstract

Source: EMBASE

Suggested ways for preventing falls in hospitalized elderly: Data and experiences from a large urban academic hospital

Citation: Journal of the American Geriatrics Society, April 2015, vol./is. 63/(S139-S140), 0002-8614 (April 2015)

Author(s): Blachman N., Leipzig R.M., Vezina M.L., Mazumdar M., Poeran J.

Abstract: Background: Falls are a leading cause of morbidity and mortality for the hospitalized elderly. High risk medications have been shown to contribute to falls. To help our hospital reduce falls, we studied the role of high risk medications in fall events. Methods: We retrospectively reviewed fall events in patients >65 years at our institution in 2012 and the use of high risk medications (opiates, benzodiazepines, sleep medications, muscle relaxants, and antipsychotics) within 24 hours of the event. Dosages were compared to those published in "Geriatrics at Your Fingertips." For each medication ordered in EPIC, an initial preference list of doses is displayed. The lowest dose offered for each high risk drug in the EPIC preference list was recorded. Results: 328 fall events were reviewed, yielding a fall rate of 3.3 per 1,000 patient-days. The patients' average age was 78.6. Over 3/5 (n=203, 62%) of falls involved patients who were using one or more high risk medication. Patients were taking one high risk medication in 30% of fall events, two in 16% of events, and three or more in another 16% of events. Opiates were given within 24 hours in 32% of fall events, benzodiazepines in 15%, non-benzodiazepine sleep medications in 26%, muscle relaxants in 3%, and antipsychotics in 11%. In 57% (29 of 56) of falls where patients were taking benzodiazepines, the doses were higher than recommended for geriatric patients. Zolpidem was given in 23 fall events; 43% of those events involved doses higher than recommended for geriatric patients. Review of dosages in the EPIC preference list found that many high risk medications had default starting doses higher than recommended for geriatric patients. Conclusions: The majority of older adults who fell during hospitalization were taking at least one high risk drug at the time of their fall, many at doses higher than recommended for older adults. Initial geriatric doses for many of these medications were not offered in the EPIC preference list, requiring prescribers to do additional work to order appropriate doses. In the spring of 2014, the EPIC preference lists for these drugs were changed to include geriatric dosages. Future work will evaluate the implementation of these changes and the effect on the association of falls with these high risk medications.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Modifiable risk factors for falls and minimizing the risk of harm

Citation: Nurse Prescribing, Apr 2015, vol. 13, no. 4, p. 192-198, 1479-9189 (April 2015)

Author(s): Nazarko, Linda

Abstract: The population is ageing, and there are now 11 million adults aged 65 years and over living in the UK (Office for National Statistics, 2013). Most older people live in their own homes, and less than half a million (405 000) live in care homes (LaingBuisson, 2014). Every year, around 30% of older adults living in the community fall at least once (Gillespie et al, 2012). This means that 3.18 million older people fall every year at home. This article uses a case history approach to illustrate how health professionals can identify and treat modifiable risk factors for falls and reduce the risk of harm when risks remain. [PUBLICATION] 47 references

Source: BNI

Full Text:

Available from *EBSCOhost* in [Nurse Prescribing](#)

Why do hospitalized older adults take risks that may lead to falls?

Citation: Health Expectations, Apr 2015, vol. 18, no. 2, p. 233-249, 1369-6513 (April 2015)

Author(s): Haines, Terry P, Lee, Den?Ching Angel, O'Connell, Beverly, McDermott, Fiona, Hoffmann, Tammy

