Assessing the safety culture of care homes; a multi-method evaluation of the adaptation, face validity and feasibility of the Manchester Patient Safety Framework

Revised submission to BMJ Quality and Safety as original research article

3662 words excluding quotations

Abstract

Background Understanding the cultural characteristics of healthcare organisations is widely recognised to be an important component of patient safety. A growing number of vulnerable older people are living in care homes but little attention has been paid to safety culture in this sector. In this study we aimed to adapt the Manchester Patient Safety Framework (MaPSaF), a commonly used tool in the health sector, for use in care homes and then to test its face validity and preliminary feasibility as a tool for developing a better understanding of safety culture in the sector.

Methods As part of a wider improvement programme to reduce the prevalence of falls, pressure ulcers and urinary tract infections amongst residents in 90 care homes in England, we carried out a multi-method participatory evaluation of the adaptation of MaPSaF and its face validity and feasibility for care home staff. Data were collected using participant observation, interviews, documentary anlaysis and a survey, and were analysed thematically.

Results MapSaf required considerable adaptation in terms of its length, language and content in order for it to be perceived to be acceptable and useful to care home staff. The changes reflected differences between the health and care home sectors in terms of the local context and wider policy environment, and the expectations, capacity and capabilities of the staff.

Conclusions A new tool, named 'Culture is Key' was developed and has the potential to be used more widely in care homes to address deficiencies in resident care by deepening staff understanding of the safety culture of their organisations.

253 words

Background

The culture of a health or care organisation, broadly defined as 'what is valued' or 'the way we do things around here' [1], is widely regarded as an important determinant of the safety and the quality of the care that the organisation delivers.[2] As a consequence, over the last two decades there has been growing international interest in addressing the cultural characteristics of healthcare organisations in order to improve patient safety.[3,4]

Safety culture assessment tools can provide insights for teams to help them to acknowledge, understand and change their shared values and ways of working with respect to safety.[5] One such tool is the Manchester Patient Safety Framework (MaPSAF). The framework underpinning MaPSaF was developed in the early 1990s for use in the petrochemical industry.[6] Using a Guttman-like scale the original framework comprised three levels of cultural maturity (termed pathological, bureaucratic and generative) and descriptors of what an organisation might look like at each of these levels for a range of different safety dimensions. The tool was adapted by Reason [7] and by Parker and Hudson [8] for use in the health sector, including expanding the assessment to five levels of maturity. It was originally developed for use in the primary care sector [9-11] and subsequently modified for the ambulance service, mental health organisations, community pharmacies [12] and hospitals.[13-15] To our knowledge MaPSaF has not previously been used outside the health sector and in particular has not been used in care homes.

The care home sector is of increasing interest to policy makers worldwide. In England there are more than 18,000 care homes providing a home for over 360,000 residents; 20 percent of people over the age of 85 years live in care home settings.[16] Many care home residents have complex healthcare needs, disability and frailty and there is growing evidence of safety concerns including preventable falls, pressure ulcers and urinary tract infections.[17-19] Such incidents impact not only on the residents but also on the care homes in which they live and on local health services. In UK and internationally, these concerns are proving difficult to address and there is an emerging consensus that doing so requires a focus on safety culture.[20]

This paper describes a study which aimed to adapt MaPSaF for use in care homes and to test its face validity and preliminary feasibility as a tool for developing a better understanding of safety culture in the sector.

Methods

Context

The study was carried out as as one part of a larger programme, PROSPER (Promoting Safer Provision of care for Elderly Residents),[21] which aimed to improve the safety of care home residents by reducing the prevalence of three common safety incidents; falls, pressure ulcers and UTIs. The initiative was carried out by a team comprising representatives of the care homes, local government commissioners of care home services, improvement facilitators and researchers responsible for a participatory and formative evaluation. A programme theory [22] was agreed which hypothesized that using a multi-faceted intervention to reduce the prevalence of the target safety incidents by addressing knowledge, behavioural and cultural factors would reduce the rates of attendance at accident and emergency departments and unplanned admission to hospital, and thereby reduce costs and well as improving safety.

