Success Factors for Quality and Safety of Intensive Care Unit Transitional Care – Listening to the Sharp End

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ABSTRACT

Purpose: The purpose of this paper was to present success factors for increasing quality and safety of intensive care unit (ICU) transitional care as described by co-workers at the sharp end using the core values of total quality management (TQM) as a theoretical lens.

Methodology/Approach: The study had a qualitative design, with data from nine interdisciplinary focus group discussions, including co-workers from the intensive care and general wards. Data were sorted into TQM core values and analysed using qualitative content analysis.

Findings: Quality and safety in transfer processes requires a holistic view, avoiding silos, shared arenas for collaboration, and evidence-based methodologies and tools for safe transfers.

Research Limitation/Implication: A limitation of this study is that it only portrays the challenges encountered by two hospitals during the process of transitional care in the ICU.

Originality/Value of paper: By using TQM core values as a theoretical lens, we could present a usable, holistic picture of success factors and how to improve the transfer process.

Category: Research paper

Keywords: quality of care; patient transfer; patient safety; participation of everybody; intensive care unit discharge; total quality management core values

1 INTRODUCTION

Increasing the efficiency of patient treatment as well as improving patient care quality and reducing waiting times are challenges facing healthcare systems around the world (Fine et al., 2009). To meet the challenges in healthcare, different Quality Management (QM) initiatives have been applied in the healthcare sector (Seidl and Newhouse, 2012). Several barriers have been identified within healthcare when QM initiatives are applied, such as hierarchy and management roles as well as professional and functional silos (De Souza, 2009). Due to this, patients perceive the care as fragmented and witness interruptions in the process as it crosses many units in complex health care organizations (ibid). One example of a complex patient transfer is from the high-technology intensive care unit (ICU) to the general ward (Häggström, Asplund and Kristiansen, 2009). Although complex care needs may not have been resolved completely after the patient was discharged from the ICU, ward nurses must receive and care for these patients (Herling et al., 2021) with less technology and fewer staff than the ICU (Häggström, Asplund and Kristiansen, 2012). This transfer process, ICU transitional care, can be traumatic for the patient and affect their emotional well-being, leading to an increased need for information and support (Cuzco et al., 2022). Resubmission to the ICU should be avoided, as research has shown that patients readmitted to the ICU have dramatically increased mortality rates compared to never-readmitted patients (Russel, 2012). Altogether, the ICU transitional care process is essential for patient recovery and safety, hospital capacity, and staff work environment. Research indicates that a poorly coordinated discharge process can pose a risk to patient safety and lead to ICU readmission. An improved ICU process can prevent death, enhance patient well-being, and prevent additional healthcare costs (Gantner et al., 2014).

Persons in direct contact with patients in dangerous or complex processes are often referred to as healthcare professionals at the sharp end (Hollnagel, 2014). Examples of sharp end co-workers in ICU transitional care include assistant nurses, registered nurses (RNs), physicians, and physiotherapists. It is essential to listen to those at the sharp end who have direct involvement with the process, i.e., healthcare professionals from both ICU and general wards.

Improving quality in organisations is one of the focuses of research within both nursing science and QM. The focus of this study was to gain more knowledge about how co-workers at the sharp end perceive what is needed to create quality and safety of ICU transitional care. Together, nursing science and QM can offer complementary perspectives and contribute to a deeper understanding of how the ICU transitional care process can be improved by taking advantage of the strengths of both research fields (Sten et al., 2020).

The foundation for QM can be seen as the values within Total Quality Management (TQM) (Lagrosen, 2006). Although different authors use different terms for the content of TQM, for instance, factors, key elements, values,

cornerstones, or principles (Foster, 2004; Dale, 2003; Sila and Ebrahimpour, 2002; Lagrosen, 2006), many agree on these core values: "focus on customers", "develop committed leadership", "let everybody take an active part", "improve continuously", "focus on processes", and "base decisions on facts" (Bergman et al., 2022). These core values are all related to each other and should be seen as a whole, which together creates something larger than separately (ibid). The application of TQM in an organisation must be based on management's whole-hearted and endless commitment to quality and the creation of a culture resting on these values (ibid). These core values support co-workers' ethical and spiritual needs; if they are not practiced, the quality, efficiency, and effectiveness of an organisation may be affected (Dahlgaard, 2012). The TQM core values have also similar content as the safety culture properties. Patient safety culture is defined as "the values shared among organization members about what is important, their beliefs about how things operate in the organization, and the interaction of these with work unit and organizational structures and systems (Sammer et al., 2010). Research has shown that patient safety culture has an impact on how transitional care processes are handled, evidence of relationships between patient safety culture and patient outcome exists (DiCuccio, 2015).