Abstract: The behaviour of hospitalized older adults can contribute to falls, a common adverse event during and after hospitalization. To understand why older adults take risks that may lead to falls in the hospital setting and in the transition period following discharge home. Qualitative research. Hospital patients from inpatient medical and rehabilitation wards (n = 16), their informal caregivers (n = 8), and health professionals (n = 33) recruited from Southern Health hospital facilities, Victoria, Australia. Perceived motivations for, and factors contributing to risk taking that may lead to falls. Semi-structured, in depth interviews and focus groups were used to generate qualitative data. Interviews were conducted both 2 weeks post-hospitalization and 3 months post-hospitalization. Risk taking was classified as; (i) enforced (ii) voluntary and informed and (iii) voluntary and mal informed. Five key factors that influence risk taking behaviour were (i) risk compensation ability of the older adult, (ii) willingness to ask for help, (iii) older adult desire to test their physical boundaries, (iv) communication failure between and within older adults, informal care givers and health professionals and (v) delayed provision of help. Tension exists between taking risks as a part of rehabilitation and the effect it has on likelihood of falling. Health professionals and caregivers played a central role in mitigating unnecessary risk taking, though some older adults appear more likely to take risks than others by virtue of their attitudes. [PUBLICATION] 25 references

Source: BNI

Dual-tasking over an extended walking distance is associated with falls among community-dwelling older adults

Citation: Clinical Interventions in Aging, April 2015, vol./is. 10/(643-648), 1176-9092;1178-1998 (01 Apr 2015)

Author(s): Hirashima K., Higuchi Y., Imaoka M., Todo E., Kitagawa T., Ueda T.

Abstract: Aim: Dual-task methods, in which walking is the primary task, are not sufficient for accurately screening for the risk of falls among healthy older adults. Therefore, the goal of this research was to investigate whether using a dual-task method over an extended walking distance can predict falls among community-dwelling older adults. Methods: We enrolled independent community-dwelling adults aged >65 years. Physical performance, cognitive function, psychological function, and a dual-task test were assessed at baseline. Our dual-task test required the subjects to walk 60 m while stepping over lines. The intervals between the lines ranged from 50-100 cm and were unequal. Falls and fall-related injuries were measured over a 12-month follow-up period using monthly postal surveys. Results: Ninety-two of 118 subjects (mean age, 75.4+/-5.5 years) completed the 12-month follow-up. Sixteen (17.4%) of fallers had injurious falls or fell more than or equal to two times. There were no significant differences between the fallers and non-fallers, except in age and in the number of missteps during the dual-task test when walking >40 m. The Kaplan-Meier analysis revealed that those who had more than one misstep while walking >40 m had a significantly higher incidence of injurious or multiple falls than those who had no missteps. Conclusion: Our findings suggest that the dual-task method with an extended walking distance may be able to predict falls among community-dwelling older adults.

Publication Type: Journal: Article

Source: EMBASE

Full Text:

Available from *Directory of Open Access Journals* in [Clinical Interventions in Aging](#)

Risk factors for falls among seniors: Implications of gender

Citation: American Journal of Epidemiology, April 2015, vol./is. 181/7(521-531), 0002-9262;1476-6256 (01 Apr 2015)

Author(s): Chang V.C., Do M.T.

Abstract: Despite extensive literature on falls among seniors, little is known about gender-specific risk factors. To determine the prevalence of falls by gender and sociodemographic, lifestyle/behavioral, and medical factors, we conducted a cross-sectional study in a nationally representative sample of Canadian adults who were 65 years of age or older ($n = 14,881$) from the Canadian Community Health Survey-Healthy Aging (2008-2009). Logistic regression models were applied to investigate gender-specific associations between potential risk factors and falls. In men, stroke (odds ratio (OR) = 1.91), nutritional risk (OR = 1.86), post-secondary school degree (OR = 1.68), eye disorder (OR = 1.35), widowed/separated/divorced marital status (OR = 1.28), and arthritis (OR = 1.27) were independently associated with significantly higher odds of falls. In women, significant independent correlates of falls included stroke (OR = 1.53), age of 85 years or older (OR = 1.51), nutritional risk (OR = 1.39), consumption of at least 1 alcoholic drink per week (OR = 1.39), use of 5 or more medications (OR = 1.36), arthritis (OR = 1.36), diabetes (OR = 1.31), and osteoporosis (OR = 1.22). Higher physical activity levels were protective in both genders, and higher household income was protective in women. Gender should be considered when planning fall prevention strategies.