A complex socio-technical safety improvement intervention was co-designed by the participants and comprised two other main components alongside MaPSaF; training in quality improvement methods and the measurement and benchmarking of the prevalence of the target safety incidents.[23] All of the intervention components were underpinned by a strong emphasis on support, facilitation and shared learning, provided or coordinated by members of the local government improvement team in partnership with the local health service.

In line with established evidence,[24] the starting assumption of the project team was that in principle MaPSAF had potential to be useful in the care home sector but that it would

need to be adapted to reflect recognised differences in purpose, governance, approach to improvement and the nature of the workforce between the two sectors.

Evaluation design

A multi-method participatory and formative evaluation of the PROSPER programme was carried out using the 'Researcher-in-Residence' model. This model positions the researcher as an active member of an operational team contributing to improvement activities by mobilizing established research evidence, undertaking a pragmatic evaluation, and negotiating the meaning and utility of the findings with other members of the team.[25,26]

The evaluation of the wider PROSPER programme aimed to examine the impact of the intervention on the culture and working processes of the homes, and on the prevalence of safety incidents and the use of hospital services. Within this, the evaluation of MaPSaF, which is the focus of this paper, aimed to describe the process of adapting MaPSaF for use in care homes, and to undertake a preliminary assessment of its face validity and feasibility as a tool for developing a better understanding of safety culture in the sector. Ethics approval for the evaluation was granted jointly by the ethics committees of the participating County Council and the lead university.

Setting and participants

A total of 90 homes from one geographical area in the south east of England took part in the PROSPER programme. All of the participating care homes were privately owned, some independently and some part of a larger group. The homes were performance managed by a team in local government and regulated by the Care Quality Commission, the English health and social care regulator. The selected homes were purposefully sampled to reflect a range of geographical locations, size, ownership arrangements and perceived level of engagement with the aims of the improvement programme. Each home signed up to take part in one of four separate cohorts recruited at approximately 6 monthly intervals over a period of nearly two years.

Data collection and analysis

A combination of documentary review, participant observation, interviews and a survey were used to evaluate both the wider PROSPER programme, and the development and testing of MaPSaF within it. Data were collected between July 2014 and April 2016.

More than 500 written reports produced by the care homes, the improvement team or the local government commissioner of care homes were reviewed to provide an understanding of the local context and to help shape the interviews and observations. Twelve planning and development meetings (including one workshop specifically focused on the initial adaptation of MaPSaF), training sessions and community of practice meetings were observed. 203 semi-structured telephone interviews were carried out with the managers and front-line staff of the care homes. Twenty-three interviews were conducted with non-care home stakeholders, including health service staff and social and health care commissioners. In addition, a small number of informal discussions were held with family members and residents. A survey of the care home managers, based largely on the components of MaPSaF, was conducted to provide a quantitative assessment of any changes in perception of safety culture before and between 8 and 20 months after the intervention. 51 of the 90 care homes provided before and after data.

Ten of the 90 care homes were selected for more detailed study by a team of two researchers. Four of these homes were visited on repeated occasions. In addition to 103 individual and group interviews in these homes, sixty hours of observations of front line care and staff meetings were undertaken.

Given the integrated nature of the intervention it is difficult to determine how much of this evaluation activity was focused on safety culture and specifically on the development and testing of MaPSaF. We estimate that issues relating to the broad concept of safety culture were addressed directly or indirectly in about fifty percent of the data collection activities described above. Between ten and twenty percent of the evaluation activity related directly to the development or testing of MaPSaF.

The interviews were not audio-recorded but detailed notes were taken of the interviews and observations by the researchers, including verbatim quotations. All notes were typed and shared with the participants. Using NVivo the data were analysed iteratively by two researchers to extract key themes relating to the aims of the evaluation. In line with the participatory design of the evaluation, emerging themes were shared with the care home participants at regular meetings, with the wider evaluation team and with an expert advisory group. The interpretation of these themes was negotiated between all of these stakeholders. The survey data were analysed with the Statistical Package for the Social Sciences (SPSS) using two-sided t-tests.

