



## Research Article

## Improving patient care transitions from the intensive care unit to the ward by learning from everyday practice. A multicenter qualitative study

Gijs Hesselink<sup>a,\*</sup>, Stan Bins<sup>a</sup>, Ingrid Bonte<sup>b</sup>, Brigitte Westerhof<sup>b</sup>, Nande Hoek<sup>c</sup>,  
Janneke van Strien<sup>c</sup>, Miriam Moviat<sup>c</sup>, Marieke Zegers<sup>a</sup>

<sup>a</sup> Radboud University Medical Center, Department of Intensive Care Medicine, Nijmegen, the Netherlands

<sup>b</sup> Rijnstate Hospital, Department of Intensive Care Medicine, Arnhem, the Netherlands

<sup>c</sup> Jeroen Bosch Hospital, Department of Intensive Care Medicine, Den Bosch, the Netherlands



## ARTICLE INFO

## Keywords:

Care transitions  
Intensive care units  
Nursing wards  
Qualitative research  
Patient discharge

## ABSTRACT

**Objective:** To explore and describe the everyday practices (Work-As-Done) that hinder and facilitate patient care transitions from the intensive care unit (ICU) to the ward.

**Research method/design:** Multiple qualitative case studies in the ICU and various specialized wards of three Dutch hospitals. Adult patients planned to be transferred were purposively sampled on a variety of characteristics along with their relative (if present), and the ICU and ward nurses who were involved in the transition process. Data were collected by using multiple sources (i.e., observations, semi-structured interviews and a qualitative survey) and then systematically analyzed using the thematic analysis approach until saturation was reached.

**Findings:** Twenty-six cases were studied. For each case, the actual transfer was observed. Sixteen patients, five relatives and 36 nurses were interviewed. Two patients completed the survey. Fifteen themes emerged from the data, showing that the quality of transitions is influenced by the extent to which nurses anticipate to patient-specific needs (e.g., providing timely and adequate information, orientation, mental support and aftercare) and to the needs of the counterpart to continue care (e.g., by preparing handovers) besides following standard procedures. Data also show that procedures sometimes interfere with what works best in practice (e.g., communication via a liaison service instead of direct communication between ICU and ward nurses).

**Conclusions:** Subtle, non-technical nursing skills play an important role in comforting patients and in the coordination of care when patients are transferred from the ICU to the ward.

**Implications for clinical practice:** These Work-As-Done findings and their underlying narratives, that are often overlooked when focusing on quality improvement, can be used as material to reflect on own practice and raise awareness for its impact on patients. They may stimulate healthcare staff in crafting interventions for optimizing the transition process.

## Introduction

The transition from the Intensive Care Unit (ICU) to the ward is an important episode in the patient's healthcare trajectory. The quality of the transition is often influenced by how healthcare providers deal with varying conditions, such as the health condition and care needs of the patient, and the care capacity in the ward [1–3]. Moreover, patients and relatives often find this transition difficult, because of the changes in care intensity and the shift of focus from stabilization and recovery to rehabilitation [3–5]. Insufficient attention to these factors increases the

risk of adverse patient outcomes such as anxiety, mental and physical decline, and ICU readmission with a higher risk of death [6,7].

In the last two decades, the quality of patient transitions from the ICU to the ward and related outcomes, such as ICU readmissions, have become important parameters for measuring hospital and departmental performance [8,9]. Parallel to this trend, the interest for studying and improving these transitions increased as well. So far, the attention has mainly focused on retrospectively mapping incidents in the transition process based on the assumption that quality and safety arises from the reliability of the working system (i.e., procedures, organization,

\* Corresponding author at: Radboud University Medical Center, Department of Intensive Care, Nijmegen, the Netherlands. P.O. Box 9101, internal postal code: 707, 6500 HB Nijmegen, the Netherlands.

E-mail address: [gijs.hesselink@radboudumc.nl](mailto:gijs.hesselink@radboudumc.nl) (G. Hesselink).

<https://doi.org/10.1016/j.iccn.2024.103797>

Received 2 April 2024; Received in revised form 27 June 2024; Accepted 2 August 2024

Available online 2 September 2024

0964-3397/© 2024 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

technology) and from interventions to mitigate potential failures [10]. Although this classical Safety I approach is still valuable, it insufficiently takes into account the complexity and inherent variability in modern practice which is needed to understand and improve healthcare processes. Greater attention for how healthcare providers deal with the dynamic circumstances and variability in everyday practices as well as their struggles (i.e., Safety II) is therefore needed.