Publication Type: Journal: Article

Source: EMBASE

Psychiatric disorders, psychotropic medication use and falls among women: An observational study

Citation: BMC Psychiatry, April 2015, vol./is. 15/1, 1471-244X (April 08, 2015)

Author(s): Williams L.J., Pasco J.A., Stuart A.L., Jacka F.N., Brennan S.L., Dobbins A.G., Honkanen R., Koivumaa-Honkanen H., Rauma P.H., Berk M.

Abstract: Background: Psychotropic agents known to cause sedation are associated with an increased risk of falls, but the role of psychiatric illness as an independent risk factor for falls is not clear. Thus, this study aimed to investigate the association between psychiatric disorders, psychotropic medication use and falls risk. Methods: This study examined data collected from 1062 women aged 20-93 yr (median 50 yr) participating in the Geelong Osteoporosis Study, a large, ongoing, population-based study. Depressive and anxiety disorders for the preceding 12-month period were ascertained by clinical interview. Current medication use and falls history were self-reported. Participants were classified as fallers if they had fallen to the ground at least twice during the same 12-month period. Anthropometry, demographic, medical and lifestyle factors were determined. Logistic regression was used to test the associations, after adjusting for potential confounders. Results: Fifty-six women (5.3%) were classified as fallers. Those meeting criteria for depression within the past 12 months had a 2.4-fold increased odds of falling (unadjusted OR = 2.4, 95% CI 1.2-4.5). Adjustment for age and mobility strengthened the relationship (adjusted OR = 2.7, 95% CI 1.4-5.2) between depression and falling, with results remaining unchanged following further adjustment for psychotropic medication use (adjusted OR = 2.7, 95% CI 1.3-5.6). In contrast, past (prior to 12-month) depression were not associated with falls. No association was observed between anxiety and falls risk. Falling was associated with psychotropic medication use (unadjusted OR = 2.8, 95% CI 1.5-5.2), as well as antidepressant (unadjusted OR = 2.4, 95% CI 1.2-4.8) and benzodiazepine use (unadjusted OR = 3.4, 95% CI 1.6-7.3); associations remained unchanged following adjustment for potential confounders. Conclusion: The likelihood of falls was increased among those with depression within the past 12 months, independent of psychotropic medication use and other recognised confounders, suggesting an independent effect of depression on falls risk. Psychotropic drug use was also confirmed as an independent risk factor for falls, but anxiety disorders were not. Further research into the underlying mechanisms is warranted.

Publication Type: Journal: Article

Source: EMBASE

Full Text: Available from *ProQuest* in [BMC Psychiatry](#)

Bedside Nurses Leading the Way for Falls Prevention: An Evidence-Based Approach

Citation: Critical Care Nurse, 01 April 2015, vol./is. 35/2(82-84), 02795442

Author(s): Cangany, Marty, Back, Dawn, Hamilton-Kelly, Tori, Altman, Marian, Lacey, Susan

Publication Type: Journal Article

Source: CINAHL

Full Text:

Available from *EBSCOhost* in [Critical Care Nurse](#)

Effects of Perturbation-Based Slip Training Using a Virtual Reality Environment on Slip-induced Falls

Citation: Annals of Biomedical Engineering, April 2015, vol./is. 43/4(958-967), 0090-6964;1573-9686 (01 Apr 2015)

Author(s): Parijat P., Lockhart T.E., Liu J.