Results

Adaptation of the health care version of MaPSaF

The version of MaPSaF developed for use in the primary care sector was used as the starting point for the process of adaptation because it was judged by the implementation team to be most relevant to care homes.

An initial full-day workshop facilitated by one of the original developers of the tool was organised in April 2014, involving 40 stakeholders including care home mangers, community volunteers, health commissioners and providers, local government commissioners, managers and quality improvement officers, academic advisors and the evaluation team. The adaptation process started with the group agreeing the overall aim and purpose of the work and utilised a combination of presentations, breakout groups and large group discussion. The participants accepted the broad MaPSaF framework, though they disliked the maturity labels (such as 'pathological' and 'generative') and decided to use the letters A-E to differentiate between the five levels. In extensive discussion throughout day they adapted the themes and redrafted the descriptors for each theme and for each level of maturity to ensure their relevance to care home settings.

Early piloting

The resulting draft was then tested with the first group of homes recruited to the programme. Guidance and some facilitation was provided by members of the improvement team, who described how MaPSaF was designed to be used by a care team in a formative rather than a judgemental way. In line with its use in other sectors, the participants were asked to start by reading the organisational descriptors at each level of maturity and to choose the description that they individually thought best reflected their organisation. They were informed that choices would then be discussed by the whole team and a single consensus descriptor chosen. The facilitators explained to the teams how a collective understanding of safety culture would be derived in part from the ratings but mostly from insights gained through team discussion.

Initial impressions of the front-line staff

The adapted version of MaPSaF was less well received by the front line staff of the care homes than by the senior managers involved in the adaptation workshop. As a consequence its implementation was given a lower priority by both the homes and the improvement team than that for the training and data components of the improvement intervention. One manager claimed that the purpose of the tool was not fully explained at the outset or understood by many of the staff:

> *"It might be good in principle, but the purpose and what we get out of it is not clear. I am happy to help them [the Council] and to fill in forms, but I don't know how it helps me."* (manager, small home, run by one family / group)

Most of the home managers said that they found it difficult to make time for their staff to participate in facilitated sessions in the absence of backfill provision:

> *"I found it hard to get people to do it. At first they wanted us to have a meeting and discuss it, can you believe it? We don't have time. It would take three or four hours. Did they expect us to pay the whole team to sit around and talk about a survey?"* (manager, medium sized home, run by large corporation).

But it was not just a question of time. As the programme progressed it became increasingly clear that the design of the tool and the language that it contained might have been acceptable to the health service staff for whom the original tool was developed but did not engage front line staff working in care homes. For some staff the terms 'culture' and 'safety' were unfamiliar and others found the title of the tool to be off-putting. Barriers such as learning difficulties or a poor command of English were reported:

> *"It's daunting. That's all I'm going to say. It is hard and a bit stressful. I was a bit upset really. I felt stupid. We did it cos we were told to. I wasn't in a good mood about it, I can tell you."* (carer, large home, run by large corporation).

> *"Have you seen it? Yeah, well there are these questions and lots of details and big words. I mean, we are good at our jobs, we care about the residents, we want to make things good, but you know, we're not university lecturers or something. We are not that good on paperwork and all the words. It is just set out so confusingly and you have to keep looking back and forth at all the pages."* (senior carer, medium home, run by corporation)

Many of the care home staff appeared to be uncomfortable with the emphasis on openness and reflective learning which MaPSaF attempts to promote. Several front-line members of staff said that they did not want to raise safety concerns in their homes because they were not sure how their senior managers would respond. Participants in the earlier stages of the programme regarded the tool as a 'survey' to collect data for others (usually local government officials) rather than something designed to help them. This caused anxiety and resulted in some compliance behaviours rather than genuine engagement:

> *"….. we did it and sent the forms back like we were asked. I thought it was a complicated survey and wouldn't trust the results."* (manager, medium home, run by large corporation)