Numerous procedures, standards and guidelines have been developed to optimize care transitions from the ICU to the ward from a clinical and organizational perspective ('Work-As-Imagined') [7,11]. However, how this relates to everyday practice ('Work-As-Done') is less known. In addition, previous research on this topic often lacks the perspective of patients and relatives while they are the constant actors in the care process. Their observations may provide an alternative and valuable view of what is considered to be important in the transition process [12,13]. Therefore, the aim of this study is to explore and describe the everyday practices that hinder and facilitate patient care transitions from the Intensive Care Unit (ICU) to the ward based on the observations of daily practice, and the perspectives of nurses, patients and relatives.

## Methods

### Design

Multiple qualitative case studies were performed to collect varied data from nurses, patients and relatives during and after the transition. The research was conducted and reported in accordance with the Standards for Reporting Qualitative Research (SRQR) to ensure study trustworthiness [14].

### Setting

We collected data from the ICUs (including one Step Down Unit; SDU) and several specialized wards in three hospitals in the eastern part of the Netherlands (Table 1). For each hospital, different wards were selected to ensure variety in patient types and (potentially) in practice.

### Ethical considerations

The medical ethical committee of the Radboud University Medical Center approved the study (number: 2022–16097). Eligible patients and relatives (if present) were first approached in the ICU by a staff nurse. ICU and ward nurses were directly approached by a researcher (SB or GH). Before the study commenced, the participants received oral and written information from the researcher describing the study's aim, assurance of confidentiality, the process of anonymization of identity, the voluntary nature of participation and the right to withdraw from the study at any time. Consent was obtained prior to each form of data collection. Participant confidentiality was ensured by de-identifying interview transcripts. Only research members had access to the data.

### Participants

Cases were considered eligible if they encompassed an adult patient

**Table 1**  
Study settings and characteristics.

Hospital type	Academic	Regional	Regional
Number of ICU beds	26	14*	14
Participating specialized wards	Traumatology; Surgery†	Pulmonary Diseases; Internal Medicine; Neurology	Surgery; Neurology
* 6 beds in the Step Down Unit.			
† Cardiothoracic surgery.			

planned for a transfer from the ICU to one of the participating wards and discharged during office hours. Patients, or their relatives, were only approached if they were able to understand and communicate in Dutch language. Purposive sampling was used to recruit a heterogenous sample across a number of characteristics (i.e., age, gender, length of ICU stay and discharge destination) to obtain as many different experiences and perspectives as possible. The ICU and ward nurses who were involved in the transition process were also approached. Nurses were excluded if they already participated in another case.

### Data collection

Data collection took place from February – December 2023, and consisted of multiple sources (i.e., a qualitative survey, observations and semi-structured interviews) to obtain a comprehensive and reliable picture of relevant everyday actions and mechanisms.

A short paper-based survey was handed out to the patient or relative just before ICU discharge. The survey consisted of open-ended questions and text fields in which they could document their experiences and observations during specific episodes of the transition process: 1) the preparation for ICU-discharge, 2) the transfer to the ward, 3) the handover and installation in the ward, and 4) the first 24 h in the ward (E-Supplementary file-1). The questions and episodes were developed by the research team based on research literature [11,15,16], and clinical experience.

Observations were conducted by one researcher (SB or GH) to describe the activities and interactions during the transition process starting from the patient's deinstallation in the ICU up to the installation in the ward. Depending on the situation, the researcher took an active, moderate or passive position [17]. This provided a unique 'insider perspective' on the everyday practice of transferring ICU patients. Descriptive and reflective field notes were written by hand during the observation and transcribed shortly after each observation according to a pre-structured format (E-Supplementary file-2). Descriptive notes reflected the setting, interactions and atmosphere; whereas the reflective notes encompassed what was learned from each observation (e.g., thoughts, clarifications, ideas) [18].