Abstract: The purpose of the current study was to design and evaluate the effectiveness of virtual reality training in improving recovery reactions and reducing fall frequency in older adults. Twenty-four older adults were recruited and randomly assigned to two groups (virtual reality training and control). Both groups underwent three sessions including baseline slip, training and transfer of training on slippery surface. Both groups experienced two slips, one during baseline and the other during the transfer of training trial. The training group underwent 12 simulated slips using a visual perturbation induced by tilting a virtual reality scene while walking on the treadmill and the control group performed normal walking during the training session. Kinematic and kinetic data were collected during all the sessions. Results demonstrated a reduced incidence of falls in the training group during the transfer of training trial as compared to the control group. The training group was able to transfer reactive control strategies learned during training to the second slip trial. The reactive adjustments included reduced slip distance. Additionally, gait parameters reflective of gait instability (stride length, step width, variability in stride velocity) reduced after walking in the VR environment for 15-20 min. The results indicated a beneficial effect of the virtual reality training in reducing slip severity and recovery kinematics in healthy older adults.

Publication Type: Journal: Article

Source: EMBASE

Improving hospital patient falls: leveraging staffing characteristics and processes of care

Citation: The Journal of nursing administration, May 2015, vol. 45, no. 5, p. 254-262 (May 2015)

Author(s): Aydin, Carolyn, Donaldson, Nancy, Aronow, Harriet Udin, Fridman, Moshe, Brown, Diane Storer

Abstract: Predictive models for falls, injury falls, and restraint prevalence were explored within nursing unit structures and processes of care. The patient care team is responsible for patient safety, and improving practice models may prevent injuries and improve patient safety. Using unit-level self-reported data from 215 hospitals, falls, injury falls, and restraint prevalence were modeled with significant covariates as predictors. Fewer falls/injury falls were predicted by populations with fewer frail and at-risk patients, more unlicensed care hours, and prevention protocol implementation, but not staffing per se, restraint use, or RN expertise. Lower restraint use was predicted by fewer frail patients, shorter length of stay, more RN hours, more certified RNs, and implementation of fall prevention protocols. In the presence of risk, patient injuries and safety were improved by optimizing staffing skill mix and use of prevention protocols.

Source: Medline

Does perturbation-based balance training prevent falls? Systematic review and meta-analysis of preliminary randomized controlled trials

Citation: Physical therapy, May 2015, vol. 95, no. 5, p. 700-709 (May 2015)

Author(s): Mansfield, Avril, Wong, Jennifer S, Bryce, Jessica, Knorr, Svetlana, Patterson, Kara K

Abstract: Older adults and individuals with neurological conditions are at an increased risk for falls. Although physical exercise can prevent falls, certain types of exercise may be more effective. Perturbation-based balance training is a novel intervention involving repeated postural perturbations aiming to improve control of rapid balance reactions. The purpose of this study was to estimate the effect of perturbation-based balance training on falls in daily life. MEDLINE (1946-July 2014), EMBASE (1974-July 2014), PEDro (all dates), CENTRAL (1991-July 2014), and Google Scholar (all dates) were the data sources used in this study. Randomized controlled trials written in English were included if they focused on perturbation-based balance training among older adults or individuals with neurological conditions and collected falls data posttraining. Two investigators extracted data independently. Study authors were contacted to obtain missing information. A PEDro score was obtained for each study. Primary outcomes were proportion of participants who reported one or more falls (ie, number of "fallers") and the total number of falls. The risk ratio (proportion of fallers) and rate ratio (number of falls) were entered into the analysis. Eight studies involving 404 participants were included. Participants who completed perturbation-based balance training were less likely to report a fall (overall risk ratio=0.71; 95% confidence interval=0.52, 0.96; P=.02) and reported fewer falls than those in the control groups (overall rate ratio=0.54; 95% confidence interval=0.34, 0.85; P=.007). Study authors do not always identify that they have included perturbation training in their intervention; therefore, it is possible that some appropriate studies were not included. Study designs were heterogeneous, preventing subanalyses. Perturbation-based balance training appears to reduce fall risk among older adults and individuals with Parkinson disease. © 2015 American Physical Therapy Association.

