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ORIGINAL ARTICLE

A longitudinal qualitative study of health care personnel's perceptions of simultaneous implementation of three risk assessment scales on falls, malnutrition and pressure ulcers

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Aims and objectives. In this study, the aim was to understand health care personnel's expectations and experiences of participating in an intervention aimed at the implementation of three assessment scales for fall injuries, malnutrition and pressure ulcers, and the performance of preventive measures in these areas over the period of 18 months.

Background. Fall injuries, malnutrition and pressure ulcers among older people are challenging issues for caregivers at different levels in the health care system.

Design. A descriptive design with a qualitative approach was used to follow health care personnel before, during and after implementation of a care prevention intervention.

Methods. Twelve health care personnel with different professions at the hospital, primary care and municipal care levels participated in a preventive care introduction. Seminars were held at four occasions, with assignments to be completed between seminars. Lectures and group discussions were performed, and three risk assessment scales were introduced. The participants were interviewed before, during and after the introduction. Manifest and latent content analysis were used.

Results. The main results are presented in the theme 'Patient needs are visualised through a gradually developed shared understanding' and in five categories. The work approach of performing three risk assessments simultaneously was perceived as positive and central to ensuring quality of care; it was not, however, perceived as unproblematic.

Conclusion. The participants as well as health care team members showed a positive attitude towards and described the advantages of being given opportunities for shared understanding to improve patient safety and to provide structure for the provision of good care.

Relevance to clinical practice. The managerial approach of listening to and acting on issues stressed by health care personnel is important to ensure ongoing and future improvement initiatives.

What does this paper contribute to the wider global clinical community?

- This study shows that health care personnel working at three health care levels; hospital, primary care and municipal care, experienced simultaneous implementation of three risk assessment scales to improve patient safety and structuring of work.
- Although personnel had a positive attitude towards performing risk assessments, problems with insufficient documentation routines and ICT systems were experienced.
- Reflections on and shared understanding of patients' care needs, brought about when working with the three scales simultaneously, probably contributed to health care team's positive attitudes.

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Introduction

Prevention of falls, malnutrition and pressure ulcers is central to good quality care. Guidelines are established to support healthcare personnel in assessing each patient's situation, function and care needs. Guidelines, which often include risk assessment, are typically implemented one at a time, although patients are at risk for multiple, often preventable adverse events simultaneously (van Gaal *et al.* 2011).

van Gaal *et al.* (2011) described promising results among hospital and nursing home patients when multiple guidelines, including risk assessment scales, were implemented at the same time. They found that patients in the intervention groups, compared with those receiving typical care, developed fewer adverse events (urinary tract infections, falls and pressure ulcers) per patient week. The present paper focuses on healthcare personnel's perceptions of simultaneous implementation of three risk assessment scales. In 2007, a patient safety initiative was launched by the Swedish Association of Local Authorities to address a number of problem areas; such as falls, malnutrition and pressure ulcers among people >65 years. A national quality register, Senior Alert, was designed (SALAR 2013) that includes the following risk assessment scales: the Downton Fall Risk Index (DFRI) (Downton 1993), the Mini Nutritional Assessment Scale (MNA-SF) (Guigoz *et al.* 1996) and the Modified Norton Scale (Norton-SF) (Lindgren *et al.* 2002). These scales are intended to support the development of the preventive care process and to promote systematic work. To facilitate the implementation of Senior Alert, a preventive care intervention was offered to county councils and municipalities. The intervention was arranged by Qulturum (2015), which is a centre for innovation and improvement associated with the county council of Jönköping, Sweden. Lecturers were persons selected by Qulturum that had previous experience in quality development work in health care. The participants in the intervention were from groups of interested health care personnel selected by their respective management.

Background

Caregivers have reported that working with guidelines and risk assessments one at a time to make improvements in the areas of fall injuries, malnutrition and pressure ulcer care is challenging (Whitehead *et al.* 2006, Pedersen *et al.* 2012, Bergquist-Beringer *et al.* 2011). Implementing multiple guidelines, including risk assessment scales, has shown positive effects in the form of fewer adverse events (van Gaal *et al.*2011). To our knowledge, no previous longitudinal qualitative study has used a pre- and postdesign to elucidate healthcare personnel's narrations about the implementation of a preventive care intervention that includes education in and the completion of; risk assessments regarding falls, malnutrition and pressure ulcers, as well as the implementation of appropriate measures. To further elucidate these three areas is of special interest as they are intertwined in clinical practice. Experiences before, during and after the implementation of an intervention can give valuable insights regarding healthcare personnel's understanding of performing risk assessments and the subsequent enactment of appropriate measures. These insights could be of value when facilitating the implementation and use of the risk assessment scales and performing preventive care measures. In the present study, the aim was to understand health care personnel's expectations and experiences of participating in an intervention aimed at the implementation of three assessment scales for fall injuries, malnutrition and pressure ulcers, and the performance of preventive measures in these areas over the period of 18 months.

