Exploring managers’ response to a quality and safety leadership intervention: findings from a multiple case study in Norwegian nursing homes and homecare services

Terese Johannessen 1, Eline Ree, Ingunn Aase, Roland Bal, Siri Wiig

ABSTRACT

Background Improvement interventions would be easier to treat if they were stable and uninfluenced by their environment, but in practice, contextual factors may create difficulties in implementing and sustaining changes. Managers of healthcare organisations play an important role in quality and safety improvement. We need more research in the nursing home and homecare settings to support managers in their quality and safety improvement work. The aim of this study was to explore managers’ response to a leadership intervention on quality and safety improvement.

Methods This study reports findings from the SAFE-LEAD intervention undertaken from April 2018 to March 2019. The research design was a multiple case study of two nursing homes and two homecare services in four municipalities in Norway. We used a combination of qualitative methods including interviews, workshops, observations, site visits and document analysis in our data collection that took place over a 1-year period.

Results Management continuity was key for the implementation process of the quality and safety leadership intervention. In the units where stable management teams were in place, the intervention was more rooted in the units, and changes in quality and safety practice occurred. The intervention served as an arena for managers to work with quality and safety improvement. We found that the workshops and use of the leadership guide contributed to a common understanding and commitment to quality and safety improvement among the managers.

Conclusions This is a longitudinal study of managers’ response to a leadership intervention targeted to improve quality and safety work in nursing home and homecare settings. Our research demonstrates how the mechanisms of stable management and established structures are crucial for quality and safety improvement activities. Management continuity is key for participating in interventions and for using the leadership guide in quality and safety work.

INTRODUCTION

Quality and safety improvement is a continuous process for identifying challenges and areas for improvement. It covers activities such as making minor improvements like changing mealtimes in nursing homes based on patients’ wishes, to testing more innovative ideas and services like new documentation systems and e-health solutions in healthcare organisations. According to Marshall et al., it would be easy to implement improvement interventions if they were stable and uninfluenced by their environment. But research has shown that contextual factors may complicate implementing and sustaining changes in practice.

In Norway, the municipalities are largely responsible for providing sound and safe healthcare services. The municipalities are responsible for providing nursing home and homecare services and are legally bound to improve quality and safety. While quality and safety improvement should be considered a central task across municipalities, this work is often poorly rooted in management. Results from Johannessen et al. and Ree et al. show that managers in nursing homes and homecare struggle to balance demands and resources in their quality and safety work, and constantly need to set priorities to ensure sound practice. Managers struggle to maintain continuity of care due to sick leave and constant organisational changes. High turnover can stall organisational and service development, and quality and safety improvement efforts can be challenged by organisational demands. Increased external pressures such as national regulations and financing also affect an organisation’s engagement and culture for improvement.

Leadership is important to quality and safety in healthcare organisations. Several studies show that managers have an important role in the patient safety culture. Previous research has shown that managers actively negotiate and
influence their organisation to support their improvement work. However, managers seem to lack tools and support in their efforts to improve quality and safety. This is especially a challenge in the nursing home and homecare settings, and there have been calls for more research to develop, test, and evaluate interventions to support managers in their quality and safety work in these settings. Therefore, we developed and implemented a quality and safety leadership intervention in Norwegian nursing home and homecare settings (the SAFE-LEAD intervention). In this article, the aim was to evaluate this intervention and its influence on managers’ quality and safety work practice. The managers’ response to the intervention was explored from the managers’ and the employees’ perspective. The following research questions guided our study: (1) How does a leadership intervention influence managers’ work on quality and safety in nursing homes and homecare; (2) What are the requirements for the intervention to be adopted?

SAFE-LEAD INTERVENTION

This article reports from the project ‘Improving Quality and Safety in Primary Care—Implementing a Leadership Intervention in Nursing Homes and Home Care’ (SAFE-LEAD). The intervention facilitated the use of a research-based leadership guide for managers for 12 months in 2018–2019. The leadership guide comprises seven quality challenges (structure, coordination/organisational politics, culture, competence, engagement, physical design/technology, external demands) that healthcare managers face in their quality and safety work. By using the guide, the managers diagnose and rate their organisation and performance in terms of these challenges. The leadership guide is based on three steps. The first step is to map out the challenges the organisation faces in quality and safety improvement. Step two lists the goals related to the seven challenges. Step three presents action plans.

During the intervention, the researchers supported the managers’ quality and safety improvement work through workshops and site visits. Eight units (four nursing homes and four homecare services) participated in the project for 6 months (phase 1). Four of the units (two nursing homes and two homecare services) participated in phases 1 and 2 (12 months). In phase 1, four workshops (2 hours each) were facilitated by researchers in which the managers worked with the leadership guide. In these workshops (table 1), the researchers used a detailed agenda of questions, discussion, reflection and feedback sessions (full description of intervention program in Johannessen et al.). In phase 2, the managers had more individual responsibility for using the leadership guide in their daily quality improvement work. We conducted observations and interviews with managers and employees and collected data from all workshops and site visits. In phase 2, two additional workshops were conducted (table 1). Two site visits in each unit were conducted where the researchers observed a quality meeting chosen by the managers. The site visits also included a short follow-up reflection or feedback session with a focus on quality and safety improvement. We also conducted a survey in all participating units before the intervention and after 6 months. Results from the survey data were not used in this qualitative part of the process evaluation but are reported in other studies.

METHODS

The research was designed as a multiple case study of the SAFE-LEAD intervention with a longitudinal in-depth study of four cases, two nursing homes and two homecare services in four municipalities in Norway (April 2018 and March 2019).

Context

Norwegian municipalities have responsibility for general practitioners, nursing homes, emergency room and homecare services. Norwegian municipalities are financed by public funds and the state oversees the municipalities through regulatory and financial frameworks. Apart from earmarked funding, the municipalities have room to prioritise and adjust services to local needs. The Norwegian municipalities vary in size and surroundings, for example, distance to hospital, and this can create variations in delivery of healthcare services. However, they are all responsible for providing healthcare services based on sound professional practice.