Source: Medline

Full Text: Available from *EBSCOhost* in [Physical Therapy](#)
Available from *ProQuest* in [Physical Therapy](#)

Promoting exercise as part of a physiotherapy-led falls pathway service for adults with intellectual disabilities: a service evaluation

Citation: Journal of applied research in intellectual disabilities : JARID, May 2015, vol. 28, no. 3, p. 257-264 (May 2015)

Author(s): Crockett, Jennifer, Finlayson, Janet, Skelton, Dawn A, Miller, Gillian

Abstract: People with intellectual disabilities experience high rates of falls. Balance and gait problems are common in people with intellectual disabilities, increasing the likelihood of falls; thus, tailored exercise interventions to improve gait and balance are recommended. The present authors set up a physiotherapy-led falls pathway service (FPS) for clients with intellectual disabilities to promote exercise and prevent falls. Fifty clients with intellectual disabilities were referred in an 18-month period, 35 (70%) were prescribed exercise and 27 (54%) completed the exercise programme. The FPS was evaluated using the following outcome measures: Tinetti score, number of falls, clinician's judgement and carer's judgement. Improvement in balance and mobility and a decrease in the number of falls were reported post-exercise intervention. Physiotherapists have a key role to play in promoting exercise to prevent falls in services for people with intellectual disabilities. This evaluation suggests positive outcomes for these clients to reduce or prevent further falls. © 2014 John Wiley & Sons Ltd.

Source: Medline

Vitamin d and falls-fitting new data with current guidelines

Citation: JAMA internal medicine, May 2015, vol. 175, no. 5, p. 712-713 (May 1, 2015)

Author(s): LeBlanc, Erin S, Chou, Roger

Source: Medline

Full Text: Available from *Silverchair Information Systems* in

Outcomes of usual versus a specialized falls and balance program in the home

Citation: Home healthcare now, May 2015, vol. 33, no. 5, p. 265-274 (May 2015)

Author(s): Whitney, Susan L, Marchetti, Gregory F, Ellis, Jennifer L, Otis, Laurie

Abstract: A retrospective cohort study with adjustment for baseline group differences was conducted to determine if there was a difference in Outcome and Information Data Set (OASIS-C) activities of daily living (ADL) outcomes as well as the duration and number of home care visits between usual home care rehabilitation services and a home care rehabilitation team that was specially trained in falls identification and prevention. Data from adult Medicare beneficiaries who were treated in a large multistate home care practice with at least one visit by a physical therapist were retrieved retrospectively for analysis (n = 3,907 records). Patients identified as having multiple fall risk factors based on OASIS-C assessment undergoing a specialized care program demonstrated greater improvements in mean total ADL scores after home healthcare rehabilitation services compared with subjects at fall risk receiving usual care. Interdisciplinary care delivered by a healthcare team specially trained in fall prevention appeared to decrease the number of home care visits and resulted in improved ADL OASIS-C outcome scores after adjustment for potential confounders.

Source: Medline

24-hour pattern of falls in hospitalized and long-term care institutionalized elderly persons: A systematic review of the published literature

Citation: Chronobiology international, May 2015, vol. 32, no. 4, p. 548-556 (May 2015)

Author(s): López-Soto, Pablo Jesús, Manfredini, Roberto, Smolensky, Michael H, Rodríguez-Borrego, María Aurora

Abstract: Falls are common among the elderly > 65 years of age and can result in both serious trauma and costly medical care. The epidemiology of falls in the elderly typically focuses on identifying contributory exogenous environmental and endogenous age-related physical, cognitive and other health status factors; however, one potentially important variable seldom considered is time of fall. We sought to determine if falls in hospitalized/institutionalized elderly persons exhibit 24 h and other temporal patterns, since knowledge of such could be useful in their prevention. We conducted a systematic review of the published literature to critically appraise and synthesize the methods and findings of previous reports addressing clock-time, day-of-week and month-of-year fall patterns of institutionalized elderly cohorts. Medline, SCOPUS, Ovid SP and Web of Knowledge were systematically assessed, entering search terms of "accidental fall", "circadian rhythm", "biological clocks", "circadian clocks", "activity cycles", "periodicity", and with databases accepting an age limiter, "age of 65(+)" years. Methodological quality was assessed by STROBE and CONSORT checklists, respectively, in observational and clinical studies. Publications were reviewed if meeting inclusion criteria of: (i) being an empirical study, (ii) adopting circadian and/or other period rhythmicity as a fall risk, and (iii) focusing on hospitalized/institutionalized falls in those ≥ 65 years of age; plus exclusion criteria of: (i) cohort