Method

Design

A descriptive design with a qualitative approach was used to follow health care personnel before, during and after the implementation of a care prevention intervention (Saldana 2003, Polit & Beck 2012).

Data collection

Participants and setting

The 12 participants were all women; four registered nurses from a hospital, two district nurses, one physiotherapist and one occupational therapist from a primary care centre and two registered nurses, one physiotherapist and one manager from a community elder care centre. Participants ranged in age from 31–59 years, and the range for years

of work experience in their current profession was from 4–37 years. Two of the 12 participants had taken university courses in one of the domains of interest, namely fall prevention. With the aim to promote cooperation among healthcare personnel regarding these risk areas, middle managers from healthcare providers in one community decided to collaborate when recommending health care personnel to the care prevention intervention. As per the request of some of the middle managers, the participant's superiors made the recommendations for participation. The total number of 12 participants (four persons from; hospital, primary care and elderly care) was set by the three middle managers. Physicians were not recommended for participation mainly because they did not perform such assessments. The middle managers approached the proposed healthcare personnel regarding participation. All proposed health care personnel were interested in participating.

The community in which the study took place had 26,000 inhabitants. The hospital had full-service facilities. The ward involved with 20 beds, was one of two in an internal medicine department. The primary care centre served a population of 4500 individuals. The community elder care centre served the same population as the primary care centre and included 70 residents living in their own flats. During the intervention process, two registered nurses and one district nurse that had been chosen by management to attend the seminars but did not take part in the interviews, supported the participants.

The care prevention intervention

The project's overall aim was to introduce risk assessments in clinical nursing practice among patients ≥65 years – concerning falls, malnutrition and pressure ulcer care – as well as to aid in the improvement of the collaboration, communication and cooperation within the health care team and the different healthcare levels. The intervention consisted of a four-month introduction period (October 2007 to March 2008), which included four seminar occasions and assignments to be completed between the seminars (Table 1). The entire seminar group with participants from different locations in Sweden consisted of about 35 individuals. The seminars were conducted on a single day per occasion. During the seminar, the completed assignment was presented and discussed, lectures were given and new assignments were presented. The seminar content consisted of, for example, evidence-based knowledge related to the problems of falls, malnutrition and pressure ulcers among older patients, information on how to perform risk assessments in these areas, and how to use assessment results to improve clinical

Table 1 Content of the seminars

Seminar I	Seminar II	Seminar III	Seminar IV
Lectures and discussions about visions and goals, evidence-based nursing care and systematic patient care. Three short-form risk assessment instruments were introduced: Downton Fall Risk Index, identifying risk of falling, Mini Nutritional Assessment Scale, identifying risk of malnutrition and Modified Norton Scale, identifying patients at risk for developing pressure ulcers The assignment was introduced: Each participant was to have carried out at least four risk assessments and discussed the results with some of their colleagues at their workplace	Presentation and discussions about the assignment. Lectures and discussions about nursing care regarding falls, malnutrition and pressure ulcers as well as treatment, prevention and information about the quality register, Senior Alert The assignment was presented: Participants were to continue the risk assessments and present a plan for implementation of risk assessments at their workplace, to discuss risk assessment results with all colleagues and other professionals as well as management	Presentation and discussions about the assignment. Lectures and discussions about cooperation in the health care chain, information transfer and how to maintain a stable process in the health care chain The final assignment was presented: Participants were to continue the risk assessments and present patient results at the next occasion. They were also to give their respective managers a report on the implementation process at their workplace	Participants' managers were invited to the fourth occasion. Based on the assignments and other things, discussions were held about the current working process, current patient care system, collated patient risk assessment results, and future plans in the manager and participant groups. The management groups were also presented experiences from the introduction

practice. Reflections on current health care practices in these three areas at each workplace were a part of the focus. The introduction and implementation of the three assessment scales in clinical practice, which was a part of the intervention, were performed by the participants at their respective work place and with the help of the three support nurses.

