Safety Literature 5th July 2020

Association between chronic diseases and falls among a sample of older people in Finland

Abstract

BACKGROUND: Falls are a major problem for older people and recurrent fallers are especially prone to severe consequences due to falls. This study investigated the association between chronic conditions and falls.

METHODS: Responses from 872 older persons (age 65-98) to a health questionnaire were used in the analyses. Characteristics and disease prevalence between recurrent fallers, one-time fallers and non-fallers were compared. A hierarchical clustering method was applied to find combinations of chronic conditions that were associated with recent recurrent falling.

RESULTS: The results showed that recurrent fallers had a higher number of diseases (median 4, interquartile range, IQR = 2.0-5.0) compared to non-fallers (median 2, IQR = 1.0-3.0). Eight clusters were formed based on the data. The participants in the low chronic disease cluster were younger, more physically active, not frail, and had fewer geriatric conditions. Multiple chronic disease cluster participants were older, less physically active, overweight (body mass index, BMI > 30), at risk of malnutrition, and had more geriatric conditions. Significantly increased risk of recurrent falls relative to the low chronic cluster was found for respondents in the osteoporosis cluster and multiple chronic disease cluster (OR = 5.65, 95% confidence interval CI: 1.23-25.85, p = 0.026, and OR = 13.42, 95% CI: 2.47-72.96, p = 0.002, respectively). None of the clusters were associated with increased risk of one-time falling.

CONCLUSIONS: The results implicate that the number of chronic diseases is related with risk of recurrent falling. Furthermore, the results implicate the potential of identifying certain combinations of chronic diseases that increase fall risk by analyzing health record data, although further studies are needed with a larger population sample.

Language: en

Keywords

Falls; Geriatrics; Aging; Older adults; Chronic diseases; Fall risk; Gerontology; Recurrent falls

Development and validation of a robotic multifactorial fall-risk predictive model: a one-year prospective study in community-dwelling older adults

Cella A, De Luca A, Squeri V, Parodi S, Vallone F, Giorgeschi A, Senesi B, Zigoura E, Quispe Guerrero KL, Siri G, De Michieli L, Saglia J, Sanfilippo C, Pilotto A. PLoS One 2020; 15(6): e0234904.

Abstract

BACKGROUND: Falls in the elderly are a major public health concern because of their high incidence, the involvement of many risk factors, the considerable post-fall morbidity and mortality, and the health-related and social costs. Given that many falls are preventable, the early identification of older adults at risk of falling is crucial in order to develop tailored interventions to prevent such falls. To date, however, the fall-risk assessment tools currently used in the elderly have not shown sufficiently high predictive validity to distinguish between subjects at high and low fall risk. Consequently, predicting the risk of falling remains an unsolved issue in geriatric medicine. This one-year prospective study aims to develop and validate, by means of a cross-validation method, a multifactorial fall-risk model based on clinical and robotic parameters in older adults.

METHODS: Community-dwelling subjects aged $\geq$ 65 years were enrolled. At the baseline, all subjects were evaluated for history of falling and number of drugs taken daily, and their gait and balance were evaluated by means of the Timed "Up & Go" test (TUG), Gait Speed (GS), Short Physical Performance Battery (SPPB) and Performance-Oriented Mobility Assessment (POMA). They also underwent robotic assessment by means of the hunova robotic device to evaluate the various components of balance. All subjects were followed up for one-year and the number of falls was recorded. The models that best predicted falls-on the basis of: i) only clinical parameters; ii) only robotic parameters; iii) clinical plus robotic parameters-were identified by means of a cross-validation method.

