A proposed model for developing quality and efficiency in transitional care

Ingela Bäckström, Pernilla Ingelsson and Lilly-Mari Sten Mid Sweden University, Östersund, Sweden, and Marie Häggström Mid Sweden University, Sundsvall, Sweden A model for developing quality

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Abstract

Purpose – The purpose of this study is to develop a model describing different factors that affect quality and efficiency in transitional care.

Design/methodology/approach – A meta-synthesis focusing on the transitions between wards was conducted within a research project. The results from eight studies within that research project have been combined and analysed from a holistic view.

Findings – The findings are a model with a description of seven different categories consisting of the identified factors affecting quality and efficiency in transitional care. Those categories are (1) learning organisation, (2) standardising and structuring, (3) applying a holistic view, (4) understanding organisational culture in a health care context, (5) management and leadership, (6) for whom value is created and (7) working together. The results from the study have been verified in previous research.

Research limitations/implications – The result of the completed meta-synthesis is based on studies conducted at two medium-sized hospitals in Sweden. The developed model can be used in a similar context to improve quality and efficiency in patient transfers by management and employees working based on the various factors.

Originality/value – This model describes factors (success factors, prerequisites, conditions and lack thereof) affecting the ability to achieve quality and efficiency in transitional care that can be used in future research as well as for practical improvements.

Keywords Quality management (QM), Health care, Continuous improvement, Leadership, Teamwork, Quality culture

Paper type Research paper

Introduction

Health care is a sector that is expected to deliver safe and high-quality patient-centred care that must also be both process and cost efficient. Increasing the efficiency of patient treatment as well as improving patient care quality and reducing waiting times are challenges facing health care systems around the world (Fine *et al.*, 2009). There are demonstrations that health care is not as safe as it should be; instead, there are arguments that medical errors are the leading cause of death and injury (Kohn *et al.*, 2000). Registered nurses highlight patient safety and are the major profession within health care; therefore, knowledge of continuous improvement among nurses could positively influence the quality of care (Andersson *et al.*, 2014). Furthermore, there are also challenges in increasing the number of patients treated,

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The TQM Journal Vol. 35 No. 9, 2023 pp. 107-122 Emerald Publishing Limited 1754-2731 DOI 10.1108/TQM-04-2022-0140 cutting wait times, keeping costs under control and becoming a more attractive employer (Van Rossum *et al.*, 2016). To meet the challenges in health care, different quality management (QM) initiatives have been applied (Seidl and Newhouse, 2012) and numerous barriers, such as hierarchy and management roles as well as professional and functional silos, have been identified (de Souza and Pidd, 2011). Due to these challenges and complex health organisations, patients perceive health care as fragmented and witness interruptions in the process (ibid). Based on previous traditions, a chain of diagnoses can involve numerous different assessments by different specialists. Instead, health care has increasingly started to use a QM methodology called "one-stop-shops," where all necessary skills are used to care for the patient (Modig and Ahlström, 2012). Then, these checks can be conducted simultaneously and with simpler interactions between the different assessment stages (Modig and Ahlström 2012).

One such process where different specialists are needed is from the intensive care unit (ICU) to the general ward or ICU transitional care. Chaboyer *et al.* (2005) defined ICU transitional care as "care provided before, during and after the transfer of an ICU patient to another care unit that aims to ensure minimal disruption and optimal continuity of care for the patient." A study of ICU transitional care showed that collaboration, routines and the learning environment need to be improved (Häggström *et al.*, 2009). Organisational learning organisation has a positive effect on the satisfaction of the employees, which in turn increases the effectiveness in the organisation (Singh, 2016). Planning for transition from an ICU to a ward is a process with the intention of offering continuity of care for the patient (Whittaker and Ball, 2000). Through person-centred patient education, family conferences before the transfer, and oral and written information about the coming transfer, the patients' and relatives' anxiety can be reduced (Brooke *et al.*, 2012). Yang *et al.* (2020) agree that an education handbook before the transition can improve health care.

