



Falls screening and assessment tools used in acute mental health settings: a review of policies in England and Wales

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Abstract

Objectives There is an urgent need to improve the care of older people at risk of falls or who experience falls in mental health settings. The aims of this study were to evaluate the individual falls risk assessment tools adopted by National Health Service (NHS) mental health trusts in England and healthcare boards in Wales, to evaluate the comprehensiveness of these tools and to review their predictive validity.

Methods All NHS mental health trusts in England ($n = 56$) and healthcare boards in Wales ($n = 6$) were invited to supply their falls policies and other relevant documentation (e.g. local falls audits). In order to check the comprehensiveness of tools listed in policy documents, the risk variables of the tools adopted by the mental health trusts' policies were compared with the 2004 National Institute for Health and Care Excellence (NICE) falls prevention guidelines. A comprehensive analytical literature review was undertaken to evaluate the predictive validity of the tools used in these settings.

Results Falls policies were obtained from 46 mental health trusts. Thirty-five policies met the study inclusion criteria and were included in the analysis. The main falls assessment tools used were the St. Thomas' Risk Assessment Tool in Falling Elderly Inpatients (STRATIFY), Falls Risk Assessment Scale for the Elderly, Morse Falls Scale (MFS) and Falls Risk Assessment Tool (FRAT). On detailed examination, a number of different versions of the FRAT were evident; validated tools had inconsistent predictive validity and none of them had been validated in mental health settings.

Conclusions Falls risk assessment is the most commonly used component of risk prevention strategies, but most policies included unvalidated tools and even well validated tool such as the STRATIFY and the MFS that are reported to have inconsistent predictive accuracy. This raises questions about operational usefulness, as none of these tools have been tested in acute mental health settings. The falls risk assessment tools from only four mental health trusts met all the recommendations of the NICE falls guidelines on multifactorial assessment for prevention of falls. The recent NICE (2013) guidance states that tools predicting risk using numeric scales should no longer be used; however, multifactorial risk assessment and interventions tailored to patient needs is recommended. Trusts will need to update their policies in response to this guidance.

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Keywords: Falls; Risk assessment; Policies; Validity; Older people; Mental health

Introduction

Falls are the most frequently reported patient safety incident [1]. Approximately 283,000 falls are reported every year

in hospitals across England and Wales, with over 36,000 reported from mental health units and 38,000 from community hospitals [1]. Falls rates in mental health units for older people varied from 7.7 to 48 falls per 1000 bed-days, which is significantly higher than fall rates in community hospitals (4.5 to 12 falls per 1000 bed-days) and acute hospitals (4.3 to 13 falls per 1000 bed-days) [2]. There is an urgent need to improve the care of older people at risk of falls or who experience falls in acute older adult mental health

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settings as the rate of falls is higher in these settings than in other clinical settings [2]. Falls cost the UK National Health Service (NHS) more than £2.3 billion per year, and account for four million hospital bed-days in England annually [3]. In addition to the impact on healthcare costs, falls have significant human costs, including distress, loss of confidence and reduced quality of life [1]. The 2013 UK National Institute for Health and Care Excellence (NICE) guidelines recommend the use of multidisciplinary falls risk assessment of older people at risk of falls in both inpatient and community settings [4]. This extends previous guidance which did not include inpatients [5], and highlights the lack of evidence of effectiveness of multifactorial interventions for older people who are inpatients in specialist mental health units, how these interventions can be targeted at those at greatest risk, and the need for further research.

A range of falls risk assessment tools have been developed and tested in different clinical settings in order to identify older people who are at risk of falls, and to facilitate effective targeting of falls prevention interventions [6,7]. There is scant evidence to support the use of any screening tool alone to predict falls, and most falls risk assessment tools have been found to discriminate poorly between fallers and non-fallers [7]. Use of these tools in settings/populations that differ from those for which they were developed is less successful in terms of effectiveness to predict falls; this compromises the validity of these tests and their wider application [7,8]. It is not yet known which tools are most effective for use in acute mental health settings.

This review presents one element of a larger study exploring falls in acute mental health settings for older people [9]. The objective was to identify the range of tools recommended for operational use and included within the policy guidelines of individual NHS mental health trusts in England and health boards in Wales, and to explore whether these were sufficient to meet the NICE recommendations [4]. A further objective was to determine the predictive validity of these assessment tools in order to determine the effectiveness of their operational use.

Methods

All mental health trusts in England ($n = 56$) and healthcare boards in Wales ($n = 6$) were invited to supply their falls policies and other relevant documentation (e.g. local falls audits). Some policies were publically available on the Internet, but for others, the authors contacted the information governance team at each trust and requested the relevant documents. Non-clinical and environmental risk assessment tools for falls were excluded from the analysis as they do not assess patients' clinical risk factors for falls.

In order to evaluate the comprehensiveness of the tools, a proforma was developed, using Microsoft Excel (Microsoft Corp., Richmond, WA, USA), to ensure a comprehensive approach and systematic data extraction across the policies.

Information was extracted from the falls assessment tools as documented in the policies, the risk variables assessed within each tool were listed, and these were compared with NICE recommendations for the assessment of multiple risk variables [5]. Variables from the tools were compared with the 2004 NICE guidance as this was the guidance in place when the policies were collected; this was updated in 2013 [4].

An analytical review was undertaken to evaluate the predictive validity of each of the falls risk assessment tools outlined in these policies. The predictive validity of these tools was analysed by evaluating sensitivity, specificity, positive predictive validity (PPV) and negative predictive validity (NPV) (Table 1). A comprehensive literature search of the following healthcare databases was undertaken: EBSCO, PSychoinfo, Nursing Index, MEDLINE, Pubmed and Cochrane Database of Systematic Reviews. The search strategy used the following keywords: falls, risk assessment tools, STRATIFY, MORSE, FRASE, FRAT, screening, predictive validity, elderly and older age. No limitations on year of publication were applied. Studies were included if a prospective investigation of the predictive properties of the tools outlined in the included policies had been conducted. Only studies published in the English language were considered for inclusion. In addition, studies were required to have reported predictive properties of these tools.

Sensitivity of a tool is determined by the percentage of patients who had a fall after being predicted to be at high risk, and specificity is determined by the percentage of patients who did not fall after being predicted to be at low risk [10,11]. PPV is determined by the percentage of high-risk patients who went on to fall, and NPV is determined by the percentage of low-risk patients who did not have any falls [10,11]. All relevant identified studies were included without considering their methodological qualities, as this was not within the scope of this review. The predictive properties of the tools from the included studies have been summarised in Table 1.

Results

Of the 62 potential falls policies, 44 were obtained from mental health trusts in England, and two were obtained from healthcare boards in Wales. Two trusts supplied their generic health and safety risk assessment policies, and when they were asked to supply their specific falls prevention policy for clinical use, one trust reported that they did not have a falls prevention strategy. Another trust reported that they were currently reviewing their policy so were not in a position to send this. Thirty policies were publically available on the Internet (trust websites).

Forty-two of the 46 falls policies recommended the use of specific falls risk assessment tools as part of their falls prevention strategy, predominantly the St. Thomas' Risk Assessment Tool in Falling Elderly Inpatients (STRATIFY), Environmental Risk Assessment for Falls, Falls Risk

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