By listening to health care professionals at "the sharp end" and using TQM core values as a theoretical lens, we can learn more about how to innovate and renew ICU transitional care, which can result in safer care with better quality for the patients' best.

The purpose of this paper is to present success factors for increasing the quality and safety of ICU transitional care as described by co-workers at the sharp end using the core values of TQM as a theoretical lens.

2 METHODS

2.1 Settings, Participants, and Data Collection

This study involved two medium-sized hospitals located in rural areas of Sweden and partners in a larger research project. The participants were recruited from two general ICUs and two medical wards (specialty stroke and infection disease units). One hospital had six ICU beds and approximately 400 ward beds, whereas the other hospital had eight ICU beds and approximately 440 ward beds. None of the included hospitals had step-down/intermediary units, which makes them comparable. Data were collected from nine focus group discussions; each session was attended by four to six co-workers, and the total number of participants included 47 individuals (42 women and 5 men). To obtain rich, varied descriptions of the research problem, the groups were organised by interdisciplinarity: critical care nurses (n = 10), RNs (n = 6), assistant nurses (n = 19), physicians (n = 7), and physiotherapists (n = 5). In the results section these healthcare professionals working at the sharp end are called participants.

A semi-structured interview guide was developed and used to ensure that the same basic lines of inquiry were used in all focus group discussions. To create a balanced approach to address problems, the interview guide was inspired by appreciative inquiry (AI), meaning that the focus was on generativity and things that work in real life, instead of just problem-solving (Bushe, 2007) to inspire, engage, and empower co-workers (Dematteo and Reeves, 2011).

The interview questions used in the paper was part of a larger interview guide and was complemented by follow-up questions. The two main questions with follow-up questions used in this paper were:

- Try to remember and retell one occasion, when a patient transfer worked very well, a situation or event that "stands out" for you?
    - What made this experience possible?
    - What were success factors that made it work so well?
    - Why was it a special experience for you?
- If you could decide, how would you like to improve the process for safer care?
    - What suggestions do you have?
    - What is essential and important?

Focus group discussions were performed in a quiet room at the hospital by the researchers where one acted as a moderator and one as an assistant moderator. The other researchers taking part assisted the moderators, handled the equipment, and took meeting notes. The duration of the discussions varied between 45 and 60 min. The researchers had prior experience in conducting focus group discussions, one was an expert in the field of nursing science and three were in QM. All focus group discussions were recorded digitally and transcribed verbatim into written text.

2.2 Data Analyses

Qualitative content analysis was performed according to the approach used by Elo and Kyngas (2008) to address the aim of the study. The analysis included three phases: preparation, organising and resulting. During the initial preparation phase, the interviews were read several times to obtain a complete understanding looking for success factors for safety and quality of ICU transitional care, including suggestions for improvements. In the organising phase, a manifest analysis was performed by mapping the data according to the aim, into six content areas using the TQM core values (Bergman et al., 2022) as units of analysis into a constrained matrix. Coding was first done individually, and then compared and discussed in a meeting that all researchers attended. If there were differences in coding these were discussed by the researchers, and this ended up with an agreement on one alternative. With further abstraction, during the

resulting phase, codes were divided into categories and sub-categories with similar incidents named using content-characteristic words that were relevant to the aim (Elo and Kyngas, 2008). The collected data was thorough and saturated the results.

2.3 Ethical Considerations

The study was conducted in full accordance with ethical principles and the project was ethically evaluated by the Swedish Ethical Review Authority (Dnr 2018-159-31M). The benefits of this project outweighed any negative effects, and the results can be used to improve the working environment of the healthcare staff. Participants were given both written and verbal information about the study and had the opportunity to ask questions before deciding to participate. Confidentiality and anonymity were ensured.