"*Yes we have to fill in a form. Later we might talk on the topics……We just do what we are told and make it try to sound good."* (carer, large home, run by large corporation)

The critical attitude of the staff to a reflective learning tool appeared to be influenced by the strong managerial and regulatory drivers prevalent in the care home sector. In many homes this was manifest by what appeared to be a sensitive relationship with council staff, including those in the PROSPER team providing the facilitation:

"The *improvement facilitator says that homes sometimes find it difficult to engage in improvement with the (improvement team) because they are council officers from the safe-guarding team; all council staff seen as looking at performance and judging them/possibly raising safeguarding issues"* (field note, home visit, 17/10/14)

Many of the staff described a climate not of fear but of scepticism that the council was more concerned with imposing rules and managing risk than with promoting a culture of openness and learning.

Finally, some care home staff were suspicious of MaPSaF's NHS origin:

"There's a bit of a backlash about things being created in hospital being applied in care homes' (home visit, 03/09/14)

In part this reflected negative past experiences of working with the NHS, including what was perceived to be unwarranted criticism of care homes by NHS staff. Some staff also described how concerns about transferring NHS tools reflected substantive differences between the two sectors, in particular attitudes towards the centrality of the service user (which was perceived by the staff to be more deeply embedded in the care homes) and in relation to attitudes to risk (where staff perceived the NHS to be more risk averse).

Further adapation of MaPSaF

The improvement team attempted to respond to these issues. They started by making minor process changes to address the workload challenges, such as encouraging the staff to complete one dimension per meeting rather than all of the dimensions at the same time. They also encouraged staff who expressed concerns about the complexity of the tool to complete the initial assessment in small groups rather than individually. However, as the project progressed and MaPSaF remained the least-used part of the intervention, it became clear that more radical changes were needed. The improvement team responded by reducing the length of the tool, summarising it on a single page, and making significant changes to the language of the themes and descriptors. On the recommendation of front line staff they changed the title of the tool from 'MaPSaF' to 'Culture is key'.

The new version of the tool was then re-piloted with six homes from the last group recruited to the programme. Sessions lasted between 90 and 150 minutes, each involving between four and eight frontline staff. This resulted in only minor changes being required to the tool. The final version is presented in Figure 1.

<< Insert Figure 1 about here >>

The new version of the tool, combined with greater encouragement and more intense and experienced facilitation from the improvement team, resulted in a higher level of engagement and more positive feedback. Attitudes changed in particular when participants were reassured that there was no right or wrong answer. As the programme developed they started to see the formative purpose of the tool and perceived it be to less threatening. Some staff reflected that the process of completing the tool gave them new insights into their home, helpfully highlighted differences in opinion between staff members and helped them to think more critically about what they were doing:

> "(We are) *now aware that we have been putting greater emphasis on how things look rather than on safety, like using table cloths which are a safety hazard" (carer, independent medium sized home)*.

As a result of using 'Culture is key' staff started thinking and talking differently about safety issues. For example they highlighted how they were redefining safety in terms of minimising risk for residents rather than avoiding sanctions for staff, and they were more like to recognise the trade-offs between keeping residents safe and respecting their independence. These cultural changes were reflected in the results of the survey which tracked changes in the self reports of the care home managers about safety culture issues (Figure 2). In particular, by the end of the programme managers were more likely to see safety as a priority, more likely to use data and systematic improvement methods to guide their activities and more likely to say that staff felt valued for improving resident safety.

<< Insert Figure 2 about here >>

Discussion

The concept of safety culture is intuitively appealing but it has proved a complex one to operationalise in the health sector [2] and one that has received very little attention in care homes. This is surprising given that a growing proportion of the most vulnerable people in society live in care homes and are known to be at higher risk of safety events. This study describes how a team of practitioners and academics adapted the Manchester Patient Safety Framework, a safety culture assessment tool that has been used extensively in health organisations, for use in care homes. A new tool, renamed 'Culture is Key', has been developed and has been demonstrated to raise the awareness of staff about safety issues, to stimulate discussions about the strengths and weaknesses of their approach to safety and to identify areas for improvement. As a result of this work we are confident that a safety cuture tool that has a formative purpose is now available for care homes. We are also confident that it has good enough face validity and feasibility to be used at larger scale, though it still requires further piloting and refinement.