Case selection and sample

A case is defined as a nursing home or a homecare service in a municipality. The municipalities and units differed in size and location (table 2) according to the selection criteria of variation in size and location. Two nursing homes and two homecare services participated in the two-phased SAFE-LEAD intervention. Co-researchers from the Centre for Development of Institutional and Homecare...
Seven focus groups and two individual interviews were conducted before the start, four focus group interviews after 6 months into the intervention and seven focus group interviews after completion of the intervention. Interviews were semi-structured and covered topics such as implementation, usefulness of the SAFE-LEAD guide, contextual integration, intervention evaluation, changes in work practice and sustainability of quality improvements (online supplemental appendices 1–5). All interviews were audio recorded and transcribed verbatim. During the intervention, we observed managers and employees in all units (108 hours) to understand how they worked with quality and safety improvement in their daily activities. The researchers used an observation guide that included themes such as quality meeting, discussion of quality and safety, and arena for quality and safety improvement (online supplemental appendix 6). We conducted 17 hours of site visits. In addition, we collected documentation on organisational structure, quality strategy, risk analysis, and organisational strategies and plans. All units were also mapped according to the SAFE-LEAD context mapping tool to gather information from the different settings and their development during the intervention period.

The data collection was conducted by researchers from the university with backgrounds in nursing, health psychology, safety science, engineering and health management. Two Centres for Development of Institutional and Homecare Services and a municipality were central partners in the SAFE-LEAD Project and representatives from these partners participated during the data collection as co-researchers. The project team was divided into intervention teams (one researcher and one co-researcher). Each intervention team had the overall responsibility for each study site during the intervention period. Co-researchers contributed with professional language and contextual knowledge in workshops and supported and facilitated managers’ use of the leadership guide in their local practice (see for further details). The project team had different backgrounds and affiliations that ensured quality and trustworthiness in interpretations of data, in workshops, observations and interviews. The project team from each study site had monthly project meetings with discussions and reflections about the intervention process and consistency of the intervention

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Overview of context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case</td>
<td>Homecare 1</td>
</tr>
<tr>
<td>Municipality population (approximate N of inhabitants)</td>
<td>5000–10 000 Rural municipality, border to big municipality</td>
</tr>
<tr>
<td>Organisation</td>
<td>Delivers homecare services Practical assistance</td>
</tr>
<tr>
<td>Size of management team</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Summary of data collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period</td>
<td>Methods</td>
</tr>
</tbody>
</table>
| March 2018 | ► 3 focus group interviews, managers (n=15)  
► 2 individual interview, managers (n=2)  
► 4 focus group interviews, employees (n=19) |
| April 2018–March 2019 | ► Workshops (44 hours)  
► 4 focus group interviews, managers (n=23)  
► Observation, managers (71.5 hours)  
► Observation, employees (36.5 hours)  
► Site visits (17 hours) |
| April 2019 | ► 3 focus group interviews, managers (n=16)  
► 4 focus group interviews, employees (n=18)  
► Document analysis |
activities (such as experiences from conducted workshops and activities and advice to ensure usefulness for the managers). These activities were key to reflection and quality of the research process.30

Patient and public involvement
The user, patient and next of kin perspectives are important in the SAFE-LEAD Project and were used in the design and implementation of the leadership intervention (the SAFE-LEAD intervention). Several co-researchers representing different stakeholders participated during the entire research process from planning to publication.20 21 Patients were not directly involved in the implementation of the leadership intervention. In addition to peer-reviewed publications from the project, the results are disseminated through summaries, podcasts and social media.

Analysis
The data material was analysed as an integrative analysis.31 We used Strøm and Fagermoen’s approach32 to integrate interviews and observation notes collected throughout the 12-month intervention and analysed it as a complete dataset. Within-case analysis in each unit was conducted to capture information within each unit. First author, with support from two coauthors, conducted an inductive content analysis of information on the units’ implementation process, changes during the intervention, and mechanisms that contributed to implementation and quality and safety improvement work. First author read through the data and highlighted themes. This was discussed with the coauthors. Meaning units were extracted from the text to be sorted and categorised. First author then drafted a narrative of each case, as recommended when analysing organisational processes.32 These were developed by integrating data from interviews, workshop notes and observations describing the units’ intervention process and changes throughout the intervention period. The third analysis step was a cross-case analysis to map similarities and differences between the units’ and managers’ work practice to improve quality and safety, and to identify requirements for the intervention. These were discussed by the entire research team to agree on themes and categories. The purpose of our integrative analysis was to produce a systematic, descriptive overview of the essence of each unit and how the managers implemented and worked with the leadership guide and extracted mechanisms that influenced the implementation process.

RESULTS
The influence of the leadership intervention on quality and safety work practice varied among the units in our study. The management teams became more focused on their quality and safety work and they described the process and time allocated to work with quality and safety as important. Three units implemented quality and safety improvement actions. Table 4 presents an overview of the implementation process in each unit. Two categories emerged from the analysis: (1) management continuity as the main contributor to the implementation process; and (2) the importance of arenas and systems for quality and safety improvement. The results are first presented with a narrative from each case (box 1). The results from the categories are then synthesised.