RESULTS: Of the 100 subjects initially enrolled, 96 (62 females, mean age 77.17±.49 years) completed the follow-up and were included. Within one year, 32 participants (33%) experienced at least one fall ("fallers"), while 64 (67%) did not ("non-fallers"). The best classifier model to emerge from cross-validated fall-risk estimation included eight clinical variables (age, sex, history of falling in the previous 12 months, TUG, Tinetti, SPPB, Low GS, number of drugs) and 20 robotic parameters, and displayed an area under the receiver operator characteristic (ROC) curve of 0.81 (95% CI: 0.72-0.90). Notably, the model that included only three of these clinical variables (age, history of falls and low GS) plus the robotic parameters showed similar accuracy (ROC AUC 0.80, 95% CI: 0.71-0.89). In comparison with the best classifier model that comprised only clinical parameters (ROC AUC: 0.67; 95% CI: 0.55-0.79), both models performed better in predicting fall risk, with an estimated Net Reclassification Improvement (NRI) of 0.30 and 0.31 (p = 0.02), respectively, and an estimated Integrated Discrimination Improvement (IDI) of 0.32 and 0.27 (p<0.001),

respectively. The best model that comprised only robotic parameters (the 20 parameters identified in the final model) achieved a better performance than the clinical parameters alone, but worse than the combination of both clinical and robotic variables (ROC AUC: 0.73, 95% CI 0.63-0.83).

CONCLUSION: A multifactorial fall-risk assessment that includes clinical and hunova robotic variables significantly improves the accuracy of predicting the risk of falling in community-dwelling older people. Our data suggest that combining clinical and robotic assessments can more accurately identify older people at high risk of falls, thereby enabling personalized fall-prevention interventions to be undertaken.

Language: en

Development of a mobile application to screen and manage fall risks in older people

Taheri-Kharameh Z, Malmgren Fänge A, Ekvall Hansson E, Bashirian S, Heidarimoghadam R, Poorolajal J, Barati M. Disabil. Rehabil. Assist. Technol. 2020; ePub(ePub): ePub.

Abstract

OBJECTIVE: Falls and related injuries are known to be the major health problem leading to disability and mortality among older adults. Identification and management of fall risks aimed to prevent falling is considered to be essential. The aim of this study was to develop a mobile application for screening and management of fall risks based for older adults.

METHOD and materials: First, we determined product features based on literature reviews. Then we asked 10 experts to assess the importance of capabilities. The application was designed in Android environment based on the STEADI toolkit. Finally, the usability and satisfaction of the application were assessed among 30 older adults by means of a usability questionnaire, and the final version was modified.

RESULTS: The experts rated the majority of feasibility features to be important. The application consisted of falls risk self-assessment, and the Timed Up and Go (TUG) test to measure individual fall risks, fall prevention education, and suggestions for training based on the individuals' level of fall risk among older adults. The results of the usability assessment showed that the users were satisfied with the application, 8.83 out of 10.

CONCLUSION: The mobile application can be used to screen and manage fall risks in older adults. It may help health providers to identify older adults at low, moderate, and high risks of falls provide education and training to minimise falls and fall-related injuries.Implications for rehabilitationFalls are a major health problem in older people. A great proportion of falls and falls related injuries are preventable.Given the availability and accessibility of various mobile health application and the increasing mobile device usage among older adults, mobile application can be used as a platform for delivering fall prevention programmes such as education and exercise training.The mobile application may be a valuable tool in the fall prevention and their consequences either in old adult.

Language: en

Keywords

prevention; aging; screening; E-health; Fall risk

Disequilibrium and risk of falling in the elderly is a priority for health services

Abstract

The prevention of falls among the elderly is one important public health issue in our aging society. Falls may cause a great deterioration in health among older adults because lead to loss of independence, worsening of quality of life and premature mortality. Epidemiological data show an heavy impact of falls and its consequences on morbidity and mortality. Within a year, more than 30% of persons living in their own homes and more than 50% of persons living in care homes experience at least one fall. One of the main determining factors in the risk of falling in the elderly population is represented by the aging of the vestibular system which exposes these people to a particular vulnerability. The high prevalence, morbidity and mortality, the high use of individual and social resources, the intrinsic complexity of the pathology, make it a major public health problem. We recommend the implementation of protocols for the identification of potential subjects at risk of falling, shared between the clinicians involved in the problem, renewing the importance of the figure of the expert in balance problems as a constant ally of the geriatrician in the management strategy for the patients in this age of life.