Data collection

Semi-structured individual interviews (Polit & Beck 2012) were conducted on three occasions; before, during and after the intervention, between September 2007 and January 2009 (Table 2). The interviews took place at a location of the participant's choice. The last author, an experienced interviewer, conducted the 12 initial interviews. Two registered nurses, enrolled in a one-year Master's programme in primary health care education, conducted 12 interviews on each of the other two occasions. The 30-sex audio recorded interviews lasted between 25–40 minutes.

The participants were encouraged to speak freely about their experiences and perceptions.

The questions addressed and repeated at each interview session were: How do you work with the problems of falls, malnutrition and pressure ulcers? What are your thoughts about responsibility? What are your thoughts about cooperation? What are your expectations concerning this introduction to preventive care practice? What are your reflections about the performed introduction? At the third interview session a further question was added: What are your reflections on working with three risk assessment scales *simultaneously*? Probing questions were asked when further elaboration or clarification was needed, for example: Could you please tell me more? (Polit & Beck 2012). Data on the participants' demographic characteristics, such as age, gender and completed university courses, were collected. Notes that included observed nonverbal communication were taken during the interviews to promote understanding during the analysis phase. From the initial interviews, an interview with one informant was excluded because there was too little time before the introduction was to begin. One entire interview and part of another interview from the second session was excluded due to technical problems with the recording.

Table 2 Overview of occasions for interviews and seminars

September 2007	Interview I	
October		Seminar I
November		Seminar II
December		
January 2008		Seminar III
February		
March		Seminar IV
April	Interview II	
January 2009	Interview III	

Research ethics

Management at the three health care levels; hospital, primary care and municipal care, gave the researchers permission to perform the study. Personnel that were recommended for participation in the longitudinal study received an invitation from the researchers, as well as written and oral information about the study from their respective managers. Participation was voluntary, confidentiality of data was guaranteed and participants could withdraw from the study at any time. As there was no risk involved with the participant's health, no approval by an ethics committee was required for this study (Swedish law 2008).

Data analysis

The transcribed interview data were subjected to manifest and latent qualitative content analysis, as described by Patton (2002). The interviews were read through several times to understand and become familiar with the comprehensive material. The authors BS and AGM performed the analyses together. First, based on the aim of the study, the interviews from before the intervention were analysed and the meaning units were identified. Thereafter the same procedures, one occasion at the time, were used when analysing the interviews from during and after the intervention. The meaning units were thereafter condensed, abstracted and given a code, then sorted into subcategories and categories. The entire text was taken into consideration during the process, and the codes and categories were balanced based on their similarities and differences. During the analysis process, the underlying meaning of the material was identified and presented in a theme. The authors GM and ME read through the interviews and the analysis scheme to ensure that no areas addressing the study's aim had been missed. The analysis scheme was discussed among the four authors until a consensus was reached.

Results

The results are presented in one theme, 5 categories and 15 subcategories. In describing the categories, the perspectives

Table 3 Overview of theme, categories and subcategories

Theme	Categories	Subcategories
Patient needs are visualised through a gradually developed shared understanding	Risk assessments are central to ensuring quality of care	Risk assessment is important and gives structure to work
		Comprehensive facts are a foundation for appropriate care measures
		Compliance is needed to achieve essential benefits
	Cooperating in a team of different health care professionals is challenging	There is cooperation although a need for consensus
		Observing others' shortcomings is a sensitive matter
		The value of teamwork decreases due to the absence of physicians in the project
	Shortcomings in documentation are identified as a risk to patient safety	Important to have access to everyone's documentation
		Risks were identified in relation to having different documentation routines
		Noncompatible data systems lead to uncertainty of documentation quality
	The understanding and application of assessment results developed gradually	No systematic assessments of results
		Complexity of assessment results is challenging
		Risk assessment results provided feedback on care quality
	Developing an understanding of one's own and others' responsibility increases awareness of one's own sphere of control	Healthcare team members' perception of managers' responsibility for quality of care is vague
		Frustrating to observe care needs and not to have control over resources
		Assessment results help managers prioritise staff resources

before, during and after the intervention (i.e. the subcategories) are highlighted (Table 3). Excerpts from the interviews are provided. 'Health care team' refers to the participants and all the personnel working with them from the different professions and levels that assess, care and share information about patients with each other.