What contributes to quality improvement work? Cross-case results
Management continuity
In our study, management continuity was key for the implementation process of the quality and safety leadership intervention. The implementation depended on stable management teams and on managers’ engagement and follow-up. In units that already had stable management teams in place, the intervention was more rooted in the units, and there were changes in quality and safety practice. In nursing home 1, where the same management team participated throughout the intervention, and consisted of managers and professional development nurses, they implemented actions and offered employees courses on person-centred care. In homecare 2, they met with resource persons to implement whiteboards. The employee involvement in the implementation of whiteboards increased their engagement. In all units where managers were engaged with the intervention (consistency of manager participation in workshops and engaged in discussions), the intervention went as intended, whereas the reverse was also true. For example, nursing home 2 did not prioritise the use of the leadership guide after phase 1 and the intervention failed as a result of manager turnover. The new manager who was overwhelmed with new responsibilities did not see the benefit from the intervention and did not make it a priority. As an employee in the unit with high manager turnover stated:

It is a lot of stress that I’m carrying. Everything from practical things like holidays and how new routines will be in the department. (healthcare worker, nursing home 1)

Throughout the intervention, contextual challenges competed with the intervention; among these challenges were externally driven organisational processes and demands from municipalities (checklist, courses, risk analysis). In workshops and during site visits, the management teams integrated external demands with their units’ strategy and goals. For example, during a site visit, the researchers observed that homecare 1 used the leadership guide to get an overview of demanding processes in the planning phase of the merger of municipalities. The management team found it important to share information with employees as this was a phase that entailed a high degree of uncertainty for the organisation. According to the managers, the employees would be better prepared to answer questions from patients and next of kin. The management team in homecare 1 wanted the new managers in the merger to get an understanding of their
Several managers claimed that they needed to shorten which they mapped, set goals and developed action plans. We also observed how fixed work lists and how this contributed to high care quality in their homecare service. We also observed how the managers adapted the use of the leadership guide in their context, for example, by condensing the three-step process to a 1-hour meeting on hectic workdays, in which they mapped, set goals and developed action plans. Several managers claimed that they needed to shorten the process to sustain the use of the leadership guide. A unit manager in homecare 2 expressed conditions for the implementation to go well:

Skilled department managers who always show up for work and who cheer on employees. Managers who are clear on the goals and act as a role model themselves. The department managers need perseverance, then, they learn from each other, set aside time, write it in the book, and talk across departments.

A common element across units was the key role of professional development nurses as part of the management team in facilitating managers' quality and safety work. Our findings showed that conditions for organisations’

### Table 4 Implementation process in the four units

<table>
<thead>
<tr>
<th>Aspect of the intervention process and status in the organisation</th>
<th>Homecare service 1</th>
<th>Homecare service 2</th>
<th>Nursing home 1</th>
<th>Nursing home 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristics of the organisational context</td>
<td>Small municipality. New management team. Structure as their main quality challenge. Professional development nurse plays a key role. Fixed worklist was central organising mean to ensure quality.</td>
<td>Established management team. Wanted to continue with integrating the use of whiteboards in daily practice for employees. Professional development nurse was central in quality work and for getting quality on the agenda.</td>
<td>Strong and established management team. Large nursing home. Seven departments with different needs. Wanted to make person-centred care a main goal before participating in the intervention.</td>
<td>Small nursing home within a large municipality. Decided to establish a common understanding for quality improvement. Internal change processes within departments of the nursing home and in the municipality. Started the intervention process as a joint process together with homecare services in the municipality.</td>
</tr>
<tr>
<td>Ethnography</td>
<td>Strengthened management structure and responsibility during intervention. Established commitment and common understanding in the management team. Intervention led to better oversight and building of relations within management team.</td>
<td>Stable management before intervention start-up with quality plans. Implemented Whiteboards. Created quality meetings. Used professional development nurse in this work. Intervention created a conceptual framework for structuring talking about quality and safety.</td>
<td>Intervention contributed to commitment and common understanding in the management group. Actions implemented in daily practice.</td>
<td>Intervention was suspended due to management turnover. No implemented actions. General frustration within the organisation due to lack of management stability.</td>
</tr>
<tr>
<td>Managers identified quality and safety challenges as part of the intervention start-up phase</td>
<td>Structure</td>
<td>Structure</td>
<td>Culture</td>
<td>Culture</td>
</tr>
<tr>
<td>Goals to overcome the challenge</td>
<td>Develop a common understanding of quality in the unit.</td>
<td>Build capacity and resources for quality improvement in the unit. Integrate quality improvement in daily routine for employees.</td>
<td>Incorporate person-centred care into all activities.</td>
<td>Develop a common quality goal among managers.</td>
</tr>
<tr>
<td>Actions implemented to reach their set goal</td>
<td>Lunch to inform employees. Established task responsibility in the management team. Weekly quality meeting. Updated the primary care role.</td>
<td>Established quality meeting. Practical use of whiteboard. Prepared further use of the leadership guide in meetings.</td>
<td>Internal courses. Kickoff for person-centred care. Established common goal in the management team.</td>
<td>None</td>
</tr>
<tr>
<td>Main contextual challenges during intervention period</td>
<td>Municipality merger process. Newly established management team.</td>
<td>Structural changes in organisation.</td>
<td>Distance in municipality/lack of support.</td>
<td>Manager turnover in the nursing home and at the municipal level.</td>
</tr>
</tbody>
</table>
The merger of municipalities
In homecare service 1, located in a rural district, the same management team participated throughout the intervention period with a professional development nurse. The municipality experienced a planning phase of a merger with the neighbor municipality during the implementation. In workshop 1, the managers identified structure as their main quality challenge. The managers also set the goal to establish a common understanding of quality in the unit. They developed actions such as a weekly Tuesday lunch to inform employees about quality and safety improvement activities and as an arena for employees to share competence. Other actions were to establish task responsibility in the management team, as well as weekly quality meetings within the management team to follow up on quality work and update the primary care nursing role. Workshops during the intervention gave the management team a shared understanding of quality as the members comprised a newly established management team. The management team had a positive attitude towards the leadership guide and met to discuss quality issues after the workshops finished. In the planning phase of the merger, they used the leadership guide to get an overview of demanding processes they were facing and what to concentrate on in an uncertain phase of their quality work.

The integration of quality and safety improvement in daily routines
Homecare service 2 was located in a rural district. In this unit, the same management team of managers and a professional development nurse participated throughout the intervention period. They identified culture and structure as their main quality challenges in workshop 1. In workshop 2, the managers chose the goals to build capacity and resources for quality improvement in the unit and to integrate quality improvement in daily routines for the employees. Action plans consisted of establishing quality meetings as an arena for discussing quality challenges in the services and to hold whiteboard meetings as a work routine for quality improvement among the employees. The unit manager arranged meetings with resource persons to discuss successes and challenges with the implementation of whiteboards and for sustainability purposes. Managers considered the leadership guide as a strength in terms of being research based and containing a high-quality standard. This was a source of pride and motivation for the management team. Throughout the intervention period, the management team found ‘physical design and technology’ as a new challenge, because they needed to implement health technology in the services in near future.