3 RESULTS

The success factors for the safety and quality of ICU transitional care are presented below in six content areas, that is, the core values of TQM (see Appendix for a total overview). Participants wanted to achieve a seamless process that was safe for the patient. The patients and their relatives needed to get opportunities to be involved and participate, for them to have such a smooth transition as possible.

3.1 Focus on Customers

Table 1 – Success Factors within Content Area "Focus on customers"

Categories	**Involved, well-informed patients and relatives**	**Good care encounters**	**Individualized care**
Sub-categories	• Written and repeated oral information pre- and post-transfer • Listen to patients and relatives in quality initiatives • Involve the relatives in the transfer	• Offer relatives/patients to visit the ward prior transfer • Staff from the ward visit ICU before transfer and connect to patients/ relatives with complex needs • Good encounters at arrival at the ward	• Plan the care before and after transferring due to patient's needs and wishes • Recognize anxiety and support needs

Having focus on the customers was essential and central for quality in ICU transitional care. Within this TQM core value, three categories were identified, involved, well-informed patients and relatives, good care encounters, and individualized care (see Tab. 1). The participants highlighted the need to listen and involve patients as well as relatives in the transfer plan as an area for improvement. According to the participants, this was done by oral information

but should be accomplished by written material. One identified success factor was to establish routines for information exchange between healthcare professionals, patients, and their relatives.

One physician said, "And the quality of care is also to involve and inform not only the patient but relatives so that you get this… The whole…."

Moreover, good care encounters where opportunities for relatives to connect with the new staff were mentioned as crucial. Ward nurses suggested that relatives should be allowed to visit the ward before the transfer so that they could see what the environment in an ordinary general ward looks like.

Ward nurse: "…creating a good first encounter is so important!"

Even though a standardised process was seen as essential this needs to be improved by creating conditions that contribute to individualised and safer care. Some patients were more fragile than others with more anxiety and muscle weakness and needed more support and attention.

3.2 Develop Committed Leadership

Table 2 – Success Factors within Content Area "Develop Committed Leadership"

Categories	**Work with safety and culture**	**Ensure reasonable resources and competence**
Sub-categories	• Getting all on the same boat, have clear goals • Breaking up old tradition concerning transfers and teamwork • Committed leaders at ICU and at the general wards	• Enough staff, especially when receiving a new patient • Create continuity, let experienced nurses take care of former ICU patients / support inexperienced nurses • Provide continuous professional development

Two categories were identified within the value develop committed leadership; work with safety and culture and ensure reasonable resources and competence (see Tab. 2).

Leaders that could get all "on board" to improve the transfer process, have safety thinking and good problem-solving ability, were seen as a success factor for maintaining quality and safety of ICU transitional care. For example, if problems occur during the handover process, the event should be analysed from a holistic perspective and communicated with the person involved without blaming him or her.

Ward nurse: "Our manager always acts when something has gone wrong and communicates with the ICU to discuss solutions…."

One area in need of improvement, pointed out by the participants, was the need for a higher staff ratio at the wards to manage former ICU patients and this was

seen as a leadership responsibility. It was suggested that the ward should have a higher staff ratio the first day after transfer, for further intense care of the former ICU patients. Leaders must ensure the availability of reasonable resources and competent staff, and the participants expressed that if a former ICU patient had complex care needs and required additional oversight in the ward, the manager should call extra staff and let the more experienced nurses take care of former ICU-patients or support unexperienced nurses. Participants meant that the leaders should ensure continuous professional development as one step to ensure competence and strengthen patient safety.

ICU nurse: "Yes, absolutely it's a risk that the patient we send to the ward does not receive the proper care if they are lacking resources and staff... They should have extra staff when receiving ICU patients..."

3.3 Let Everyone Take an Active Part

Table 3 – Success Factors within Content Area "Let Everybody Take an Active Part"

Categories	**Effective communication**	**Interdisciplinary teamwork**	**A just and supportive work environment**
Sub-categories	• The receiving unit should read the patient's journal before hand-off • Documentation by the whole team • Better hand-offs, with written recommendations for future care	• Collaborative patient care rounds • Involved physiotherapist • Shared responsibility for the process • An overall patient responsible physician with engagement and interest before and after transfer • Daily Interdisciplinary Care Conference	• Mutual respect and a problem-solving attitude, and a positive atmosphere • Support for ward nurses, (tracheostomy, education about nursing interventions for former ICU-patients)

Within this value effective communication, interdisciplinary teamwork, and a just and supportive work environment were identified as categories (see Tab. 3).