Language: en

Keywords

elderly; health services; falls; risk; Disequilibrium; dizziness

Efficiency gains from a standardised approach to older people presenting to the emergency department after a fall

Arendts G, Leyte N, Dumas S, Ahamed S, Khokulan V, Wahbi O, Lomman A, Hughes D, Clayden V, Mandal B. Aust. Health Rev. 2020; ePub(ePub): ePub.

Abstract

OBJECTIVE Falls are a major cause of hospital-related costs in people aged ≥65 years. Despite this, falls are often seen as trivial and given low priority in an emergency department (ED), especially in the absence of overt major injury. ED systems that care for falls patients are often inefficient. The aims of this study were to: (1) design and implement a standardised and systematic approach to patients presenting to an ED after a fall; and (2) achieve hospital efficiency gains, such as reduced hospital length of stay, through implementation of this approach.

METHODS A prospective study was conducted with pre- and postintervention measurement of outcomes. The key features of the intervention were direct admission to an ED short stay unit, standardised assessment of cognition, medications, mobility and discharge risk, and access in the ED to a geriatric consultation service for complex patients.

RESULTS In the 12 months of the intervention, 1435 male and female patients aged ≥65 years were enrolled in the study. At the end of 12 months, these patients had significantly higher ED discharge (66% vs 46%; $P<0.001$) and, if admitted, shorter median hospital stays (6 vs 2 days; $P<0.001$) compared with the baseline pre-intervention phase. Analysis 1 year later revealed that these outcomes were sustained or further improved.

CONCLUSION A systematic approach to falls in older patients attending the ED is feasible and beneficial. Decreased hospital stay and improved rates of effective discharge from ED back to the community are achievable and sustainable.What is known about the topic?Falls are common, serious and costly. Not identifying and managing falls risk factors is a common feature of ED practice. As a result, admission rates to hospital for patients who fall are high.What does this paper add?In this large study we have shown that a systematic approach to falls assessment is feasible, sustainable and results in higher discharge rates from the ED.What are the implications for practitioners?EDs are the gateway to a hospital bed. It is possible to redesign ED flow and bring front-loaded multidisciplinary geriatric care into an ED short stay environment, to the benefit of patients and health systems.

Language: en

Fear of falling, lower extremity strength, and physical and balance performance in older adults with diabetes mellitus

Abstract

Fear of falling (FoF) is known to affect the physical activities and quality of life of older adults with type 2 diabetes mellitus (DM). Many complications of DM, especially ones distressing lower extremity (LE), could lead to increased fall risk and FoF. This study aimed to explore the relationship between FoF, LE muscle strength, and physical performance in older adults without diabetes mellitus (ONDM) and with DM (ODM) with varying degrees of balance impairment. The participants comprised 20 ONDM and 110 ODM. The ODM was grouped by the number of failed performances of the modified clinical test of sensory interaction and balance (mCTSIB). The scores of FoF, balance performance of mCTSIB, physical performance of TUG, and LE muscle strength were compared between groups. The results showed that FoF was present in 30% and 60% of the ONDM and ODM, respectively. Forty percent of the ODM failed one condition of the mCTSIB, while 18% and 16% failed two and three conditions, respectively. As the number of failed performances on the mCTSIB increased, the proportions of participants with FoF significantly increased. The psychosocial domain of FoF, LE muscle strength, and TUG score was significantly different between groups and more affected in the ODM with a greater number of failed performances on the mCTSIB. In conclusion, the mCTSIB can differentiate the varying degrees of balance impairment among ODM. FoF, LE muscle strength, and physical performance are more affected as the degree of balance impairment increases. Comprehensive management related to balance and falls in the ODM should include a regular evaluation and monitoring of standing balance, LE muscle strength, physical performance, and FoF.