The person-centred care unit
Nursing home 1 was located in a large city. In this unit, the same management team of managers and professional development nurses participated during the intervention. The managers identified culture and engagement as their units’ main quality challenges in the first workshop and agreed to focus on these. The management team had decided to make person-centred care a main goal before participating in the leadership intervention. In their action plans, they set a kickoff date for putting person-centred care on the agenda in all activities. All employees were informed of the goal for the nursing home and the upcoming planned in-house courses for employees to educate them on person-centred care. Throughout the intervention period, the management team described their struggles with external demands from the municipality; for example, they needed to implement a nutritional assessment tool for each patient. During the intervention, they were able to connect this to their action plan in the intervention, thus integrating external demands with internal goals. The workshops contributed with a common understanding of the management team.

The struggle with management turnover
Nursing home 2 was located in a medium-sized city. In this unit, the management team collaborated across nursing home and homecare in the first phase of the intervention. This unit was characterised with management turnover. Two managers (one unit manager and one department manager) left during the intervention period. They cited culture and engagement as their quality challenges in the first workshop. In workshop 2, they were trying to establish a common understanding of quality improvement. The management team claimed to have a common understanding, but it was difficult to involve the employees. In their action plan, they wanted to develop an education plan for newly hired assistants. The intervention failed in phase 2 because of a change of management. Employees explained that the change in leadership had brought activities to a halt and that they felt insecure in their situation, for example, with taking holidays off. The new manager had not attended previous intervention workshops and using the leadership guide was not prioritised, as the intervention was considered an additional burden. The manager was temporary for two departments at the same time as being manager at the intervention nursing home. The intervention ended, and data collection consisted of observing daily work and interviewing employees about their work situation.

Arenas and systems for quality improvement
A main finding was the lack of systems and arenas to work on quality and safety improvement in daily work practice. In our study, the intervention workshops and leadership guide contributed to a common understanding and commitment in the management teams and created an arena in which managers could focus on quality and safety. During the intervention, managers expressed that they realised that someone needed to establish a structure and take responsibility for scheduling and organising quality meetings. Our findings demonstrated a lack of systems for quality improvement in all study units. The units used systems for reporting deviations (eg, medication errors, near misses, fall injuries), but had few systems for creating an overview...
and systematising the quality and safety work. The leadership guide provided the managers with a tool for a clearer sense of quality and safety in the units. Managers claimed to have worked with quality in different settings, but there was no documentation and there was no system for managers to connect all quality work-related activities, as illustrated by the following quote:

This tool is very useful [leadership guide] and puts a concept on the daily work that we are doing and integrates it into a system. This is a very good thing to adhere to. What we are doing now, you [researcher] have observed us in the department, we don’t document that on an ordinary basis. (manager, nursing home 1)

The workshops (working with the leadership guide) also created a social and reflexive arena for quality and safety work. In homecare 1, they developed a positive attitude towards the leadership guide through the workshops and perceived it as a useful arena to discuss quality and safety. The contributions with researchers in workshops stimulated reflection and discussions in the quality and safety improvement work. Nursing home 1 consisted of five department managers, and they also used the intervention workshops as arena for interdepartmental competence development. Observation otherwise showed little time for direct daily reflection on quality and safety work in management teams. Managers claimed to have plans for quality and safety but failed to complete all quality-related tasks on busy workdays:

The challenge that remains is to follow up what is already in the structure and system. There is much that we talk about and want to do, but we need concrete plans for implementation and changes in practice. (manager, homecare service 2)

We found that the workshops and use of the leadership guide contributed with sustained focus and a more structured process that eased implementation of actions in practice. Results showed that when managers understood the leadership guide, they felt a greater sense of control, worked more independently, and took advantage of the quality arena and an agenda set by the intervention programme. According to the unit manager in nursing home 1:

For us it has been more committing to be part of this [leadership intervention], it has more to do with the actions around the tool and the structure itself. I think we have seen good results from working this way, that we have had our own meetings only dealing with this [quality and safety improvement], and separate it from the rest of the work tasks that we have to do.

DISCUSSION

In this study, we found that managers’ response to the leadership intervention depended primarily on management continuity. Units with a stable management team had more capacity for quality and safety improvement and implemented actions as planned. In contrast, comprehensive management turnover in one of the units led to withdrawal from the intervention due to lack of capacity for quality and safety improvement at the management level, and thus lack of prioritising the leadership guide. The results from Vaughn et al’s systematic review found disconnected leadership and leadership turnover as two of several factors that characterise organisations that strive to succeed with quality and safety improvement. In addition, our findings showed limited capacity to work with quality and safety in daily work practice. Managers expressed lack of time and no systems for quality and safety improvement. Our results are consistent with a review by Lau et al showing how organisational turbulence and the exigencies of everyday work impede implementation. This illustrates the importance of understanding the contextual settings (competence, capacity, leadership situation) in nursing homes and homecare services prior to implementation efforts. It also explains the everyday challenges in nursing homes and homecare settings where these factors are constantly changing.

Parand et al’s systematic review found that hospital managers do not spend sufficient time on quality and safety. Our study found similar results in the nursing home and homecare settings. However, throughout the intervention, we found that management continuity together with arenas and systems for quality and safety improvement gave the managers an opportunity to reflect on their quality and safety challenges and improvement areas. This adds important sustainability in focus and implementation of actions. The managers, however, needed to perceive the leadership guide as useful. Our deviant case with high management turnover demonstrated how the unit was not ready for a leadership intervention. In such a situation, the leadership guide and the intervention programme were incompatible with the manager’s need for an overview of the organisation. This illustrates the need for context-sensitive improvement measures to support managers, and a need for genuine interest from the managers to participate in intervention activities.