One suggestion for improvement mentioned by the participants was better and more effective communication within and between units before and after the transfer. They thought that it was timesaving if the receiving unit read the patient's journal before hand-off and were prepared for what to expect. They suggested that the tool used (SBAR; Situation, Background, Assessment, and Recommendation) needed to be replaced by better, structured interdisciplinary handoffs with documentation from the whole team, including a synthesised report of what had happened, with less focus on medical history and more on nursing care.

Physiotherapists also emphasized the need for effective communication to ensure the continuity of care; "As soon as I know that the patient is to be transferred,

from ICU, it's important for me to prepare my colleague, the physiotherapist at the ward... to communicate and report what to expect and how to treat the patient...."

Teamwork, and collaboration within the unit and across the hospital to avoid working in silos were mentioned as success factors. This was also an area in need of improvements according to the participants, such as improvements in collaboration with shared responsibility. One suggestion was implementing daily interdisciplinary care conferences. The involvement of a responsible physician from the ward, with engagement and interest before and after the transfer, was also mentioned as a success factor.

Ward nurse: "And the collaboration with you physicians, that... yes, I find you incredibly accessible. You are close at hand, so that quick decisions can be made. I mean teamwork …that means that we work with each other and that it is close to each other, in my opinion."

Physician: "Yes… we are working closely together in the team in our unit."

A supportive work environment, with a just and less hierarchical approach regarding what is best for the patients, was seen as a success factor for improving ICU transitional care.

One assistant nurse said: "Support is essential. I think we have a rather non-hierarchical approach to our clinic compared to others…That helps…A lot."

Even if the staff from the ICU and general wards seldom met, they expressed that helping each other cross the boundaries of departments was important. The ward nurses felt safe knowing that they could call the ICU staff for advice and help with the patients, for example with tracheostomies.

3.4 Improve Continuously

Table 4 – Success Factors within Content Area "Improve Continuously"

Categories	**Evaluate outcome**	**Quality improvement initiatives**
Sub-categories	• Data driven evaluation; use quality indicators from national register, and follow up systems • Use near misses and adverse events	• Make a person (liaison nurse or case manager), or /and a group responsible to continuously improve the process (improvements groups) • Create regular patient safety team huddles, i.e., recurring meetings to evaluate and give feedback about transfers

The value improve continuously consists of two categories; evaluate outcome and quality improvement initiatives (see Tab.4).

One improvement suggested by the participants was the development of an evaluation process that is driven by more and different data. According to the

healthcare professionals, quality indicators and registration data were used to enable comparisons and development, i.e., frequency of readmissions. They expressed that this data could be improved by using the valuable qualitative data provided. For example, when the patients and their relatives met at the "post-ICU" setting after the patient had been discharged home. The collection of more data to evaluate the patient's outcomes were emphasized, such as active learning from identified safety risks, near misses, and adverse events related to a transfer.

Physician: "I want more data, to evaluate outcome... not only the readmissions. That is important…"

Quality improvement efforts at the system level were seen as a success factor for improving quality and safety of ICU transitional care. In relation to this, an improvement suggested by the participants was that a shared forum for continuous quality work should be implemented. They also suggested working in a more structured way and assigning an individual or a group to evaluate the quality of work, that is, an interdisciplinary team or a "transfer workgroup," comprising staff members from both the ICU and the ward. Routines should be evaluated, and new evidence-based care standards should be implemented, some suggested also having regular patient safety team huddles to talk about patient safety.

ICU nurse: "Yes, but we are very bad at evaluating what we do... We change our procedures, and then … after a year, we do another change, without any evaluation of the intervention. In 95% of the cases, things go back to the way they were before...."

3.5 Focus on Processes

Table 5 – Success Factors within Content Area "Focus on Processes"

Categories	**Standardize, create guidelines**	**Minimize risks or hazards after transfer**
Sub-categories	• Define the process; transfer planning by who, how, when, and what? • Well-planned ICU discharge activities (Reduce technology before transfer; review and reduce unnecessary medications/drugs; early & frequent mobilization) • Avoid ad hoc decisions • Develop guidelines or/and a transfer tool • Include transfer planning in the medical rounds	• A well-planned, suitable time for transfer • Create a step-down opportunity • Higher staff ratio the first day after transfer • Post-intensive care groups that follow up with the patient (PIG) • Information about eventual care restrictions • Care plans, i.e., measure vital signs, nutrition, fluid intake, urine, mobilization

Standardize and create guidelines and, minimize risks or hazards after transfer were the two categories identified in relation to the value focus on processes (see Tab. 5).