Language: en

Frailty and risk of falls in community-dwelling older adults living in a rural setting. the Atahualpa Project

Abstract

BACKGROUND: Data supporting a link between frailty and risk of falls is mostly confined to individuals living in urban centers, where risk factors and lifestyles are different from that of rural settings.

OBJECTIVE: To assess the association between frailty and risk of falls in older adults living in rural Ecuador.

DESIGN: Population-based cross-sectional study.

PARTICIPANTS: Community-dwellers aged ≥60 years living in a rural Ecuadorian village, in whom frail status and risk of falls were assessed.

MEASUREMENTS: Frailty was evaluated by the Edmonton Frailty Scale (EFS) and risk of falls by the Downton Fall Risk Index (DFRI). Multivariate models were fitted to evaluate whether frailty was associated with risk of falls (dependent variable), after adjusting for demographics, alcohol intake, cardiovascular risk factors, sleep quality, symptoms of depression, and history of an overt stroke. Correlation coefficients were constructed to assess confounders modifying this association.

RESULTS: A total of 324 participants (mean age: 70.5±8 years) were included. The mean EFS score was 4.4±2.5 points, with 180 (56%) participants classified as robust, 76 (23%) as pre-frail and 68 (21%) as frail. The DFRI was positive in 87 (27%) participants. In univariate analysis, the EFS score was higher among participants with a positive DFRI (p<0.001). The number of frail individuals was higher (p<0.001), while that of robust individuals was lower (p<0.001) among those with a positive DFRI. Adjusted logistic regression models showed no association between frailty and the DFRI. Correlation coefficients showed that age, high glucose levels, and history of an overt stroke tempered the association between frailty and the risk of falls found in univariate analyses.

CONCLUSIONS: Frailty is not independently associated with risk of falls in older adults living in a remote rural setting. Further studies are needed to assess the impact of frailty on the risk of falls in these populations.
Language: en

Keywords
Frailty; falls; population-based study; downton fall risk index; Edmonton frail scale

Identification of risk factors for falls in postmenopausal women: a systematic review and meta-analysis

Abstract

The purpose of this study was to identify risk factors for falls in postmenopausal women and provide evidence for the primary prevention of falls in postmenopausal women. The protocol for this meta-analysis is registered with PROSPERO (CRD42020170927). We searched PubMed, the Cochrane Library and EMBASE for observational studies on the risk factors for falls in postmenopausal women. Review Manager 5.3 was used to calculate the relative risk (RR) or weighted mean difference (WMD) of potential risk factors related to falls. STATA 14.0 was used for the quantitative evaluation of publication bias. Eleven studies with 42,429 patients from 7 countries were included. The main risk factors for falls in postmenopausal women were patient sociodemographic risk factors (age: WMD = 0.37, 95% CI 0.07 to 0.68; body weight: WMD = 0.88, 95% CI 0.56 to 1.12; BMI: WMD = 0.34, 95% CI 0.21 to 0.46; exercise: RR = 0.97, 95% CI 0.94 to 0.99; and FES-I: WMD = 6.60, 95% CI 0.72 to 12.47) and medical risk factors (dietary calcium intake: WMD = - 16.91, 95% CI - 25.80 to - 8.01; previous fracture history: RR = 1.21, 95% CI 1.13 to 1.29; previous falls: RR = 2.02, 95% CI 1.91 to 2.14; number of diseases, > 2: RR = 1.17, 95% CI 1.11 to 1.23; and number of reported chronic health disorders: WMD = 0.30, 95% CI 0.10 to 0.49). Knowledge of the many risk factors associated with falls in postmenopausal women can aid in fall prevention. However, we cannot rule out some additional potential risk factors (age at the onset of menopause, years since last menstruation, hormone therapy and BMD) that need further clinical research.