To deliver high-quality patient care, hospitals also need to become collaborative organisations (Prætorius *et al.*, 2018). When investigating several hospitals, Prætorius *et al.* (2018) found that when daily operations were improved with cross-boundary collaboration, the hospitals used a combination of many different design features and used formal meeting places (war rooms) for planning, discussion, informing, displaying and making decisions. According to Curtis *et al.* (2006), there is a need for more research to develop the necessary methods and identify the most cost-effective means of improving the quality of health care received by critical ill patients and their relatives. Furthermore, Kauppi *et al.* (2018) called for more research from an organisational perspective to present a more complete understanding of what is needed to ensure smoother transitional care from the ICU to the general ward.

Overall, there is a need for new knowledge and solutions for how health care can be planned and managed to become sustainable and efficient. To contribute to this endeavour, the results from a research project were compiled and analysed from a holistic view. The purpose of this paper is to develop a model describing different factors that affect quality and efficiency in transitional care.

Method and case study

The research presented in this paper was conducted in a research project called "Increased Quality and Efficiency in Patient Transfers," which was financed by The Kamprad Family Foundation [1]. The overall purpose of the research project was to gain new knowledge about how quality and efficiency in patient transfers within ICU transitional care can be improved with a focus on leadership, continuity of care, safety culture and learning. This project is an

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interdisciplinary cocreation between the research subjects of quality management and nursing science as well as between two health care organisations. Because the project addresses such a complex challenge as improving health care and quality of care, the combination of the two different research subjects is a way to take this challenge on from more than just one aspect. Through their complimentary perspectives, the two research subjects can contribute to a deeper understanding of how to improve the process by taking advantage of the strengths of both research fields. The ethics of the project have been evaluated by the Swedish Ethical Review Authority (Dnr, 2018-159-31 M), a public agency under the Ministry of Education that examines and approves or denies applications for ethics reviews of research involving humans and human biological material.

The results from eight scientific articles and conference papers presenting studies and the results from the research project have been combined and analysed from a holistic view, focusing on the transitions between wards. Using a holistic view when analysing the combined results means that, in this paper, the results from each of the papers are being compiled and analysed as a whole in relation to the overarching challenges of achieving quality and efficiency in transitional care. Using this approach with the results from the entire project, the aim is to gain new interpretations, insights and deepened knowledge about the phenomenon. A summary of the eight articles and papers can be found in Table A1.

The results originate from studies conducted at two mid-sized hospitals located in rural areas in Sweden. The empirical data collected from the hospitals during the project encompassed the following:

- focus group interviews with co-workers were nine focus group interviews with a total of 47 staff members.
- (2) surveys measuring QM values and team collaboration, answered by 113 co-workers.

These studies have been supplemented with one systematic literature review and several scoping reviews and literature searches. The purpose, overall methodology, main results, and conclusions from the papers are summarised and presented in Appendix.

This summary was then read through by the four researchers in the research team, and a meta-synthesis was conducted to understand the results from a holistic view and provide overarching results from where a model could be built.

The analyses were conducted as follows (see Figure 1):

- (1) *Individual analysis*. Each of the researchers read the summaries individual to see if all important results and conclusions from the articles and conference papers were presented in the table, and then each researcher marked the results pertinent to achieving quality and efficiency in transitional care.
- (2) Consensus dialogue. The marked results from each article were discussed, and when a consensus was reached, the results were written on a sticky note formulated as factors affecting the ability to achieve quality and efficiency in transitional care (one sticky note per factor).
- (3) *Clustering dialogue*. All sticky notes were posted on a whiteboard and then clustered by the research team during discussions until everyone agreed on the clusters.
- (4) *Identifying subcategories.* A heading for each cluster was formed and written on new sticky notes.
- (5) *Identifying categories*. A new cluster process started with the new headings, and then a new heading was formed.

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Figure 1. The analysis process The clustering process thus far followed the steps in affinity diagrams (Mizuno and Bodek, 2020).