Source: Medline

Factors associated with falls in hospitalized adult patients

Citation: Applied nursing research : ANR, May 2015, vol. 28, no. 2, p. 78-82 (May 2015)

Author(s): Cox, Jill, Thomas-Hawkins, Charlotte, Pajarillo, Edmund, DeGennaro, Susan, Cadmus, Edna, Martinez, Miguel

Abstract: Despite efforts in hospitals to identify patients at risk for falls and to prevent these incidents, falls among hospitalized patients are not a rare event and continue to be a major health care concern, occurring in approximately 700,000-1,000,000 hospitalized patients per year. The purpose of this study was to examine intrinsic, extrinsic, and workforce factors that contribute to falls among hospitalized adult patients. A retrospective correlational design was used to examine 160 patients admitted to a medical-surgical unit over the year 2012. Analytical weighting was applied to the study sample to conduct bivariate and multivariate analysis. In multivariate analysis, the variables age, narcotic/sedative use, and overnight shift, significantly predicted the likelihood of a fall during the hospitalization. Cardiovascular disease, neuromusculoskeletal disease, evening shift, the implementation of fall prevention strategies and higher RN to unlicensed assistive personnel staffing ratios decreased the likelihood of a fall during the hospitalization. In addition, patients at high risk for falls using the Hendrich I fall scale were nearly 17% more likely to fall during the hospitalization. Many factors influence the occurrence of a fall in hospitalized patients. Fall risk assessment and the implementation of fall prevention strategies are both effective strategies in the clinical area to identify and decrease the probability of a fall. The presence of the RN is significant in fall prevention in medical-surgical patients. Copyright © 2014 Elsevier Inc. All rights reserved.

Source: Medline

The impact of a home-based walking programme on falls in older people: the Easy Steps randomised controlled trial

Citation: Age and ageing, May 2015, vol. 44, no. 3, p. 377-383 (May 2015)

Author(s): Voukelatos, Alexander, Merom, Dafna, Sherrington, Catherine, Rissel, Chris, Cumming, Robert G, Lord, Stephen R

Abstract: walking is the most popular form of exercise in older people but the impact of walking on falls is unclear. This study investigated the impact of a 48-week walking programme on falls in older people. three hundred and eighty-six physically inactive people aged 65+ years living in the community were randomised into an intervention or control group. The intervention group received a self-paced, 48-week walking programme that involved three mailed printed manuals and telephone coaching. Coinciding with the walking programme manual control group participants received health information unrelated to falls. Monthly falls calendars were used to monitor falls (primary outcome) over 48 weeks. Secondary outcomes were self-reported quality of life, falls efficacy, exercise and walking levels. Mobility, leg strength and choice stepping reaction time were measured in a sub-sample (n = 178) of participants. there was no difference in fall rates between the intervention and control groups in the follow-up period (IRR = 0.88, 95% CI: 0.60-1.29). By the end of the study, intervention group participants spent significantly more time exercising in general, and specifically walking for exercise (median 1.69 versus 0.75 h/week, P

Source: Medline

Ability versus hazard: risk-taking and falls in older people

Citation: Journals of Gerontology Series A: Biological Sciences & Medical Sciences, 01 May 2015, vol./is. 70/5(628-634), 10795006

Author(s): Butler, Annie A, Lord, Stephen R, Taylor, Janet L, Fitzpatrick, Richard C