An intervention described by Jones et al is founded on similar theoretical backdrop and guide structure as the SAFE-LEAD intervention. This illustrates that the guide has a potential in hospital settings as well as the nursing home and homecare settings when it is context sensitive. However, major effort is required before the implementation to adapt the tool to the local context where it is being implemented. In line with previous studies, contextual factors were important in the units’ implementation process. In our study, different organisational contexts affected the focus and use of the leadership guide. Managers used the workshops as arenas for quality improvement discussions and steer quality and safety work according to their jointly established priorities. However, they needed to come across
the barrier with different patient needs in depart-
ments. The management team’s discussions in work-
shops contributed to collective solutions and actions. This is in line with the work of Engeström et al\textsuperscript{8} who describe an intervention which facilitated managers and stakeholders to learn in multiple workshops and take the learning and reflections back to their units as a new, negotiated way of working. We know concept-
ualisation of quality may differ between managers
and employees,\textsuperscript{41, 42} and further investigation into the
negotiations with the employees as an ongoing part of
the management activities is recommended for future
research.

Understanding contextual barriers and challenges in
quality and safety work is crucial to effective interven-
tion, can be executed with limited researcher involve-
tion and supporting employees’ responsibility for patient
safety initiatives.\textsuperscript{43} This was evident in our study; in one of
the homecare services the managers were determined
to involve employees to sustain the work with whiteboards.
We found that requirements for the intervention to be
adopted were stable management and establishment of
structures. Managers’ engagement and follow-up in work-
shops were important for the intervention to be rooted
in the units and for actions to be implemented. Also, the
role of managers to structure quality work and delegate
responsibility to the team managers and involve profes-
sional development nurses was fundamental for adopting
this intervention. This is in line with research on inter-
ventions in other settings.\textsuperscript{5} It is also clear that the role
of the researchers in driving the intervention process
was important in our study. The researchers also estab-
lished a structure and set out a detailed process for the
management teams as part of following the intervention
programme. Future studies of how interventions with
a content related to organisational development and
competence development, like the SAFE-LEAD inter-
vention, can be executed with limited researcher involve-
ment are recommended.\textsuperscript{44}

Norwegian national healthcare policy has highlighted
management, culture, and systems as important topics
for improving quality and safety.\textsuperscript{45, 46} The regulations for
management and quality improvement\textsuperscript{47} in the health-
care service are meant to lay the foundation for quality-
oriented management and systems. However, our study
explains how managers in nursing home and homecare
services struggle to have an overview and complete all
quality and safety-related tasks. Kattouw and Wiig\textsuperscript{48} found
that for some municipalities, quality and safety had less
priority and that finances dominate the management of
homecare services. Managers’ constant need to nego-
tiate their context against externally driven factors is
time-consuming\textsuperscript{1, 11} and affects their goals and plans for
quality and safety improvement. Based on our results,
using the guide actually helped managers to incorpo-
rate external demands and ‘context’ into their quality
strategies.

Units with high management turnover and constant
organisational change processes lack the opportunity and
capacity to work with quality and safety improvement and
set up structures to enable this work. Our results indicate
that units in need of quality improvement (eg, lack of
structures, turnover, lack of manager commitment, low
user involvement) are the most unlikely to benefit from
them. Thus, national healthcare regulators and policy-
makers need to acknowledge this in a risk-based perspec-
tive, give priority to such contexts, and support and follow
up managers in nursing homes and homecare services to
enable sound organising and working with quality and
safety improvement.\textsuperscript{49, 50} Results from this study contribute
with longitudinal insight into managers’ quality and safety
work in nursing home and homecare services. It shows
how several factors affect this work, and how it is possible
for this group to set long-term quality goals and partici-
pate in leadership interventions as part of their ongoing
activities. This should be considered by managers in
municipalities and researchers in further research on how
to support managers in everyday quality work prac-
tice. Despite organisational changes, the results strongly
indicated that managers benefited from the reflexive
arenas that the intervention and the guide created. Low-
hanging fruits for management teams in nursing homes
and homecare could be to create similar arenas with
management colleagues and with their employees to
reflect and discuss on current quality and safety work
and ongoing experienced challenges. Furthermore, manage-
ment teams could also take advantage of research-based
tools to support the structure and improve engagement
and commitment in quality and safety work.

Limitations
It is difficult to separate the leadership guide from the
intervention activities. The managers needed the intro-
duction and facilitated workshops in the start of the
intervention to understand how they could use the lead-
ership guide in their daily quality and safety work. The
intervention activities (workshop) were also a mechanism
that contributed to managers’ quality and safety improve-
ment work. In addition, the observations and data anal-
ysis could be biased by strong researcher involvement
in intervention activities. Multiple researchers can be
considered a strength, but also a potential limitation as
information could get lost between researchers. However,
a strict meeting structure, monthly project meeting,
continuous reflection and close collaboration between
researchers were measures taken to reduce this risk. We
have collected data from several sources (interviews,
observations, workshop notes) that give credibility to the
findings.\textsuperscript{51, 52} In addition, the year-long involvement and
data collection in the field gave the researchers a deeper

\begin{thebibliography}{99}
\end{thebibliography}
CONCLUSION

In this study, we explored managers’ response to a quality and safety leadership intervention in nursing homes and homecare. To our knowledge, this is the first longitudinal study of managers’ response to leadership interventions targeted to improve quality and safety work in nursing home and homecare settings. The investigation from the managers’ and employees’ perspective in our research demonstrates how the mechanisms of stable management and established structures are crucial for quality improvement activities to take place. Management continuity is a dominant mechanism for participating in the intervention activities and for using the leadership guide in quality and safety work. Also prominent was that the SAFE-LEAD intervention served as an arena and a system for managers to work with quality and safety improvement. There is a need for further studies with larger samples and cross-country designs to find even stronger evidence for the leadership guide and how it might work in different contexts.