Patient needs are visualised through a gradually developed shared understanding

The participants gradually developed a shared understanding, an ongoing awareness seen throughout the subcategories and pictured in the content of the five categories, in which both possibilities and hindrances associated with meeting patients' needs were described. That also seemed to be the case for the other health care teams at the participating units.

Risk assessments are central to ensuring quality of care

Before The participants generally described the importance of performing risk assessments with regard to falls, malnutrition and pressure ulcers. Although their previous experience of scales was that they are not always easy to apply, they expected the forthcoming work with the intervention to be rewarding, that is, they felt that their knowledge would increase. They felt it was good to start using scales, that the documentation would improve and that it would be labour saving. Working with three risk areas at the same time was thought to be an advantage and could contribute to better structure, that is, that assessments would not be forgotten. Beginning with risk assessments on a small scale was considered important. Their only misgiving concerned finding enough time to carry out the risk assessments. *During* Use of the three risk assessment scales was proclaimed to be easy, and the work involved in using the scales was described in detail. The participants reported that both they themselves and other members of the health care team at the participating units also found it valuable to work with different scales simultaneously. This approach resulted in a more distinct picture of each patient's situation. The participants discussed patients' needs and described their thoughts about appropriate prevention measures; they also talked about taking each patient's entire situation into account. This new knowledge was also applied when caring for patients other than those that met the criteria to be included in the Senior Alert risk assessments. The benefits of detecting risks were stressed, as detection meant avoiding patient suffering and costs to society. *After* Participants described how assessments in the three areas of concern were easy to perform, intertwined and interrelated, that is, if risk assessment scores were high on just one scale, extra attention needed to be given to other areas of the patient's situation. They underscored the importance of working preventatively, which was now described as a way to think and act, but depended on actually performing the assessments. '… three scales in combination, ulcers, falling and … I think it's good because one of them can lead to the other, and it's really difficult for pressure ulcers to heal if you don't get enough nutrition and well … it's just that nutrition is the most important somehow, because if you don't eat enough then the ulcers won't heal and you can

get so weak that well, there's a risk for falling too…' Participant E. The risk assessments had made the participants aware of the risks for falling, becoming malnourished and developing pressure ulcers. This awareness, in turn, opened the door for the entire healthcare team to engage in preventive care. The participants stressed the importance of everyone in the health care team being informed and performing routine risk assessments, but it was difficult to motivate all of their colleagues to perform the assessments. Limited periods for providing care were thought to be problematic, as it was difficult to find occasions to perform risk assessments. Moreover, such limited periods for providing care were, in turn, perceived too often to result in new hospital admissions after a short time. The participants who were registered nurses emphasised that the assessment results were important facts on which to base individualised care plans.

Cooperating in a team of different health care professionals is challenging

Before The participants reported that there were existing cooperation forums through which members of different professional groups consulted each other. Cooperation between different care levels and different professionals was in need of further development if quality of care was to be improved. Consensus about risk for falls, malnutrition and pressure ulcers did not exist at the time, but the participants stressed that consensus was necessary. Participation from the different healthcare levels was described as advantageous, as it was expected that it would lead to a shared knowledge base. *During* The participants stated that all members within the different professionals groups were obligated to report their observations, but if there was a failure to do so, calling each other's attention to various issues was considered a problem. Oral reports were perceived as an import complement to written documentation. The participants felt it was unfortunate that the physicians who were part of the daily teamwork had not participated in the current intervention. 'Haven't you had time to work with that? No, we haven't gotten to them yet [getting physicians involved in risk assessment work]. A hinder you have to get over somehow.' Participant I. *After* The participants reported that different health care team members viewed and understood patient situations and problems differently and that this was due to their professions. They stressed that oral reports were necessary, and the registered nurses were responsible for coordinating these dialogues. The absence of physicians in the current intervention was mentioned in relation to their role in prescribing medication, as that was an important aspect in fall prevention.