Among the mentioned success factors was a well-defined process, with a better flow, and that well-planned transfer planning activities, such as reducing technology and medication, should be part of daily medical rounds. Participants suggested a checklist, evidence-based guidelines, methodologies, and tools that could be used in transitional care processes. However, planning often was done differently depending on the involved physician, often ad-hoc.

Physician: "You must have a strategy – that's really what everything is about! Every ICU should have a checklist with procedures to follow when a patient is transferred to a general ward. That's where to start!"

The participants wanted the patient to have the best possible preparation for the transfer. They identified risk situations that should be avoided and suggested for example, that extubating should not be done the same day as the patients were to be transferred. Patient transfers should also be avoided, during Friday afternoons, as the staff ratio was usually reduced.

ICU nurse: "I think it's difficult to care for these former ICU patients on the ward because of the workload and understaffing... And the ward nurses surely know that they will not catch up with our recommendations not without extra resources."

Participants wanted to have a step-down opportunity, an intermediary unit for the most fragile patients, this was seen as a safety precaution for preventing readmission. One additional success factor was to implement of nurse-led follow-ups to support and assess patients in the general ward, several days after ICU admission. The participants also meant that it was important to have decisions concerning how to deal with patients' future eventual health problems. Ward nurses suggested having better written information about any care restrictions, such as do not resuscitate orders, so that no mistakes were done. Some of the patients that were transferred could have a written decision that they should not be readmitted to ICU if they had a worsened health status. Furthermore, written care plans, with recommendations for further care, should be developed and implemented as an improvement.

One ICU nurse stated, "I think that staff at the ward needs a written guideline in how often to measure vital signs, nutrition, fluid intake, urinary output, and frequent mobilization."

3.6 Base Decisions on Facts

Within the value base decisions on facts, only one category was identified: A well-thought-out transfer decision (see Tab. 6).

Table 6 – Success Factors within Content Area "Base Decisions on Facts"

Categories	**A well-thought-out transfer decision**
Sub-categories	• The right patient at the right unit • ICU-discharge criteria

Having the right patient in the right unit was considered an essential condition for ensuring quality and safe care. Fragile patients required a well-thought-out transfer decision, and healthcare professionals discussed the need for evidence-based ICU discharge criteria.

One anaesthesiologist said: "The most important thing for me is to know for sure that the decision to transfer is right … that the patient is in a condition to cope with the transfer to the ward."

4 ANALYSIS AND DISCUSSION

The purpose of this paper was to present success factors for increasing the quality and safety of ICU transitional care as described by co-workers at the sharp end using the core values of TQM as a theoretical lens. By using TQM core values as a theoretical lens, we were given a usable, holistic picture of success factors and how to improve the transfer process, which is a strength (see Appendix). The overall findings showed that the healthcare professionals at the sharp end perceived that their goal was to gain a clarified process with a person-centred, holistic, system-oriented solution.

Andersson et al. (2014), emphasise that managers must clearly provide for continuous improvement work, as this gives legitimacy to the work that the staff are requesting. Furthermore, organising safe ICU transitional care also meant having the right patient in the right unit, with low risks of patient harm, sufficient resources, and competent staff. The findings also show that the process is multifaceted and needs to be defined and that quality improvement initiatives at a system level are required. The participants highlighted the problem of working across boundaries, and a success factor was a venue for holding regular meetings between staff members from different units involved in discussing routines. In this context, this involved avoiding working in silos and instead having the patient in focus (De Souza, 2009). Also, to clarify what, who and when to do different actions in the process. The core value "Let everyone take an active part" included suggestions as implementing daily interdisciplinary care conferences and bedside handoffs for improving the process. Implementing regular patient safety huddles (Fencl and Willoughby, 2019) and interdisciplinary team care interventions with staff from the ICU and general wards could be solutions to improve patient safety and quality of care and focus on the customer (patient and/or relatives). This is in line with Sten et al. (2021), who found that co-workers want to involve patients and relatives in improving team collaboration when seeking quality care.