Acknowledgements

We thank all participants in the study for their generosity with their time and for sharing their knowledge and expertise with us. We also acknowledge the following members of the SAFE-LEAD Primary Care team: Karina Aase, Lene Schibevaag, Torunn Stromme, Bent Ulltveit (co-researcher), Marta Stranados (co-researcher), Line Hurup Thomsen (co-researcher), Elisabethe Holen-Rabbersvik (co-researcher), Mette Brevigh Nilsen, Torunn Grinvoll (co-researcher), Anne Torhild Sandvik Pedersen (co-researcher) and Elsa Kristiansen (co-researcher). Language editing done by Servicescape.

Contributors

All authors contributed to the research, design and writing of the manuscript. ER, SW and IA collected data materials. TJ drafted a narrative for each case, within-case analysis of all data materials and later a cross-case analysis to map similarities and differences between the units with input from ER and SW who read transcripts and discussed theme development throughout the analysis period. IA and RB took part in discussion regarding theme development and refinement. TJ wrote the first draft of the manuscript, while ER, SW, IA and RB critically reviewed and revised the subsequent drafts. All authors have read and approved the final manuscript.

Funding

The work is part of the project ‘Improving Quality and Safety in Primary Care–Implementing a Leadership Intervention in Nursing Homes and Home Care’ (SAFE-LEAD Primary Care), which has received funding from the Research Council of Norway’s programme HELSEVEL, under grant agreement 256681/H10, and the University of Stavanger, Norway.

Competing interests

None declared.

Patient consent for publication

Not required.

Ethics approval

The Regional Committees for Research Ethics in Norway found that the study was not regulated by the Health Research Act. The Norwegian Social Science Data Services approved the study (NSD, ID 52324). The study followed the Helsinki Declaration, and all participants gave their written informed consent. All invited participants consented to participate.

Provenance and peer review

Not commissioned; externally peer reviewed.

Data availability statement

Original de-identified data of the study will be stored at the Norwegian Centre for Research Data subsequent to completion of the project. Original de-identified data are available from corresponding author on reasonable request.

Supplemental material

This content has been supplied by the author(s). It has not been vetted by BMJ Publishing Group Limited (BMJ) and may not have been peer-reviewed. Any opinions or recommendations discussed are solely those of the author(s) and are not endorsed by BMJ. BMJ disclaims all liability and responsibility arising from any reliance placed on the content. Where the content includes any translated material, BMJ does not warrant the accuracy and reliability of the translations (including but not limited to local regulations, clinical guidelines, terminology, drug names and drug dosages), and is not responsible for any error and/or omissions arising from translation and adaptation or otherwise.

Open access

This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: http://creativecommons.org/licenses/by-nc/4.0/.

ORCID iD

Teres Johannessen http://orcid.org/0000-0003-2462-8487

REFERENCES


23 Ree E, Wiig S. Employees’ perceptions of patient safety culture in Norwegian nursing homes and home care services. BMC Health Serv Res 2019;19.


32 Langley A. Strategies for theorizing from process data. AMR 1999;24:691–710.


38 Øvrveit J. Understanding the conditions for improvement: research to discover which context influences affect improvement success. BMJ Qual Saf 2011;20:18–23.


48 Kattouw OU, Wiig S. The organisation of community nursing services may impact negatively on safety and the quality of care. Sykepleie Forskning 2010;33:14–89.


51 Smith J, Noble H. Bias in research. Evid Based Nurs 2014;17:100–1.


**Interview guide - managers**

**Background information**
Age
Education / profession
Work experience
Work title

**Structure**
- What is your conceptualization of quality and safety?
- What are the key challenges in your quality and safety work?
- How is your unit working to improve quality and safety?
  - How is this work organized? (Responsibility)
  - Do you have a specific strategy and plan for quality and safety improvement work?
- Have you, as a manager, developed specific goals, strategies or plans for the quality improvement work in your unit? How does that work?
- To what extent do you have access to tools, guides, interventions, or methods to use in your quality and safety work?
  - What is your experience with using different tools in your improvement work?
  - How often are you using them?
  - How are different kind of tools supporting your quality and safety work?
  - As a leader in a nursing home, do you miss any tools that could be useful? Can you describe it and for which purpose you would use it?
- How is the collaboration with other management levels/managers in other departments within this organization/nursing home and in the municipality?
- Do you have any experience with collecting and using patient-experiences in the quality and safety improvement work? How?
- How do you involve patients and next of kin in quality and safety improvement work?
  - Are there any specific methods or arenas for this?
- How do you handle adverse events that occur (internal reporting systems, regulatory supervision, analysis of incidents)?
  - Reporting (internally – inspectorate)
  - Information to family
  - Dealing with employees involved
  - Do you have own procedures or methods for this?
  - Which competence is there to deal with adverse events?

**Culture and engagement**
- How is a common understanding of quality and safety created? (common goals)
  - Do you experience a shared understanding and commitment towards quality and safety goals in this unit?
- What factors hamper your work on quality and safety?
- What factors facilitates your work on quality and safety?
- Can you remember specific occasions were you experienced to be successful in your work to improve quality and safety?
- Can you remember specific occasions where your work with quality and safety was hampered or didn’t work out? Why did you perceive it as such?
- How do you facilitate initiatives from employees in the quality and safety work?
- Have you experienced one or more adverse events with large influence for your work on quality and safety? Can you please tell us about it?
- How are you working to create engagement among employees in the unit regarding changes and use of evidence-based knowledge/interventions in the quality improvement work?