Shortcomings in documentation are identified as a risk to patient safety

Before The participants were afraid that deficiencies in the structure of the health care documentation could lead to misplacement of important patient information. They felt that the lack of structure made it difficult to find information and that the fragmented nursing documentation could result in difficulties obtaining complete information. *During* It was frustrating that the Information and Communications Technology (ICT) systems had not yet been fully implemented and that the structure and indexing alternatives for the documentation had not been resolved. 'And I think it will be better when we get it on a computer. Uh huh. Because there's all these forms to fill in, it's simple if there's a template you can just click on it. So I think it will … but I don't know when it will arrive, hopefully in the spring maybe.' Participant F. The fact that members of the healthcare team chose to document in different ways, that is, paper-based data or computerised data, was perceived as risk filled. The participants stressed the risk of losing important information and, in that respect, described oral reports as a way for the healthcare team to acquire sufficient information about patients. They felt this was especially difficult and risked filled when working between the hospital, primary care and municipal care levels. *After* The county council and municipal ICT systems were incompatible, and while waiting for solutions, hand written paper documentation was being used. They reported that the problem of agreement regarding the data system's indexing alternatives was still unsolved. These situations contributed to feelings of insecurity regarding the existence and quality of the documentation.

The understanding and application of assessment results developed gradually

Before According to the participants, some of the risk assessment scales were used and evaluations of results were performed for some patients. *During* Risk assessments were conducted and the results followed up by the registered nurses participating in the project. Depending on the scale, analysis of the results was perceived as easy or complex, the latter resulting in a need for further analysis. Perceived complexity, in turn, led to uncertainty about what conclusions could be drawn from the assessments. The assessment results on malnutrition were reported to be more difficult to evaluate on the basis of risk scores, as a number of aspects need to be considered. '… if they [scored as] underweight on the first part and then maybe not on the larger part then it's always the case that they're underweight. Uh huh. I think it's a bit misleading sometimes. Uh huh. Like I

said you have to use your common sense too. You have to think anyway, because they can be overweight but malnourished.' Participant C. The participants stressed that most patient results had to be further analysed, but they nonetheless emphasised the importance of using the scales. *After* Collation of results gave the healthcare team information on the prevention needs for patients and was perceived as valuable because it allowed the data to be used as, for example, a basis for resource allocation. Further, collation confirmed for the healthcare team whether or not they had successfully performed the prevention measures. The participants pointed out that it was important to pay attention to both positive and negative results.

Developing an understanding of one's own and others' responsibility increases awareness of one's own sphere of control

Before Management were perceived as having the overall responsibility for the quality of the care and for ensuring sufficient resources, and it was stressed that they were also responsible for communication between the care levels. Some participants, however, felt uncertain about what was included in the managers' area of responsibility. Staff resources were of great importance, but not the only factor, in preventing fall injuries. According to the participants, if each patient's individual status and needs were understood, resources could be allocated where they were most needed. If staff resources were lacking or if individual falls occurred repeatedly, hip protectors were used and under difficult circumstances even physical restraints. *During* The participants talked about the hardships patients endured after fall injuries and stressed the importance of sufficient resources. They said that falls could be prevented, but they as staff did not always have control over resource allocation, that is, when the patients themselves have to buy certain aids, when decisions are made elsewhere in the organisation or when insufficient time is allocated to the healthcare team. Management were said to be supportive and motivated, but shortcomings were mentioned with regard to resource allocation, that is, staff shortages and inflexible scheduling. *After* The participants described how health care team members worked to prevent care-related injuries and the importance of experienced managers. The participating manager expressed the importance of having primary information about the assessment results to prioritise appropriately when allocating resources. The participants again stressed their own and other individual health care team member's responsibility in patient care, in that they expressed frustration as they now had become aware that rather small measures could result in either avoiding or diminishing patient suffering. ... Yes but at some point it's like I said when there are fewer people, there's less position changing too so it's [silence for a while]. And that means great suffering for them they're [pressure ulcers] horrible and then they take more pain medications and then they get up and maybe fall down [embarrassed laugh]. And then you're into the whole well nausea from the pills and then no appetite and then well, all these things are wrapped up in each other all the time... Participant F

Discussion

The main results from the present longitudinal study showed that the working approach of performing three risk assessments for fall injuries, malnutrition and pressure ulcers simultaneously was perceived as positive and as central to ensuring quality of care; it was not, however, perceived as unproblematic.