(6) In the step where the relations between the headings are supposed to be determined, the research team realised that all of the results are related and equally important to ensuring quality and efficiency in transitional care; thus, a "circle" was created where this could be illustrated.

This method allowed both perspectives from QM and nursing science to be represented in the results as the researchers from the two scientific disciplines were creating the model together.

Results

The main results and conclusions from eight scientific papers have been summarised (see Table A1). The results were, for example, success factors, prerequisites and conditions for achieving quality and efficiency in transitional care.

When those overarching results were analysed from a holistic view, seven different categories affecting quality and efficiency emerged. Those categories are (1) learning organisation, (2) standardising and structuring, (3) applying a holistic view, (4) understanding organisational culture in a health care context, (5) management and leadership, (6) for whom value is created and (7) working together. These categories are described in more detail below and are illustrated in Figure 2.

Learning organisation

The category of learning organisation emerged from the four subcategories of *QM culture* and core competencies, QM system in ICU care, ability and skills and learning environment, which are described below.

Core competencies in nursing science have similarities with the core values in QM, indicating that core values in QM and the core competencies within nursing science in ICU transitional care are mutually dependent but also exist as a whole. This fact gave rise to the subcategory QM culture and core competencies. A learning environment is coveted



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Figure 2.

by the staff, and there is a need for increased learning between professions within the health sector. Continuous learning among the hospital staff is needed. There is a need for a greater degree of knowledge exchange between units and professions. The results show a lack of sharing, understanding and using knowledge throughout the entire ICU process. Working in multiprofessional teams within and between hospital units can increase learning between professions. QM is a system that could be applied in ICU transitional care to improve quality of care and patient safety, leading to the subcategory of QM systems in ICU care. The staff must have the **ability and skills** to ensure safety and quality of care. The nurse must be able to consciously contribute to a good health and work environment and to reflect a good health and working environment. In addition, they must be able to contribute to research, development and education.

Standardising and structuring

From five different subcategories, standardising and structuring emerged. The subcategories were *standardised routines*, *strategies and tools, measurement tools, datadriven development, structured information and communication and a common view of continuous improvement.*

There is a need to create standardised routines. Then, the routines and strategies must be implemented. There is also a need for quality improvement tools in the patient transfer process. The analysis then resulted in the category of standardised routines, strategies and tools. One result of the project is a measurement instrument that was developed and designed in collaboration between the two research subjects that can help the organisation detect strengths and opportunities for improvement. The **measurement tool** can be a basis for developing team collaboration and understanding how team collaboration is performed and how it can be improved. There is a need for follow-up, evaluation and measurement, such as continuous improvement via data-driven evaluation. Structured information and communication are needed to ensure quality and efficiency in ICU transitional care. A standardised and structured process for communication, which facilitates competence exchange, decision-making and leadership, is not only important but also affects the possibility of creating a learning environment. The results show that quality improvements are important and that the staff request shared spaces for continuous improvements between organisational boundaries and professions. Quality initiatives require a shared space for health care personnel from ICUs and wards to discuss improving and implementing new routines and strategies. To summarise, there is a need for a common view of continuous improvement.

Applying a holistic view

The category of applying a holistic view emerged from the three subcategories: *holistic view*, *need for planning and defined and well-designed ICU transitional care processes*.

To enhance the quality and efficiency of transitional care, a **holistic view** is vital, and thereby silos and suboptimality be avoided. A need for a more holistic view across organisational boundaries will help improve processes. Therefore, an increased degree of systematic thinking is important. There is also a **need for planning** the entire process from a patient view. A requisite identified in the results was **defined and well-designed ICU transitional care processes** with a holistic view of how to ensure quality of care. Today, the staff perceive the process of ICU transitional care to be undefined. Another result is that ICU transitional care is a complex interpersonal process.

Understanding organisational culture in a health care context

The subcategories *QM culture* and *organisational culture* together constitute the category of understanding organisational culture in the health care context.