Abstract: BACKGROUND: Among older people, undue risk taking could lead to falls, irrespective of physical ability. We investigated the interaction between risk-taking behavior and physical ability and its contribution to falls. METHODS: Participants (N = 294, age ≥ 70) were asked to walk as quickly as possible to a visible destination by choosing one of six paths. Each contained a raised plank that had to be walked along without falling. The shortest path had the narrowest and tallest plank and the longest had the widest and lowest. Behavioral risk was defined as the probability of falling off the chosen plank. This was estimated from a ground path walking task because, for safety, participants were stopped before crossing the plank. Self-reported everyday risk-taking behavior, fear of falling, physical functioning, and 1-year prospective fall rates were measured. RESULTS: Older participants and those with poor physical ability chose easier planks to cross. Participants with good physical ability consistently took a slight behavioral risk, whereas those with poor physical ability took either very-high behavioral risks or chose the overly safe path with no risk. Unexpectedly, participants reporting cautious behavior on the everyday risk-taking behavior scale took greater behavioral risks. Independent of physical performance, behavioral risk was significantly associated with falls during the subsequent year. CONCLUSIONS: Assessing behavioral choice in relation to physical ability can identify risk-taking but neither the difficulty of a chosen action nor self-reports of risk-taking behavior are sufficient. Risk-taking behavior is an independent risk factor for falls and management of undue risk-taking might complement existing fall prevention strategies.

Publication Type: journal article

Source: CINAHL

Ambulatory fall-risk assessment: amount and quality of daily-life gait predict falls in older adults

Citation: Journals of Gerontology Series A: Biological Sciences & Medical Sciences, 01 May 2015, vol./is. 70/5(608-615), 10795006

Author(s): van Schooten, Kimberley S, Pijnappels, Mirjam, Rispens, Sietse M, Elders, Petra J M, Lips, Paul, van Dieën, Jaap H

Abstract: BACKGROUND: Ambulatory measurements of trunk accelerations can provide valuable information on the amount and quality of daily-life activities and contribute to the identification of individuals at risk of falls. We compared associations between retrospective and prospective falls with potential risk factors as measured by daily-life accelerometry. In addition, we investigated predictive value of these parameters for 6-month prospective falls. METHODS: One week of trunk accelerometry (DynaPort MoveMonitor) was obtained in 169 older adults (mean age 75). The amount of daily activity and quality of gait were determined and validated questionnaires on fall-risk factors, grip strength, and trail making test were obtained. Six-month fall incidence was obtained retrospectively by recall and prospectively by fall diaries and monthly telephone contact. RESULTS: Among all participants, 35.5% had a history of ≥ 1 falls and 34.9% experienced ≥ 1 falls during 6-month follow-up. Logistic regressions showed that questionnaires, grip strength, and trail making test, as well as the amount and quality of gait, were significantly associated with falls. Significant associations differed between retrospective and prospective analyses although odds ratios indicated similar patterns. Predictive ability based on questionnaires, grip strength, and trail making test (area under the curve .68) improved substantially by accelerometry-derived parameters of the amount of gait (number of strides), gait quality (complexity, intensity, and smoothness), and their interactions (area under the curve .82). CONCLUSIONS: Daily-life accelerometry contributes substantially to the

identification of individuals at risk of falls, and can predict falls in 6 months with good accuracy.

Publication Type: journal article

Source: CINAHL

Lower-extremity osteoarthritis and the risk of falls in a community-based longitudinal study of adults with and without osteoarthritis

Citation: Arthritis Care & Research, 01 May 2015, vol./is. 67/5(633-639), 2151464X

Author(s): Doré, Adam L, Golightly, Yvonne M, Mercer, Vicki S, Shi, Xiaoyan A, Renner, Jordan B, Jordan, Joanne M, Nelson, Amanda E

Publication Type: journal article

Source: CINAHL

Full Text: Available from *John Wiley and Sons* in [Arthritis Care and Research](#)

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