From the outset, the participants generally had positive attitudes towards performing the risk assessments. These positive attitudes seemed to be associated with two perspectives on the advantages of relevance to patients and the healthcare team, respectively: improvement of care quality and increased ease and support in providing patient care. These positive attitudes also persisted over time and were reinforced by participants' prolonged assessment experiences. This might be understood in light of Sandberg and Targama's (2000, 2007) research on and descriptions of understanding human competence in an organisation. They presented and discussed an interpretative perspective on management compared to a rationalistic perspective on management. In the interpretative management perspective, it is argued that how employees as individuals or as members of a collective act, is governed by their experiences and understanding of their reality, their life world. This understanding covers the situation as a whole and includes considerations such as: What will happen if different alternatives are chosen? Are there other alternatives at hand? What are my obligations and reflections concerning what is right and wrong in the situation? (Sandberg & Targama 2000, 2007) The present results can probably be understood from an interpretative management perspective in that the staff reported beneficial experiences. Working simultaneously with the three areas supported not only a good structure for their work but also contributed to reflection and a shared understanding of patients' care needs. Working with the three scales simultaneously probably made it easier to consider the situation as a whole. Patients' needs and vulnerability were recognised and understood, as were the consequences of not meeting these needs. This

working approach among the members of each healthcare team provided for prevention of patient suffering and was thought to be transferable to other patient groups. According to van Gaal *et al.* (2011), decreased incidences of adverse events caused by pressure ulcers, urinary tract infections and falls at hospitals and nursing homes in the intervention groups were reported to be the effects of a multifaceted intervention involving simultaneous application of three risk assessment scales.

Although several benefits were mentioned in this study, problematic issues were raised, such as the shortcomings in obligatory documentation. One example mentioned was the lack of agreement in the indexing of the documentation. Health care personnel are required to perform nursing documentation and prepare care plans relevant to each patient's needs, the aim being to carry out appropriate measures and evaluate the outcomes (National Board of Health and Welfare 2008). In a review study, Häyrinen *et al.* (2008) stated that the quality of the documented information is of great importance, because it is the basis for decisions about patient care and a communication tool between staff. Moreover, they suggested that good structures and well-defined and agreed-upon terminology are needed and that if documentation is inaccurate or incomplete, it is of little value in the decision-making process. In th study, problems and statements similar to those reported by Häyrinen *et al.* (2008) were highlighted regarding nursing documentation. Recently, Voyer *et al.* (2014) revealed the low proportion of documentation in the nursing homes they studied. Sparse nursing documentation leads to nonavailability of important information for all healthcare team members. This was expressed as problematic for physicians. The physicians visited the nursing homes less frequently and as a consequence they had to rely on nursing documentation to get a picture of each patient's status and changes. Thus, lacking nursing documentation was described as problematic (Voyer *et al.* 2014).

Yet another problem related to documentation was the lack of supporting ICT. Computer terminals should be easily accessible in the health care environment (Blair & Smith 2012). Meißner and Schnepp (2015) suggested that whether or not information technology complicated or simplified nurses' documentation depended on their experiences of promoting or hindering factors. The factors mentioned were, for example, ease of use, skills, equipment availability, technical functionality and nurses' attitudes. In the current study, during the entire intervention period, the staff called attention to and waited for the ICT system to be adjusted to ensure proper documentation. When information technology promotion is absent (Meißner & Schnepp 2015), such deficiencies can reduce staff members' ability to perform various tasks. Poorer documentation or use of paper documentation may result in the use of, for example, a double documentation system. In such situations, the ICT complicates rather than facilitates daily working processes and is perceived to be a burden. Frustrations related to double documentation systems were also highlighted in the current study. ICT use is also experienced as frustrating if it does not work. According to Morrison and Lindberg (2008), little is known about the impact of computerisation on the health and well-being of health care personnel.

In this study, health care team cooperation was found to be valuable, but also challenging – particularly the lack of physician involvement. According to Jankowski and Nadzam (2011), health care teams working with pressure ulcer prevention often report limited physician involvement. This may be due to the fact that pressure ulcer prevention is often identified as solely a nursing issue. Moreover, medical involvement is stressed as crucial, because physicians – who are supposed to be involved in risk prevention – most likely see nutritional support as a high-priority preventive measure. Different knowledge and perspectives were taken into account (Jeffs *et al.* 2013) when professionals worked together in the health care teams. That work approach, in turn, led to care improvement and a decreased number of pressure ulcers.

In this study, some health care team members participated in care prevention seminars as part of a long-term programme. The programme involved reflection, and results from the risk assessments were analysed together with other staff members at the workplace. This provided the preconditions for developing a shared understanding of their daily risk assessment work, although perhaps not everyone found time to perform risk assessments. The participants became aware of what measures they and other members of the health care team could offer or not offer to patients. Although we do not have narratives from all health care team members in the participating settings, it seems that a shared understanding has developed in several of them. However, it was obvious that some actions that would increase the reliability of the patientcare system were outside the healthcare teams' control, namely making changes in the ICT. Such issues are mandated and governed by top-level management in the organisation. According to Sandberg and Targama (2007), how the work situation is understood by the individual or as a member of a collective, will direct the work as well as the members' perceptions of what further competences are needed. Management are responsible for providing the prerequisites, such as time for dialogue among personnel. Sandberg and Targama (2007) stressed that developing understanding is complex, because

all individuals develop their own understanding. It is not possible to transfer one's own understanding to others. Developing a shared understanding requires a continuous dialogue and reflections among members.