Language: en

Keywords

Risk factors; Falls; Meta-analysis; Postmenopausal women

Modified timed up and go test for tendency to fall and balance assessment in elderly patients with gait instability

Soto-Varela A, Rossi-Izquierdo M, Del-Río-Valeiras M, Faraldo-García A, Vaamonde-Sánchez-Andrade I, Lirola-Delgado A, Santos-Pérez S. Front. Neurol. 2020; 11: e543.

Abstract

OBJECTIVE: To compare the results from the modified Timed Up and Go Test (TUG) with posturographic variables, the subjective perception of disability due to gait instability, and the number of falls in a sample of the elderly population with imbalance, to confirm that the TUG Test is a useful clinical instrument to assess the tendency to fall in individuals of this age group.

MATERIALS AND METHODS: Cross-sectional study conducted in a tertiary university hospital, in 174 people aged 65 years or older with gait instability. Modified TUG Test was performed; time, step count and the need for support during the test were the analyzed variables. They were compared with the number of falls, Computerized Dynamic Posturography scores, and questionnaires scores (Dizziness Handicap Inventory and a shortened version of the Falls Efficacy Scale-International).

RESULTS: The average time to complete the TUG Test was 21.24 ± 8.18 s, and the average step count was 27.36 ± 7.93. One hundred two patients (58.6%) required no support to complete the test, whereas the other 72 (41.4%) used supports. The time taken to complete the Test was significantly related with having or not having fallen in the previous year, with the scores of the questionnaires, and with various parameters of dynamic posturography. A higher percentage of patients who took more than 15 s had fallen in the previous year than those who took up to 15 s to complete the test [$P = 0.012$; OR = 2.378; 95% CI (1.183, 4.780)]. No significant correlation was found between the step count and the number of falls in the previous year, with falling during the test or not, or with being a single or a frequent faller. No relation was found between the need for supports and the number of falls, with having or not having fallen in the previous year, or with being a single or frequent faller.

CONCLUSION: The modified TUG Test is in relation with the presence or absence of falls. Time is the essential parameter for analyzing the risk of falling and the 15-s threshold is a good value to differentiate elderly patients at high risk of falling.

Unique Identifier: NCT03034655, www.clinicaltrials.gov.

Language: en

Keywords

Vitamin D megadose: definition, efficacy in bone metabolism, risk of falls and fractures

Narvaez J, Maldonado G, Guerrero R, Messina OD, Rios C. Open Access Rheumatol 2020;
12: 105-115.

Abstract

INTRODUCTION: Currently, approximately more than one billion people around the world
are considered to have deficient levels of vitamin D. International consensus recommends
vitamin D supplementation to high-risk patients (advanced age, osteoporosis, liver failure,
malabsorption syndromes, etc.) and those with levels below 30 ng/mL. There are several
vitamin D formulations and dosages available, including megadoses. At the moment, there is
no consensus on the definition of megadoses.

The purpose of this review is to define what is a megadose and analyze its effectiveness in
bone metabolism, risk of fractures and falls.

Conclusion: The administration of doses higher than 100,000 IU of vitamin D is considered a
megadose. It is evident that the use of megadoses increases serum concentrations of vitamin
D; however, there has been no evidence of a decrease in the risk of falls, vertebral fractures
or changes in bone mineral density.

Language: en

Keywords

falls; vitamin D; supplementation; bone mineral density

Effects of community based fall prevention program for elderly people in Busan Metropolitan City, Korea

Abstract

BACKGROUND:

Fall related fractures in elderly are one of the most serious health problems in the world. Due to the rapid aging of the elderly in Korea, elderly falls has emerged as a very important social health issue. Falls can result in injuries, a loss of confidence and a subsequent reduction in physical activity and community participant. This work was conducted by the Busan Metropolitan International Safe Community Program in 2018.

PURPOSEs The purposes of this study were to develop a community-based fall prevention program and to test the effects of the program on the postural balance and fall efficacy for elderly people.