**Competence**
- How do you as a manager facilitate competence development among employees?
  - Which areas are of interest for the employees, and why?
- How do you map competence and competence needs among the employees? Are you doing anything specific regarding competence development in quality improvement work?
- Do employees have responsibility for following up different quality measures/goals in this unit?
- How do you work to share experiences between employees and units in quality and safety improvement work? (Also regarding adverse events)

**Organizational politics, care coordination**
- What influence does the political and administrative management in the municipality have for your work as a manager?
- How are decisions on implementation/changes regarding quality and safety efforts made in this nursing home?
  - How do you as a manager facilitate change processes in your unit?
  - What can facilitate local adaptations to implementation in your unit?
  - How do you experience attitudes from employers when changes are necessary?
- What influence does the size of the institution/remoteness (urban/rural) have for your work on quality and safety?
- How does the economic status influence your work with quality and safety?
- How is the cooperation/interactions with different professions in quality and safety improvement work?
- How is the interaction with hospitals in this municipality? (and between departments and other units in the municipality)

**Physical and technology environment**
- What is your experience on how data- and information's system support quality and safety improvement? (For example reporting systems, access to data on quality, nutrition status, information from hospital, cooperation with general practitioner)
- How is the physical environment of the unit in relation to quality and safety for patients and employees? (Patients contact, reports transfer, risk of patients fall, stairs, areas outside etc.)

**External context**
- What networks exist in the municipality that can contribute with competence and support in the quality and safety improvement work?
- How do you work to balance external demands and expectancies to the employees daily work life?
- How do you as a manager work with local adaptions on national policies? How do you adjust them into the unit?
- In what way have you experienced that regulations and demands from authorities restrain or promote your work with quality and safety?
  - Do you try to influence political and national guidelines? In what way?
  - How do you establish contact with local / national media? What is the purpose of this connection?
- Have you used public reports or regulations, such as regulatory investigation reports or the regulation on leadership and quality improvement in the health and care services in your quality and safety work? How do you experience using this?

**Closure**
- Is there anything else you would like to share with us to make us understand factors of importance for quality and safety improvement?
Interview guide – focus group employees

Introduction
- Can you please tell about yourself; age, education, work experience, work title?

Structure
- What is your conceptualization of quality and safety?
- How is quality and safety work organized in this unit?
  o How is the responsibility for this work distributed? Do you know of any strategies or plans for the work?
  o How are adverse events handled?
  o Are you currently involved in any quality improvement projects? How? What kind of projects?
  o To what degree do you as employees have access to tools, measures or guides to support your quality and safety work? Can you provide examples?
  o Do you perceive it as beneficial to use tools/national guidelines or interventions in your daily work? Can you tell us about it?
  o What is necessary for you as employees to utilize different kind of tools in your work? (e.g., support, training)
- Do you experience having enough time specified to use evidenced based knowledge during your work?
- How do you collect and use patients and users experiences from health services in this unit?

Culture and engagement
- How are you working with quality and safety in this unit?
  o What challenges are you experiencing?
  o How does that affect your daily work?
- What is done in your unit to create engagement regarding quality improvement work?
- What is done in your unit to accomplish patient centered care and positive patient experiences?

Competence
- How does the unit facilitate competence-development among employees?
- How is it arranged for time to work with quality improvement? Is it part of the work plan?
- Who takes the initiative to implement changes related to quality and safety in the unit?
- Do you experience that changes and interventions implemented to promote quality and safety are useful in your daily work? Can you tell about it?
- How are external demands and policy guidelines adapted to fit the local needs in your unit?
- How do you experience that upper management facilitates implementation and change processes in the unit?

Organizational politics, care coordination
- Which networks are available for you in the quality and safety work and professional development?
- How do you experience collaboration with other professionals in the quality and safety improvement work?
- How is the collaboration with nursing homes and hospitals in this municipality facilitated?

**Psychical design/technology**
- What is your experience with data-and information systems at your unit? Do they support quality and safety improvement work? (For example reporting systems, access to data on quality, nutrition status, information from hospital, cooperation with general practitioner)
- How is the physical environment of the unit in relation to quality and safety for patients and employees? (Patients contact, reports transfer, risk of patients fall, stairs, areas outside etc.)

**External demands**
- What is your experience with local adaptions of national policy related to quality and safety improvement?
- In what way have you experienced that regulations and demands from authorities (e.g., regulatory investigations, regulations, guidelines) restrain or promote your work with quality and safety?

**Closure**
- Is there anything else you would like to share for understand factors of importance for quality and safety improvement?
Interview guide – (during intervention)

Evaluation of the guide
1. Have you used the web version, the paper version or both?
2. How has the guide worked in their work with quality and safety?
3. How did you work with the guide?
4. What has been particularly useful and relevant? In what way?
5. What has been challenging / difficult or that has not worked? In what way?
6. How can the guide be further developed to work even better for you in the work with quality and safety?

Evaluation of workshops and own work
1. How has it been to attend the workshops?
2. Has it been in line with your expectations in advance? (if yes / no: in what way?)
3. What benefit have you gained from attending the workshops? What could / should possibly have been different for it to work even better?
4. How has it been to get homework between each workshop? Has this been done? What challenges have you possibly faced? What has gone particularly well?
5. How has it been working with the guide between the workshops?
6. If we are going to create a new agenda at a later date, what suggestions would you then give us researchers designing the intervention agenda? What has been good / bad, and what could / should have been changed?

Sustainability: How to make the work of the guide and the focus on quality work persist?
1. How do you think you can use the leadership guide further as an integral part of the quality and safety work?
2. What challenges do you think may apply in further work with the guide? How can you meet these?
3. What challenges do you have - where should the focus be in the further work?
4. What factors should be present for you to be able to maintain the work with the guide in the quality work?
5. How can you involve employees in the further quality work and work with the guide in the future?
6. How can you involve users / patients in the further quality work and work with the guide in the future?

7. Who will be responsible for following up?

8. How do you want us researchers to get involved in the further work? What do you need?

9. Do you want more workshops? That we participate in management meetings and / or professional meetings? If so, what do you want us to focus on?
Interview guide employees - after intervention (focus group)

This is just a guide, the focus group interview is flexible. Write down what actions the unit has implemented and ask the employees specifically about this - have they noticed about it and experienced changes in their unit? How? Have they become more involved?