In this study, management had supported and planned an intervention involving risk assessments, the aim being to promote safe patient care and increase the quality of the care.

According to Sandberg and Targama (2007), management often use a rationalistic perspective when trying to implement a change process. In the current study, it is possible that management's inability to solve the recurrent documentation and ICT problems mirrored the tension between the rationalistic perspective and the interpretative perspective. In the rationalistic perspective, management set goals, provided information and expected these goals to be met. The health care teams, on the other hand, experienced shortcomings in daily documentation and ICT, which were judged as possible risk factors in relation to safe patient care. The staff repeatedly called attention to problems and expected management to solve them, but their warnings received no response. We wish to emphasise the importance of management listening to and acting on issues stressed by health care personnel regarding patient care, as it is the personnel who have first-hand information on each patient's situation and care needs.

The participants in this study described their own responsibility for patient care as important and reacted strongly to patient suffering as a consequence of inadequate care. An open attitude towards warnings from healthcare team members may also be of importance to future development initiatives. Health care personnel who have experiences of being listened to and acknowledged in their profession will probably have the confidence and willingness needed to support and participate in forthcoming development work.

Methodological considerations

The study sample represents several professions and several care contexts, which is considered a strength in that meeting patients 65 years and older mirrors their daily work situation. Another strength is the longitudinal before-during-after design. That no physicians participated in the intervention can be considered a weakness from two perspectives. The fact that an important part of the health care team was absent from the intervention (seminar occasions and assignments to be completed between the seminars) leaves us without an understanding from one of the professions in the health care team. Their absence also decreased the possibility for the achievement of a more complete shared understanding among all of the health care team members. One should keep in mind, when reading the results that the participants were interested in and wanted to take part in the intervention. One limitation is that more than one person performed the interviews, but to counteract this each interviewer used the same interview guide. A question regarding participants' reflections on working with three assessment scales simultaneously was prepared for the third interview. However, the results show that participants reflected on the simultaneous assessment approach during the second interview, which was not expected to occur so early in the process. The interviewers explored these reflections through the use of probing questions. Further, the three interview sessions provided comprehensive data. Saturation of data was achieved after analyses of about eight interviews from each of the three sessions. The analysis was considered challenging, and a decision was made that two of the authors would perform the analysis together. Co-assessment was a precaution of particular importance in ensuring consistency throughout the analysis phase. In one of the categories, the shortcomings regarding documentation were expressed. If we, in our design, had envisioned that problem we could have given a more comprehensive description of that important issue by also analysing patient documentation.

Conclusion

The participants as well as health care team members showed a positive attitude towards and described the advantages of the working approach, which involved performing three risk assessments simultaneously: they did not, however, find it unproblematic. The working approach was perceived to be beneficial for the targeted patients, transferable to other patient groups and to have improved and supported patient care. Collaboration across and shared understanding among health care professional groups led to valuable insights into patients' needs and the measures to be taken.

Relevance for clinical practice

A seemingly complex and time-consuming routine – simultaneous use of three assessments scales – was perceived as positive for both the patients and the health care team in that it provided opportunities for shared understanding that could improve patient safety and provide structure for the provision of good care. To facilitate such improvements, it is important that management listen to and act on issues stressed by health care personnel, as it is these personnel who have first-hand information about patients' situations and care needs. To ensure the success of future care improvement initiatives suggested by management, it is

important that management have an open attitude towards warnings from the health care team members as well as an ongoing dialogue with them. Health care personnel who have experiences of being listened to and acknowledged regarding patient care will probably have the confidence and willingness needed to support and participate in forthcoming development work.

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Disclosure

The authors have confirmed that all authors meet the ICMJE criteria for authorship credit (www.icmje.org/ethical_1author.html): (1) substantial contributions to conception and design of, or acquisition of data or analysis and interpretation of data, (2) drafting the article or revising it critically for important intellectual content and (3) final approval of the version to be published.

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