After each observation, patients, relatives and nurses were invited for a semi-structured interview. The interviews with patients and relatives took place individually or dyadic at the ward, 24–48 h after ICU discharge. Most nurses were immediately interviewed or shortly after the installing the patient in the ward. The interview guide consisted of the same questions and structure as used in the survey. Interviewees were encouraged in the interviews to substantiate their answers on the basis of concrete experiences and feelings. Survey data and the observation notes were used for probing during the interviews. All interviews were audio recorded and transcribed verbatim.

### Data analysis

All data were systematically analyzed in Atlas.ti (Version 22) according to the principles of thematic content analysis [19]. The analysis started with reading and re-reading the data from the first three cases to become familiar with and gain an overall sense of the content. Subsequently, one researcher (SB) generated initial codes by providing conceptual labels to relevant text passages referring to a barrier or facilitator. The generated codes were based on the data itself and driven by literature on transitional care [11–13,15,16]. This resulted in the development of an initial codebook that, after being discussed and revised by two researchers (SB and GH), acted as a blueprint for the coding of new data. After analyzing new data, SB critically examined the list of codes for relevance, uniqueness and formulation and made revisions when needed. Codes that referred to the same underlying concept were grouped into overarching themes per transition episode. In several rounds, the codes and themes were discussed between two researchers (SB and GH) to reach agreement on structure, wording and

relevance. In case of disagreement, a third researcher (MZ) was consulted. By frequently reflecting on the meaning of data with a group of researchers with different professional backgrounds (biomedical-, health- and organizational sciences and Intensive Care Medicine) we have tried to limit the influence of personal experiences and subjectivity in the analysis and meet the requirements of reflexivity. Data collection and analysis stopped after no new findings emerged and data saturation was reached. Illustrative quotes were selected to support the main findings.

## Findings

A total of 26 cases were studied. The transfer to the ward was observed in all cases. Two patients completed the survey. Sixteen patients, five relatives, and 36 nurses were interviewed. The characteristics of the interviewees are shown in Tables 2 and 3. E-Supplementary file-3 shows interviewees' characteristics per hospital. Each case missed one or more viewpoints as eligible persons (i.e., patient, relative, ICU or ward nurse) had no time or interest in participating, or were unable to do so (e.g., deliriant, emotionally unstable).

Fifteen themes, divided across four episodes, emerged from the data and are discussed below. Related interview quotes and observation notes per theme are presented in E-Supplementary file-4.

### Episode 1: Preparation for ICU discharge

#### Timely informing patients and their relatives

Many patients mentioned that the timely information about the nearing discharge helped them to mentally prepare for upcoming care changes. However, others were overwhelmed by a sudden discharge. Several ICU nurses stated they sometimes forget to inform the patient on time and mentioned having a different reference of timeliness (i.e., a couple of hours before discharge) compared to the patient. Sometimes, the last-minute availability of a bed on the ward made it impossible to timely inform the patient. ICU nurses also struggled with the timing of informing patients: i.e., informing at an early stage may frustrate patients as discharge times are often rescheduled earlier or postponed

**Table 2**  
Characteristics of observed and interviewed patients and relatives.

Variable	Observed patients (n = 26)	Interviewed patients (n = 16)*	Interviewed relatives (n = 5)
Age in years, median (IQR)	66.5 (9.0)	66.5 (14.5)	NR
Sex			
Male, n (%)	14 (53.8)	8 (50.0)	3 (60.0)
Female, n (%)	12 (46.2)	8 (50.0)	2 (40.0)
ICU or SDU length of stay			
≤1 day, n (%)	7 (26.9)	6 (37.5)	NA
2–6 days, n (%)	10 (38.5)	8 (50.0)	NA
≥7 days, n (%)	9 (34.6)	2 (12.5)	NA
Time of ICU discharge			
9:00 am – noon, n (%)	12 (46.2)	7 (43.8)	NA
noon – 5:00 pm, n (%)	14 (53.8)	9 (56.3)	NA
Discharge destination			
(Cardiothoracic) surgery, n (%)	11 (42.3)	11 (68.0)	NA
Neurology, n (%)	6 (23.1)	3 (18.8)	NA
Internal Medicine, n (%)	4 (15.4)	1 (6.3)	NA
Pulmonary Diseases, n (%)	3 (11.5)	1 (6.3)	NA
Traumatology, n (%)	2 (7.7)	0	NA

\*Five were transferred from the Step Down Unit to the ward.  
IQR: Interquartile Range; NR: Not Reported; NA: Not Applicable; ICU: Intensive Care Unit; SDU: Step Down Unit.