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There is a need to work with the **QM culture** in health care organisations, and all QM values are needed if such a quality culture is desired. The factor "pride" had the highest mean when measuring the culture within the investigated organisations. The results show high agreement with the QM values in the organisation, indicating the presence of a quality culture in the investigated health care organisations. Simultaneously, different perceptions of quality culture between professions were found. The findings show a common QM culture at the two different ICUs and hospitals. Within the process of ICU transfer care, there are differences in organisational culture and core values between the ICU and the general wards. The category **organisational culture** emerged from the following: There is a need for a blameless organisational climate when a safety culture is wanted. A safety culture that promotes collaboration and patients' participation is also essential. Welcoming and positive organisational culture within and between teams is needed.

Management and leadership

The category of management and leadership was the result of merging two subcategories: *committed leadership* and *sufficient resources*.

The QM value **committed leadership** is a base for other values but was found the least often in the reviewed articles in the project. ICU transitional care could be safer and more efficient with sufficient resources and with an overall patient focus. **Sufficient resources** are an essential condition according to the staff.

For whom value is created

The category "for whom value is created" was the result of a merger of the subcategory *personcentred care*. According to co-workers, ICU transitional care could be safer and more efficient under an overall patient focus. The measured factor "**person-centred care** between units," which illuminated how much the value for the patient is in focus, had a significantly higher mean for the assistant nurses than for the nurses. This finding can be explained by the fact that the assistant nurses are often responsible for physically transporting the patient from the ICU to the general ward. The results indicated that teams collaborating between hospital units need to focus more on how to increase person-centred care.

Working together

The category of "working together" was the result of merging the two subcategories, *multi/interdisciplinary teamwork* and *teamwork between and within units*.

The ICU transitional care process is characterised by differences in organisational cultures and core values. A process that is interpersonal and involves multidisciplinary teams must collaborate across hospital units. This subcategory was called **multi/interdisciplinary teamwork**. Teamwork is a common denominator for both QM and nursing science. Teamwork and collaboration are needed to ensure quality and efficiency in ICU transitional care. The findings from the project show that ICU transitional care could be safer and more efficient by better **teamwork between and within the units**. A condition is interdisciplinary teamwork within the unit and across the hospital borders. This was also confirmed in the measurement, as the result showed a lower mean for team collaboration between hospital units than within hospital units.

Discussion and conclusions

Providing efficient and high-quality care is the purpose of the health care sector. Due to patient differences, momentary interpersonal relations and the need for collaboration between different professions and departments, this is a complex and difficult task to achieve (Prætorius *et al.*, 2018). The identified general areas for improvement in transferring patients

A model for developing quality between wards must have support from top management. There must be a shared picture of the situation within health care, as well as a need for management and leadership with a holistic view, if these changes are to be possible.

Management must conduct the changes that are needed in the entire health care system, which is consistent with early research; for example, Curtis *et al.* (2006), who noted that leadership is crucial to the prosperity of quality improvement projects and that the entire quality improvement program should learn from its successes as well as failures. This is consistent with Andersson *et al.* (2014), who emphasise that managers must explicitly support continuous improvement work, as this gives legitimacy to the work that the staff are requesting.

We conclude that a learning organisation is important as well as creating a learning environment, as it affects both the employees and the effectiveness in a positive way (Singh, 2016). This is not easy to accomplish in practice according to You (2022). Working together and learning from each other between professions and units are also important. If better teamwork between and within the units can be established, then ICU transitional care could be safer and more efficient. This is consistent with Curtis *et al.* (2006), who stated that incremental and continuous interdisciplinary teamwork is necessary for successful quality improvement within the health sector.

Person-centred care and standardising routines for structuring information and communication are important (Brooke *et al.*, 2012; Yang *et al.*, 2020). These should be easy things to fix but, simultaneously, this is what the staff, patients and relatives have requested, indicating there is still a need. Why is a big question? Is this also dependent on leadership and management?