Methods:

36 elderly were recruited from the community in Dong-gu district of Busan Metropolitan City. The program consisted of balance exercises, elastic resistance exercises and prevention education. Postural balance and fall efficacy were evaluated before and at the end of the intervention, using the Functional Reach Test (FRT), Timed Up & Go test (TUG) and the fall efficacy scale-K. The intervention was performed for twice a week in the senior center for 12 weeks. Data were analyzed using paired t-test using the SPSS program.

Results:

Developed program was based predominantly on the social cognitive model of behavioral change to successfully increased activities participation in elderly. This program is very useful because it not only focuses on exercise, but participants also learn fall prevention strategies. There were significantly improved in postural balance (FRT; p<.001, TUG; p=0.02) and fall efficacy (p<.001).

Conclusions:

This study suggests that this program can improve postural balance and fall efficacy in elders. Therefore, this program is recommended for use in fall prevention programs for elders living in the community.
Language: en

Patient falls and injuries in U.S. psychiatric care: incidence and trends

Turner K, Bjarnadottir R, Jo A, Repique RJR, Thomas J, Green JF, Staggs VS. Psychiatr. Serv. 2020; ePub(ePub): ePub.

Abstract

OBJECTIVE: The goal of this study was to estimate the incidence of falls (total, injurious, and assisted) in U.S. psychiatric care across 6 years (April 2013-March 2019).

METHODS: Data on falls among patients of adult and geriatric psychiatric units of general, acute care, and psychiatric hospital inpatient units from the National Database of Nursing Quality Indicators were used for this 6-year study. Total falls, assisted falls (i.e., falls broken or slowed by staff), and injurious falls were calculated, along with trends in total and injurious fall rates.

RESULTS: The sample included 1,159 units in 720 hospitals. Of the 119,246 falls reported, 25,807 (21.6%) resulted in injury. Only 7.0% of the total falls in psychiatric units were assisted by a staff member. Falling unassisted was associated with a higher likelihood of fall-related injury (adjusted odds ratio=1.69, 95% confidence interval=1.59 to 1.80). The total fall rate (8.55 per 1,000 patient-days) and injurious fall rate (1.97 per 1,000 patient-days) were highest for geriatric psychiatric units in general hospitals. Total and injurious fall rates in psychiatric units in general hospitals declined during the study (total fall rate declined by 10% for adult psychiatric units in general hospitals). There was no clear trend in total or injurious fall rates for units in psychiatric hospitals.

CONCLUSIONS: Falls are a persistent problem in psychiatric care settings. Few fall-prevention programs have been tested in these settings, which have unique risk factors for falls. Additional research is needed to develop fall-prevention interventions in psychiatric care.

Language: en

Keywords

Preventing falls among behavioral health patients

Ocker SA, Barton SA, Bollinger N, Leaver CA, Harne-Britner S, Heuston MM. Am. J. Nurs. 2020; 120(7): 61-68.

Abstract

BACKGROUND: Inpatient falls are among the most common hospital incidents reported. Fall-related injuries have significant implications for patients, staff, and organizations. Adult behavioral health inpatients are responsible for higher rates of injurious falls and challenge traditional fall prevention methods. An inpatient behavioral health unit in an acute care hospital identified an increased rate of injury from falls per 1,000 patient-days in three months; three falls resulted in major injury.

PURPOSE: The purpose of this quality improvement (QI) report is to describe the redesign of a fall prevention program for adult behavioral health inpatients using evidence-based practice (EBP) and QI methods.

METHODS: Root cause analyses (RCAs) were conducted on all three fall-related major injuries. Concurrently, a literature review identified EBP recommendations for fall prevention on behavioral health units. A fall prevention action program was developed consisting of four elements: RN education to improve Morse Fall Scale scoring, individualized fall prevention patient plans, revised staff workflow, and improved fall prevention communication.