The health version of MaPSaF used in this project was a complex tool for care homes to engage with and adapting it for use in the sector was a more challenging task than adapting it for use within different health environments. The reasons for this include the capacity and

capabilities of care home staff to engage with a safety culture assessment process; the impact of hierarchical relationships within the homes on the willingness of staff to discuss their culture; the apparent lack of emphasis on developing an environment that values reflection and learning, in part because of the predominance of the strong focus on performance management and regulation; and a scepticism about learning from the health service. This study confirms the widely cited view that interventions are more likely to be used and to be effective if these contextual issues are recognised and acted upon.[27]

Adapting an established tool, rather than inventing one de novo, offered a number of advantages to the care home staff and to those responsible for the governance of the homes.[10,28] Most obviously the approach reduced the costs associated with developing a new tool. In addition, the process of adapation generated new insights into the similarities and differences between the health and care sectors. In providing a permanent place of residence care homes serve a different function from health organisations and therefore would be expected to have a different attitude towards health, well-being and risk. Only by appreciating these fundamental differences can safety culture be understood. In addition, in many countries the care home sector is dominated by a strong regulatory ethos which has impacted on the willingness of care homes to engage with the systematic quality improvement approaches that have become popular in the health sector. Finally, care homes often experience a higher turnover of staff, pay lower wages and are less likely to invest in staff training and development than health organisations.[20]

The approach that we adopted in this study highlighted some of the benefits of utilising a participatory approach to service improvement and evaluation.[26,29] By working closely with the improvement team and with care home staff, the researcher was able to bring established evidence about what worked and what was important to the fore, was able to provide practical support for the team, and to deliver a timely and responsive process evaluation. Nevertheless, our approach had some limitations. The fact that the development and evaluation of a safety culture assessment tool was embedded within and just one part of a wider improvement programme made it difficult to differentiate between the impact on safety culture of the tool and that of other elements of the complex intervention. The development of an acceptable draft of the tool took longer than predicted

and this left less time to fully test it as an effective component of the wider safety improvement intervention. Finally, the findings may not be widely generalizable given that the study was carried out in one geographical area and managed by one local authority.

A number of lessons arise from this work for people involved in safety improvement. First, when transferring tools between sectors, it is important to follow a rigorous, inclusive and substantive process, with multiple rounds of piloting and openness to the need for adaptation. Only then can the deep contextual determinants of improvement be properly understood.[27] Second, the project demonstrates the significant structural, procedural and cultural differences between the health and social sectors. Understanding these differences is important as the two sectors work more closely together and opportunities for mutual learning are explored. For example, arising from this work there might benefits to both sectors reflecting on the risks of operating in an environment in which performance management and regulatory imperatives crowd out an improvement philosophy.