All professions in health care want to do the right thing for patients, but the culture, structure and/or identity are hindered and must be overcome. How can these hindrances be conquered? As previously mentioned, management with a holistic view is needed, but what more can be done? According to Ingelsson (2013), leadership is of great importance and managers are key players when cultural transformation is desired. Snyder *et al.* (2016) maintained that leaders must perform and conduct new methodologies that focus on building an open culture environment if they want to change the culture within an organisation. Ingelsson *et al.* (2018) established that working with leadership behaviours within the management group affected the culture of the entire organisation.

What we can conclude after analysing the project results from a holistic view is that ensuring high-quality and efficient care is a complex challenge that health care organisations face in providing transitional care. The results described above (see also Figure 2) indicate that the factors, prerequisites and conditions in the model are intertwined and all are needed when quality and efficiency in ICU transitional care are desired.

Future research

The proposed model must be tested, validated and perhaps updated in future research. It would be interesting to do a similar study from other research projects or do the same research in other countries and then compare the results. Another way to further validate the model could be to perform a systematic literature review with the seven identified categories as a base.

Note

 The Kamprad Family Foundation for Entrepreneurship, Research and Charity is a foundation with the purpose to support, stimulate and reward education and scientific research to promote entrepreneurship, the environment, competence, health and social improvement. It focuses specifically on implementing the results of the research and education to benefit many people quickly and cost-efficiently.

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Corresponding author

Ingela Bäckström can be contacted at: Ingela.backstrom@miun.se

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118	Main results and conclusions	The results indicated a relatively high agreement with the QM values in the organisation indicating the presence of a quality culture. The results showed no statistically significant differences between the two umits, thus indicating the same culture in both CUS even though they are located in two different of the exciting culture within an organisation and can help organisations prioritise their work with continuous improvements. The difference in results found between professions could indicate a division and be a sign of professional solis in the units. Pride was the factor with the highest mean. The result regarding the factor system view could be an indication of differences in insight in the whole organisation, where the physicians may have a large overview since they often work in several units. The assistant nurses are most often the persons can be further supported by the statistically pignificant difference of the statistically person-centred care between units where the assistant nurses had statistically significant higher mean then the nurses	(continued)	
	Purpose	The purpose of this paper was to present and analyse the results from using a questionnaire measuring the presence of a number of QM values, as well as the use of Appreciative Inquiry (AI) and the feeling of pride in a health care setting focusing on transitional care		
	Method	Quantitative, baseline data collection via. A survey used to assess the quality culture in the two ICUs		
Table A1.	Source References/Title	Ingelsson et al. (2019) Assessing Quality Management culture in order to develop ICU transitional care		

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120	Main results and conclusions	The QM core values were found in the reviewed articles on ICU transitional care, which was made acticles on ICU transitional care, which was made science have similarities with those in QM. This finding indicates that core with those in QM. This competencies within nursing science in ICU transitional care are mutually dependent and exist as a who. The core values of committed leadership was found the because committed leadership is in notable because committed leadership is the basis for the other core values, indicating that more research is needed on how committed leadership is can strengthen the organisational care is a complex interpersonal process, characterised by differences in multicitisciplinary teams that collaborate across hospital units Different QM and core values and corre values and corre values and core values and multicitisciplinary teams that collaborate across hospital units Different QM and dones and core values and involving and standardising patient transfer data were used in the reviewed articles and could be a system that could be patient safety. Together, QM and nursing science can offer complementary perspectives and contribute to a featuritional care process by leveraging the strength of both fields. This review may contribute to a paractically used in ICU transitional care to provide better quality care and patient transitional care process by leveraging the strength of both fields. This review may correly and tools are practically used in ICU transitional care to provide better quality care and patient safety (continued)
	Purpose	The purpose of this literature review was to explore to what extent quality management (QMJ) and mussing science offer complementary perspectives to provide better quality care, by looking at QM core concepts and tools
	Method	Systematic literature review focusing on QM applied in patient transfers from ICU to general ward
Table A1.	Source References/Title	Sten <i>et al.</i> (2020) Improving ICU transitional care by combining quality management and musing science - two scientific fields meet in a systematic literature review