Opening question

- Tell a little about yourself.
  o Age, position, experience, how long have you been in your current position?
- Introduction / transition:
  o How do you experience producing with quality and safety in your workplace?
  o In the last year, your workplace has been involved in a project called SAFE-LEAD, have you got it?
  o How? (examples: survey, managers have talked about it, measures, etc.)

Key questions

- Have you experienced that new measures or procedures have been implemented in your workplace in the last year?
  o Which ones? Can you tell us about it?
  o How do you feel this has worked? (positive and / or negative)
  o Have you as employees been involved in companies with any of the measures? In what way?
- Have there been any changes in routines with regard to quality and safety? (Changes in management / physical changes in department / relocation of employees / new strategies / increased commitment etc.)
  o Have there been special areas / themes in focus? Do you know why exactly these areas have been in focus?
  o Have new arenas been established where you talk about quality and safety, if so which ones? (Eg Morning meeting, team meetings)
  o How do you feel this has worked?
- Are there any specific areas in the offer with quality and safety that you think you as an employee are responsible for? What and in what way?
  o Have you experienced new / changed requirements for employees or working methods in the last year?
  o Do you feel that you as employees have been involved to a greater extent or in a different way than before?
  o Have you had follow-up in the last year in areas within quality and safety?
  o Have you participated in anything that contributes to increased competence / knowledge about quality and safety?
  o What / who do you experience contributes to motivation and commitment to work with quality and safety?
  o Is there anything you miss that could have been of help to you in your work with quality and safety?
- Have you received new systems or other technology in the work with quality and safety in the last year? (Computer systems, checklists)
  o How does it work?
- Can you say something about what you yourself do to involve users and relatives in their daily work? (ask for examples)
  o Do you feel that the management focuses on user involvement? (if so, in what way? Examples).
  o Have there been any changes in how you work with user involvement in the last year? How?
- Is there anyone you feel could have been done differently who would have improved the work with quality and safety in your workplace?
• Have you experienced changes in the organization in the last year (for example reorganization, new leader, new tasks)?
• How has this affected their work?
• Do you feel that it has affected the opportunities to provide good quality services? How?

Closure

• Is there anything you want to add about the team that did not appear in the questions?
**Interview guide - leadership guide (after intervention)**

Adapt the interview guide to the individual unit and the actions/concepts used in the unit throughout the year we have followed them. This is just a guide, the focus group interview is flexible.

**Introduction / transition:**

- What expectations did you have in advance to participate in SAFE-LEAD and use the management guide in your daily work?

**Key questions:**

- How was it experienced to participate in the SAFE-LEAD project?
  - What did you like best?
  - In retrospect, is there anything that could have been done differently? Can you tell?
- How do you generally think it has been to use the management guide?
- How have you used the guide in your workplace? (Eg alone, in management teams, with employees in meetings etc.)
  - What has been particularly challenging?
  - Is there anything you think could/should have been different? (if so, what and in what way?)
- Why have you succeeded/failed with the implementation of the management guide in this unit?
  - What do you experience as the most important factors that must be in place when implementing tools/guides in this unit? (Management, training, utility, etc.)
- Have you learned anything new in quality and safety work during this year?
  - In what way?
  - What have you specifically gained increased competence or knowledge about?
  - Do you feel that SAFE-LEAD has contributed to this? How?
- What has been the most important contribution from the guide in their work with quality and safety?
  - In what way?
  - What has possibly been challenging?
- Have you kept to the challenges you chose at the beginning of the project or have you changed along the way / started new ones?
  - How have you worked to achieve improvement in the chosen challenges?
  - What has worked well? What are the conditions for it to work so well?
  - What has been challenging, and why?
- Now that you have used the leadership guide for one year:
  - What is it about the guide itself that has worked well?
  - What should we possibly adjust to?
How do you feel that SAFE-LEAD has fit in with the work you are already doing with quality work? (for example, the process with the three steps - challenges, goals, action plans)

Do you feel that the guide is in line with the leadership regulations that we talked about in workshop 5 - have you reflected anything more on this?

How has it been to continue working with the guide after the first half year where we have been less involved?

Have you adapted it to your needs? In what way?

Have there been any important organizational changes in the unit in the last year that you feel have had an impact on the ability to provide good services?

Do you feel that this has affected the work with SAFE-LEAD? In what way?

Can you say something about what you do to involve users and relatives in your workplace? (ask for examples)

Have there been any changes in how you work with user involvement in the last year? How?

Closure

What recommendations would you give to others who should start using the guide for the first time?

(Briefly summarizes what we have talked about). Is there something you think I should have asked about that you want to convey in conclusion?
Topics that are central to focus on in observations of meetings and in connection with "shadowing" of managers and employees are:

- How managers use checklists / leadership guides in daily work. How often they are used and in what contexts
- How is the leadership guide used for self-evaluation
- Which tools / guides / checklists are used at different levels
- How quality work is visible in strategies and action plans
- Do the managers have professional training / courses for self-development and learning in the leadership role
- How managers plan daily tasks - focus on quality
- Focus on quality and safety work in interdisciplinary meetings
- How managers communicate quality work to middle managers / employees
- Flow of information between the levels in quality work
- Structures / plans that managers work with
- Collaboration in the quality improvement work. Shared understanding (s) / values / behavior in the quality improvement work
- Interaction between professions/ management related to quality improvement work
- Courses / training related to quality improvement. Enthusiasm / motivation in the daily quality improvement work
- Barriers and opportunities for improvement in the quality improvement work
- IT - availability and use in quality improvement work
- Learning activities - arenas and activities where work is done on quality improvement
- Sustainability of quality and safety improvement work
- Organizational levels and interaction and communication across levels
- Which channels do managers use for dissemination to employees
- Time factors and stress elements in the organization related to quality improvement. If times are experienced during the day with a high «stress», who are visible in these times
- How is the user perspective (contact with patients / relatives / collection of information) visible in quality work
- When is the manager available / visible to employees - (for example, informal conversation with employees, drop by the office)

Reporting

After the observation write a summary of about 0.5 -2 pages. The summary is sent to (…), which collects all these field notes for use in further analyzes.