RESULTS: There were no fall-related injuries for six months and no fall-related major injuries for 12 months following implementation of the fall prevention program. Overall, this reduction in fall-related major injuries was sustained over a 21-month period.

CONCLUSION: An interprofessional team approach using EBP and RCA is effective in redesigning and implementing a fall prevention program for the adult inpatient behavioral health population.

Language: en

Test-retest reliability and response stability of gaze stabilization, postural sway, and dynamic balance tests in persons with multiple sclerosis and controls

Garg H, Schubert MC, Gappmaier E, Sibthorp J, Bo Foreman K, Dibble LE. Int. J. MS Care 2020; 22(3): 136-142.

Abstract

BACKGROUND: Psychometric properties of tests that assess the angular vestibulo-ocular reflex (aVOR) and vestibulospinal reflex function are currently unknown. This study investigated the test-retest reliability and response stability of gaze stabilization, postural sway, and dynamic balance measures in persons with multiple sclerosis (MS) and controls.

Methods: Nineteen adults with MS and 14 controls performed passive horizontal head impulses, quiet standing, and dynamic balance tests on two separate occasions. Gaze stabilization measures included aVOR gain, number of compensatory saccades (CSs) per head rotation, CS latency, and gaze position error. Postural sway included sway amplitude and total sway path. Dynamic balance measure included the Functional Gait Assessment. Intraclass correlation coefficient, standard error of measurement (SEM, SEM%), and minimal detectable difference at 95% confidence level were calculated.

Results: Test-retest reliability for aVOR gain, CSs per head rotation, and gaze position error was moderate and for each postural sway and dynamic balance measure was good. Low error (SEM, SEM%) for aVOR gain, CS latency, postural sway, and dynamic balance variables and low minimal detectable difference values for aVOR gain and Functional Gait Assessment scores were seen, suggestive of acceptable response stability.

Conclusions: These results support the utility of some of the gaze and postural measures for examination and treatment efficacy purposes in people with MS.

Language: en

Keywords

Balance; Psychometric properties; Multiple sclerosis (MS); Posture; Vestibular-ocular reflex

The epidemiology of emergency presentations for falls across Western Victoria, Australia

Holloway-Kew KL, Baker TR, Sajjad MA, Kotowicz MA, Livingston PM, Khasraw M, Hakkennes S, Dunning TL, Brumby S, Page RS, Sutherland A, Venkatesh S, Brennan-Olsen SL, Williams LJ, Pasco JA. Australas. Emerg. Care 2020; ePub(ePub): ePub.

Abstract

BACKGROUND: In order to develop and implement prevention strategies for falls, comprehensive epidemiological data are required. Therefore, this study mapped emergency presentations for falls across the western region of Victoria, Australia, encompassing urban, regional and rural areas.

METHODS: This cross-sectional study utilised electronic data for emergency presentations following a fall from <1 metre for individuals aged ≥40 yr during 2014-2016 inclusive. Age-standardised incidence rates (per 1,000 population/year) were calculated for each Local Government Area (LGA).

RESULTS: Age-standardised falls incidence varied across the LGAs, with the lowest occurring in the Rural City of Ararat LGA (4.4; 95%CI 3.5-5.4) and the highest for the City of Warrnambool (25.1; 95%CI 23.7-26.6), Colac-Otway (24.7; 95%CI 23.0-26.4) and Moyne (23.0; 95%CI 21.2-24.8). Patterns were similar for men and women when stratified by sex across these LGAs. For men and women combined, most patients arrived at the hospital using private transportation (55.4%) or road ambulance service (43.1%). Most falls occurred during leisure activities (48.0%) in a home setting (54.8%).

CONCLUSIONS: Higher rates of falls presentations were observed in southern LGAs and most commonly occurred at home, during leisure activity. Future research should identify specific intervention strategies to reduce falls in the region, based on the data reported from this study.

Language: en

Keywords