Source References/Title	Method	Purpose	Main results and conclusions	
Sten <i>et al.</i> (2021 a, b) The development of a measurement instrument focusing on team collaboration in patient transfer processes	Quantitative development of a questionnaire and measuring team collaboration	The purpose of this paper was to describe the development and testing of a questionnaire aiming to measure perceived team collaboration in the patient transfer process from ICU to the general ward. This study also aims to analyse the results to see how the survey could help inprove team collaboration within ICU transitional care	Team collaboration in ICU transitional care can be measured using a developed and tested questionnaire. Measuring team collaboration can provide an understanding of how oublaboration is previewed and dentifying weaknesses and areas for improvement. The results from the survey gave insights that can be used to improving team collaboration in ICU transitional care. The results information the survey gave insights that can be used to improving team collaboration in ICU transitional care. The results information are collaborating across person-centred care and continuous learning and how to create prerequisities for successful patient thanklers there is a need for a more holistic view of iteam collaboration in this. The results there seems to be a lack of abarration in the care process nequires deeper understanding and using knowledge during the entire process. Increased dearne of sharing the entire process. Increased dearnes Collaborating in teams or showed that there is a across organisational care process requires an oncreased dearne of sharing the entire process. Increased dearnes Collaborating in teams over hospital units along the ICU transitional care process requires an oncreased dearne of systematic thinking and less sibed thinking using knowledge furm co-workers across organisational bounders: Collaboration in the entire process. Increased dearne of the sum- sure hospital units along the ICU transitional care process requires an outboration over team performance and knowledge in how the co-workers in teams are interdependent on each other to succeed. The ordeboa an areastrone and protomating team ordeboa an areastrone and provement tool for on subart and oppartunities can be poinport and each opheric tare procesive and QM, has given new perspectives on how to develop a measurement tool for measuring team ordeboa an anostrone tare objectives, reflection over team oblobration in the individual to team, othurn system, process and ontinuous improvement	
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A model for developing quality

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Table A1.

TQM			
<u>122</u>	Main results and conclusions	The results indicate that quality of care in ICU transitional care processes can be improved with quality improvement initiatives at the system level including more collaborative actions and with more methodologies and tools. The process could be transwed with conditions that allowed person-centred care, a holistic view avoiding silos. We also conclude that quality initiative requires shared spaces for health care personnel from ICU and the wards to discuss improvements and the implementation of new routines and strategies. Additionally, essential conditions are enough resources and establishing interdisciplinary teamwork within the own unit and	Results indicated that there is an expressed need to improve team collaboration, define and design ICU transitional care process with a holisite view of how to create a latrning environment. Team collaboration could be interpreted as a need for a standardised process for working with continuous improvements affect multiple hospital units and that involved co- workers from different professions and hospital units, as well as patients and relatives. A standardised and that involved co- workers from different professions and hospital units, as well as patients and relatives. A standardised and structured process for communication, competence exchange, decrision-making and leadership for teams in ICU transitional care could be important to improve team collaboration and increase quality of care and patient safety. The findings indicated a need for team collaboration and increase quality of care and patient safety. The findings indicated a need for team collaboration and increase quality of care and patient safety. The findings indicated a need for team collaboration and increase quality of care and patient safety in this is an edo for a welcoming and positive organisational culture within and between teams.
	Purpose	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 total quality management (TQM) as a theoretical lens	The purpose was twofold: first to describe how co- workers within a team perceived team collaboration in patient transfers from an intensive care unit (ICU) to general wards and, second, to describe co- workers' suggestions for am improved future state of team collaboration
	Method	Qualitative design through focus group discussions	Qualitative content analysis from focus groups discussions
Table A1.	Source References/Title	Häggström <i>et al.</i> (2023) (forthocoming in Quality Innovation Prosperity) Success Factors for Quality and Safety of ICU Transitional Care – listening to the sharp end	Sten <i>et al.</i> (2021 a. b) Improving Team Collaboration in Patient Transfer Processes by Co-Workers' Perceptions and Suggestions