The findings also show that communication between staff members from the ICU and those from the general ward needs to be enhanced and improved. Brown et al. (2018), suggested implementing standardised discharge communication tools to ensure the continuity of communication, while other studies indicated that a checklist to structure verbal handover would be useful (Van Sluisveld et al., 2015). Specially designated liaison nurses/case managers responsible for organising and evaluating the whole transfer process may be a solution for improving communication, which has been studied with positive results (Aued et al., 2019). ICU liaison nurses can contribute to improvements on several levels, first and foremost to improve clinical patient outcomes and second to the confidence levels of ward nurses in managing deteriorating patients (Lynch, Cope and Murray, 2021; Tabanejad, Pazokian and Ebadi, 2014). Furthermore, delays in the patient transfer process can be reduced by early evaluation, timely team communication, and proper preparation (Alali et al., 2019; De Grood et al., 2018). Also, involving and communicating decisions to the whole team and across organisational boundaries can avoid the perception of 'parallel systems' (Sten et al., 2021).

The content in the core value "Focus on customers", shows that organising person-centered transitional processes is essential for the quality of care. The category 'Involved, well-informed patients and relatives', showed that the patients and their relatives needed to get more opportunities to be involved in what happened and to participate in the quality initiative. The relative's concerns had to be met, and many improvement suggestions were about a well-informed relative. The co-workers discussed that written and oral information should be used. This is strengthened by a scoping review by Stelfox et al. (2015). In their study, the most common themes concerning discharge from ICU, were patient and family needs and experiences, availability of complete and accurate discharge information, and discharge education for patients and families.

According to the participants, ensuring resources and staff competence throughout the process was essential for providing safe patient care, also in the general wards. This is also concluded by Enger and Andershed (2018). The outcomes of care and patients' experiences with hospital care are related to whether hospitals have sufficient manpower, for example, nurse staffing and supportive work environments (Aiken, 2014; Aiken et al., 2014). Therefore, lifelong learning and competence development for staff seems crucial for safety (Allum et al., 2020).

When looking at the results from the analysis one can see that all TQM core values are in focus when success factors are described even though not all to the same extent. This could help to support the building of a desired quality culture since this culture is based on the presence of all core values (Bergman et. al, 2022). Our findings indicate that building a quality culture transitions that enhances the quality of care during transitions requires a holistic, system-thinking solution that brings people together toward the same goal. This is in line with a recent study, which showed that lack of quality improvement initiatives at

the system (macro) level, lack of time for quality improvement, and lack of autonomy was considered barriers to quality improvement at health centres (Arvidsson, Dahlin and Anell, 2021).

4.1 Implications for Practice and/or Future Research

Evaluations and improvements of the ICU transitional care process should be more data-driven with more data and outcomes. The patient's and their relatives' experiences with the transfer process should be a natural part of quality improvement initiatives and research. Attention must also be paid to the need to optimise care before and after patient transfer. The result indicated that a well-thought-out transfer decision based on facts was highly important, and specific evidence-based ICU discharge criteria and recommendations for future care seem requested. Further research about an evidence-based transfer tool also seems essential (Boyd et al., 2018), for example, clinical pathways that are associated with quality aspects such as reduced in-hospital complications (Tanjung and Nurwahyuni, 2019).

4.2 Strengths and Limitations

The chosen qualitative method was appropriate and suited to the aim of the study. One limitation of this study is that it only portrays the challenges encountered by the two hospitals during the process of ICU transitional care. The hospitals size and similar context in a rural area, may affect the findings and the improvement suggestions, however, we saw that the success factors in our study also are seen as important in other studies. The focus group discussions had a good flow, and the group could share their ideas and opinions (Krueger, 2014). Thus, there are challenges with focus group discussions. One challenge with focus group discussions is to make it possible for everybody in the group to speak up, and to achieve an allowing climate during the interview. The attending researchers, therefore, emphasized that what was said in the room should not leave the room and give consequences. The researchers also facilitated so that all participants had the opportunity to speak and so that no respondent dominated the interview.