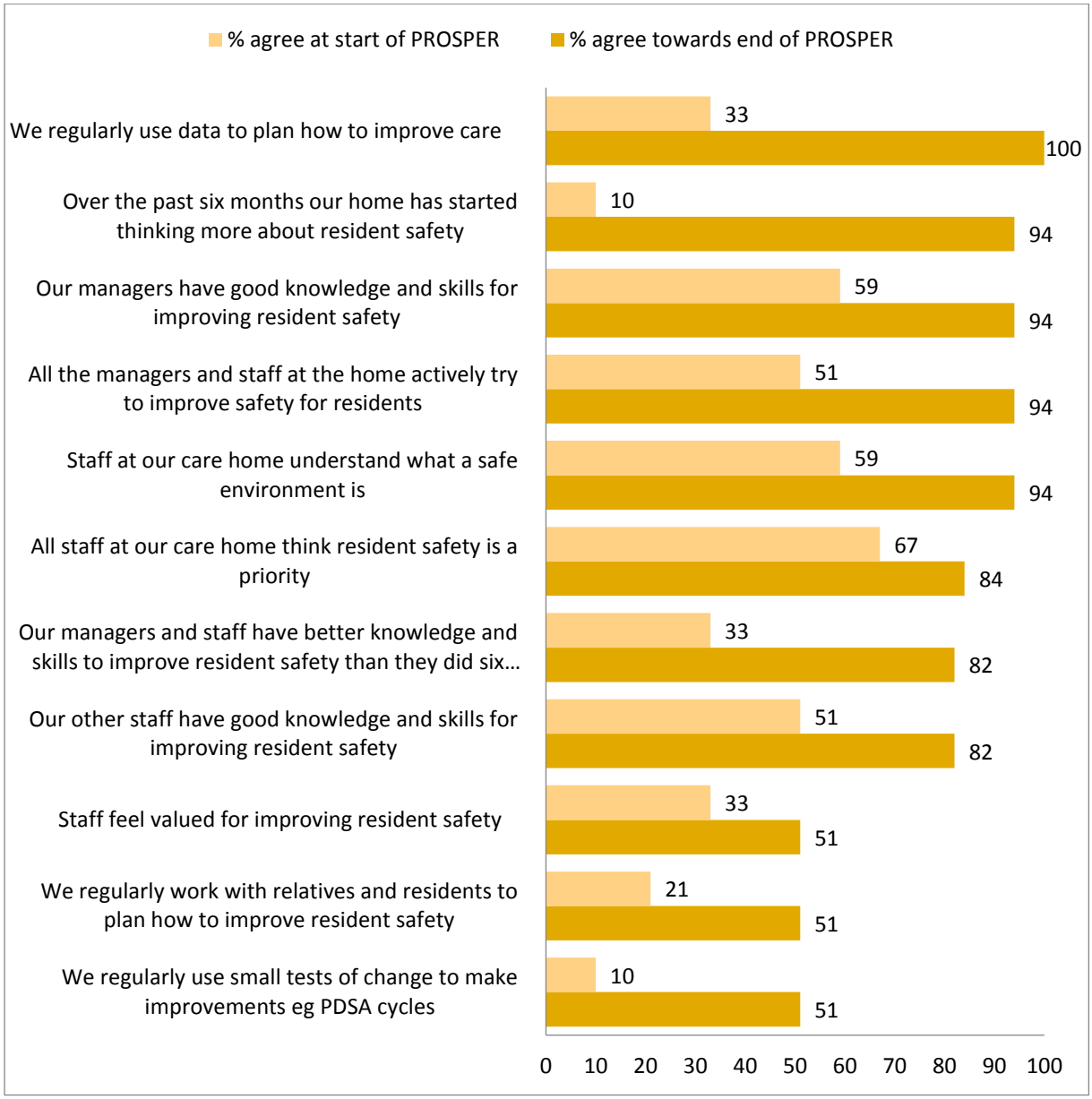
Third, even when a systematic process to create a rigorous intervention is followed, challenges remain with implementation.[30] This work demonstrated the need for high quality facilitation focusing on clarifying the purpose of cultural assessment, managing staff expectations, encouraging engagement and helping to solve practical problems. This support should be based on a deep understanding of staff learning styles, capabilities and their training needs. Finally, the challenge of creating time to engage with cultural assessment may mean that in the short term it is unrealistic to expect all homes to use tools like MaPSaF as part of their core business. A more targeted approach which focuses use of the tool on organisations with identified need of improvement, perhaps those identified by a regulator, might be more productive

Whilst further work is required to test the acceptability and utility of ‘Culture is Key’, we hope that this study provides a tool for care home staff to better understand and to act upon the cultural determinants of the safety of their residents.

Figure 1: the final modified version of 'Culture is Key' (previously the Manchester Patient Safety Framework or MaPSaF) designed for use in care homes

(see separate word document)

Figure 2: Proportion of care homes that agreed with statements about safety culture



Note: Data is based on matched comparisons of 51 care homes spanning eight- to 20-months.

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