**Table 3**  
Characteristics of interviewed nurses (n = 36).

Variable	Score
Age in years, median (IQR)	33 (23.5)
Sex	
Male, n (%)	8 (22.2)
Female, n (%)	28 (77.8)
Department	
ICU, n (%)	22 (61.1)
SDU, n (%)	5 (13.9)
Neurology, n (%)	5 (13.9)
(Cardiothoracic) surgery, n (%)	3 (8.3)
Internal Medicine, n (%)	1 (2.8)
Professional tenure	
≤1 year, n (%)	6 (16.7)
2–5 years, n (%)	12 (33.3)
≥5 years, n (%)	18 (50.0)

IQR: Interquartile Range; ICU: Intensive Care Unit; SDU: Step Down Unit.

while waiting for a definitive discharge time may be felt too late.

#### Discharge conversation

Many interviewees mentioned the importance of a conversation with the patient about discharge. This conversation did not necessarily have to be lengthy but is considered relevant for recognizing and anticipating on possible patient needs, concerns and (false) expectations of care in the ward. The experiences with such conversations varied and were sometimes contradictory: while nurses felt they had made all necessary preparations, patients and relatives felt unprepared and unsure about what to expect after discharge. Nurses also noted that talking effectively with patients about discharge strongly depended on their health condition, their medical history (e.g., familiarity with the ward) and personal preferences.

#### Communicating actions to patients

Upon discharge, several ICU nurses informed patients about their preparation actions (e.g., removing lines, pumps and monitoring equipment) and the rationale behind these actions. This reassured patients and helped them gaining a sense of control. It also allowed nurses to verify their actions with a colleague. On the contrary, there were also cases in which nurses communicated little to nothing and acted hurried.

#### Coordination between ICU and ward nurses

The transfers were usually coordinated via a designated person or service. Although they are considered helpful to smoothen the logistical care process, maintain control over patient flow and reduce administrative workload, this procedure hindered nurses often from directly contacting their counterpart in the ICU or ward. Interviewees indicated that, especially for patients with complex or specific care needs, direct communication helped them to explain discharge decisions, assess needs and resolve issues. The lack of direct contact was seen as an important cause for recurring misunderstandings and frustrations between ICU and ward nurses.

In all three hospitals, interviewees referred to the added value of ward nurses visiting the patient in the ICU prior to discharge, particularly for those with an ICU-stay longer than one week. Apart from having already a first contact with the patient, ward nurses were able to better assess and discuss care needs directly with an ICU nurse on-site. In one hospital, it was standard procedure for ward nurses to pick up patients in the ICU, allowing them to perform the handover in a calm and private setting in presence of the patient.

Ward nurses also emphasized the importance of being timely informed about a transfer to make all necessary preparations in advance. Sometimes, they were caught off guard by last-minute transfers. This

frustrated a smooth reception in the ward. Sometimes essential materials, such as a feeding pump or an oxygen clock, were not in place once the patient already had arrived in the ward due to the lack of direct communication.

#### *Episode 2: Patient transfer to the ward*

##### *Involving relatives*

Interviewees emphasized the added value of inviting relatives to be present during the transfer. Their presence often comforted the patient and enabled them to exchange relevant information with nurses when the patient was unable to do so. Inviting relatives was however not standard procedure and sometimes impossible when patients were transferred on short notice.

##### *Anticipating on environmental factors*

Contrary to others, several nurses paid attention to the impact the environment had on patients. For example, by transporting patients carefully (i.e., keeping a calm pace and announcing obstacles) to avoid or minimize pain of hitting a bump or crossing a ridge. Some nurses considered which route to the ward was the most patient-friendly before they started walking. Others were sensitive to the potential impact of mirrors in hallways and in elevators. Patients, especially those with a prolonged ICU stay, found it very confronting to see themselves in such a vulnerable state. Nurses anticipated on this by announcing nearing mirrors, blocking the line of sight or by giving comfort if needed. Nurses also kept an eye on the patient's privacy by covering exposed and affected body parts, and by choosing for a longer but less crowded route to the ward.

