

Safety Literature 23rd January 2022

The feasibility and acceptability of a falls prevention e-learning program for physiotherapists

Soh SE, Morgan PE, Hopmans R, Barker AL, Ackerman IN. *Physiother. Theory Pract.* 2022; ePub(ePub): ePub.

(Copyright © 2022, Informa - Taylor and Francis Group)

DOI 10.1080/09593985.2021.2023928 **PMID** 35040710

Abstract

OBJECTIVE: To examine the feasibility and acceptability of a falls prevention e-learning program for physiotherapists working with people with osteoarthritis (OA).

METHODS: A prospective pre-post quasi-experimental approach was adopted. An e-learning program on falls prevention specific to the OA population was developed and delivered. Feasibility and acceptability data were obtained from recruitment records, Moodle(TM) activity logs, multiple choice quizzes and customized surveys.

RESULTS: Of the 65 physiotherapists and near-graduate physiotherapy students who met the eligibility criteria, 50 (77%) completed the e-learning program. Participants were satisfied and considered the program to be acceptable. The program met their expectations (n = 45; 90%) and was highly relevant to their work (median 8-10 [interquartile range (IQR)] 2; range 0 [not at all relevant] to 10 [extremely relevant]). An overall improvement in knowledge was also observed (mean percentage difference 8%; 95% CI -3.49, -1.27).

DISCUSSION: Given a heightened risk of falls among people with OA, ensuring physiotherapists are skilled in falls prevention is important. Our acceptability and outcomes data indicate that a falls prevention e-learning program can be feasibly delivered to physiotherapists working in OA care. Future research should assess subsequent changes in clinical practice to determine whether physiotherapists deliver care reflective of contemporary falls prevention evidence.

Language: en

Keywords

Education; falls; e-learning; osteoarthritis

Barriers and facilitators in using a clinical decision support system for fall risk management for older people: a European survey

Ploegmakers KJ, Medlock S, Linn AJ, Lin Y, Seppala LJ, Petrovic M, Topinková E, Ryg J, Mora MAC, Landi F, Thaler H, Szczerbinska K, Hartikainen S, Bahat G, Ilhan B, Morrissey Y, Masud T, van der Velde N, van Weert JCM. Eur. Geriatr. Med. 2022; ePub(ePub): ePub.

(Copyright © 2022, Elsevier Publishing)

DOI 10.1007/s41999-021-00599-w **PMID** 35032323

Abstract

PURPOSE: Fall-Risk Increasing Drugs (FRIDs) are an important and modifiable fall-risk factor. A Clinical Decision Support System (CDSS) could support doctors in optimal FRIDs deprescribing. Understanding barriers and facilitators is important for a successful implementation of any CDSS. We conducted a European survey to assess barriers and facilitators to CDSS use and explored differences in their perceptions.

METHODS: We examined and compared the relative importance and the occurrence of regional differences of a literature-based list of barriers and facilitators for CDSS usage among physicians treating older fallers from 11 European countries.

RESULTS: We surveyed 581 physicians (mean age 44.9 years, 64.5% female, 71.3% geriatricians). The main barriers were technical issues (66%) and indicating a reason before overriding an alert (58%). The main facilitators were a CDSS that is beneficial for patient care (68%) and easy-to-use (64%). We identified regional differences, e.g., expense and legal issues were barriers for significantly more Eastern-European physicians compared to other regions, while training was selected less often as a facilitator by West-European physicians. Some physicians believed that due to the medical complexity of their patients, their own clinical judgement is better than advice from the CDSS.

CONCLUSION: When designing a CDSS for Geriatric Medicine, the patient's medical complexity must be addressed whilst maintaining the doctor's decision-making autonomy. For a successful CDSS implementation in Europe, regional differences in barrier perception should be overcome. Equipping a CDSS with prediction models has the potential to provide individualized recommendations for deprescribing FRIDs in older falls patients.

Language: en

Keywords

Barriers; Falls prevention; Medication review; Clinical Decision Support System (CDSS); Facilitators

Development of data-driven metrics for balance impairment and fall risk assessment in older adults

McManus K, Greene BR, Motti Ader LG, Caulfield B. IEEE Trans. Biomed. Eng. 2022; ePub(ePub): ePub.

(Copyright © 2022, Institute of Electrical and Electronic Engineers)

DOI 10.1109/TBME.2022.3142617 **PMID** 35025734

Abstract

Ageing incurs a natural decline of postural control which has been linked to an increased risk of falling. Accurate balance assessment is important in identifying postural instability and informing targeted interventions to prevent falls in older adults. Inertial sensor (IMU) technology offers a low-cost means for objective quantification of human movement. This paper describes two studies carried out to advance the use of IMU-based balance assessments in older adults. Study 1 (N=39) presents the development of two new IMU-derived balance measures. Study 2 (N=248) reports a reliability analysis of IMU postural stability measures and validates the novel balance measures through comparison with clinical scales. We also report a statistical fall risk estimation algorithm based on IMU data captured during static balance assessments alongside a method of improving this fall risk estimate by incorporating standard clinical fall risk factor data.

RESULTS suggest that both new balance measures are sensitive to balance deficits captured by the Berg Balance Scale (BBS) and Timed Up and Go test.

RESULTS obtained from the fall risk classifier models suggest they are more accurate (67.9%) at estimating fall risk status than a model based on BBS (59.2%). While the accuracies of the reported models are lower than others reported in the literature, the simplicity of the assessment makes it a potentially useful screening tool for balance impairments and falls risk. The algorithms presented in this paper may be suitable for implementation on a smartphone and could facilitate unsupervised assessment in the home.

Language: en