The validity of this study, that is, that the findings reflect the specificity which the study is intended to portray (Graneheim, Lindgren and Lundman, 2017) was assumed by involving interdisciplinary teams from both ICU and general wards. Dependability (factors that contribute to instability) was assessed using the same initial questions and semi-structured guide. The research group consisted of members with different prior understandings of the subject, which contributed to many discussions and was considered a strength of this study. Using quotes from the findings provides support for coding and interpretation of the results, as well as makes the text more vivid for the reader.

5 CONCLUSIONS

The findings indicate that the quality of care and safety during the transition of patients from the ICU to the general ward can be improved using quality improvement initiatives at the system level, including more collaborative actions. In addition, lifelong learning and competence development for staff is crucial for safety. Quality improvement initiatives should include user involvement, that is, the perspective of patients and relatives. Quality initiatives require a shared venue for healthcare personnel from the ICU and wards to discuss improvements and the implementation of new routines and strategies. Moreover, an evidence-based ICU transfer tool is needed. The TQM core values can be used as a theoretical lens when a holistic picture is requested.

In summary: Quality and safety in transfer processes requires a holistic view, avoiding silos, shared arenas for collaboration, and evidence-based methodologies and tools for safe transfers.

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CONFLICTS OF INTEREST

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APPENDIX

An Overview of the Result

Unit of analysis	Success factors for the quality and safety of ICU transitional care		
Content area	1. Focus on customers		
Categories	Involved, well-informed patients and relatives	Good care encounters	Individualized care
Sub-categories	• Written and repeated oral information pre- and post-transfer • Listen to patients and relatives in quality initiatives • Involve the relatives in the transfer	• Offer relatives/patients to visit the ward prior transfer • Staff from the ward visit ICU before transfer and connect to patients/relatives with complex needs • Good encounters at arrival at the ward	• Plan the care before and after transferring due to patient's needs and wishes • Recognize anxiety and support needs
Content area	2. Develop committed leadership		
Categories	Work with safety and culture	Ensure reasonable resources and competence	
Sub-categories	• Getting all on the same boat, having clear goals • Breaking up old traditions concerning transfers and teamwork • Committed leaders at ICU and at the general wards	• Enough staff, especially when receiving a new patient • Create continuity, let experienced nurses take care of former ICU patients / support inexperienced nurses • Provide continuous professional development; educate all involved staff about needs and risks in ICU transitional care	
Content area	3. Let everybody take an active part		
Categories	Effective communication	Interdisciplinary teamwork	A just and supportive work environment
Sub-categories	• The receiving unit should read the patient's journal before hand-off • Documentation by the whole team • Better hand-offs, with written recommendation for future care	• Collaborative patient care rounds • Involved physiotherapist • Shared responsibility for the process • An overall patient-responsible physician with engagement and interest before and after the transfer • Daily Interdisciplinary Care Conference	• Mutual respect and a problem-solving attitude, and a positive atmosphere • Support for ward nurses, (tracheostomy, education about nursing interventions for former ICU-patients)

Unit of analysis	Success factors for the quality and safety of ICU transitional care	
Content area	4. Improve continuously	
Categories	Evaluate outcome	Quality improvement initiatives
Sub-categories	• Data driven evaluation; use quality indicators from national register, and follow up systems • Use near misses and adverse events	• Make a person (liaison nurse or case manager), or /and a group responsible to continuously improve the process (improvements groups) • Create regular patient safety team huddles, i.e., recurring meetings to evaluate and give feedback about transfers
Content area	5. Focus on processes	
Categories	Standardize, create guidelines	Minimize risks or hazards after transfer
Sub-categories	• Define the process; transfer planning by who, how, when, and when? • Well planned ICU discharge activities (Reduce technology before transfer. review and reduce unnecessary medications/drugs, early & frequent mobilization) • Avoid ad hoc decisions • Develop guidelines or/and a transfer tool • Include transfer planning in the medical rounds	• Create a step-down opportunity • A well planned, suitable time for transfer • Higher staff-ratio the first day after transfer • Post intensive care groups follow up the patient (PIG) • Information about eventual care restrictions • Care plans, i.e., measure vital signs, nutrition, fluid intake, urine, mobilization
Content area	6. Base decisions on facts	
Categories	A well-thought-out transfer decision	
Sub-categories	• The right patient at the right unit • ICU-discharge criteria	