##### *Enhancing sense of orientation*

As patients often felt disoriented during the transfer, several nurses tried to enhance their sense of orientation. First, by repeatedly informing them about the location, route, duration, and the surroundings. Secondly, by adjusting the patient's position in bed to improve their field of view. Nurses argued that awareness of time and space helps patients gain control of the situation and reduces stress.

#### *Episode 3: Handover and installation in the ward*

##### *Using a standardized approach*

ICU and ward nurses used a standardized approach for the verbal handover which helped them convey information in a structured manner and determine whether all essential information had been discussed. Despite the presence of aids such as pocket cards, most nurses relied on own insights and their ability to structure information during handovers.

##### *Addressing and asking for psychosocial aspects and current care needs*

Directed by this standardized approach, nurses tend to primarily focus on the exchange of (historical) clinical information. Actual nursing problems and psychosocial care needs, and related interventions in the ICU were less often addressed. Several ward nurses expressed that the lack of such information, in both written and verbal handovers, hindered an effective follow-up in the ward.

##### *Preparing for handover*

Handovers were considered more efficient and effective if ward nurses had studied discharge summary information beforehand. It helped nurses to get to the point of things much faster and ask more specific questions about care needs and arrangements. However, ward nurses were not always prepared in practice, because other tasks were given more priority or because discharge information could not be accessed.

##### *Using different information systems*

The use of one patient information system facilitated the information

exchange between the ICU and wards nurses. On the contrary, the use of different and incompatible information systems between the departments often frustrated the handover. Nurses had to find workarounds to transfer information from one system to another. As a result, valuable time was often spent in manually organizing and transferring information with an increased risk for crucial information being missed.

##### *Performing handover with or without patients and relatives*

Handovers often took place in the presence of the patient who was sometimes accompanied by a relative. Sometimes nurses decided to perform the handover without the patient if they expected it to be too burdensome for the patient or in case privacy could not be guaranteed. Most nurses preferred to perform handovers at the presence of the patient, because this gave them the opportunity to check the verbal information with an actual observation. However, patients and relatives were usually not actively engaged in the conversation. Several nurses also argued that they could be involved more in handover conversations.

##### *Dealing with noise*

Contrary to the rather quiet ICU, nurses were regularly distracted while performing a handover in the ward by incoming phone calls, questions from colleagues and background noise (e.g., loud conversations, alarms, pagers going off). Some nurses tried to cope with this by searching for a quiet space in the ward, by addressing this to colleagues and by putting up a 'do not disturb' door sign while performing the handover.

#### *Episode 4: First 24 h in the ward*

##### *Attention to the impact of ICU stay*

Once on the ward, many patients really started to realize what has happened and became aware of their often vulnerable health situation. Some patients also had little recollection of their ICU stay. This evoked various emotions like frustration, fear or helplessness. Particularly those with an unplanned and prolonged ICU stay, also had difficulties with getting used to the new circumstances and routines in the ward (e.g., less frequent contact with nurses, more noise and different visiting rules). Attention to these emotions in the ward varied according to patients. Some found comfort in a listening ear and uplifting words from nurses and physicians (i.e., medical specialists, residents), whereas others experienced a more clinically-oriented attitude. Ward nurses mentioned that they tried to help patients adapt the new situation by being flexible with visiting hours, keeping an extra eye and by stimulating their self-reliance.

##### *Providing ICU aftercare*

All participating hospitals work with a consultative ICU nurse. This service is intended to provide various types of aftercare in the ward, ranging from help with specific procedures (e.g., tracheal suction) to providing mental support (e.g., by retelling what happened during ICU stay). Interviewees valued the visit from the consultative ICU nurse. However, there was ambiguity and uncertainty among ICU and ward nurses regarding its purpose and tasks. Consequently, this function was mainly used for technical care support in the ward. ICU nurses usually mentioned in handovers that they could be approached easily for additional questions or support, but the possibilities of the consultative ICU nurse were not routinely discussed.

## **Discussion**

Care transitions from the ICU to the ward are strongly influenced by the extent to which ICU and ward nurses, throughout the entire transfer process, recognize and respond to patient-specific needs: i.e., timely and adequate information, orientation, mental support and aftercare. This often involves actions that are not (or less clearly) protocolized. Our data shows that these actions are particularly valuable for patients who are

transferred after a prolonged ICU stay as they most often experience adjustment problems and stress following discharge.

The quality of transfers is also influenced by non-standardized actions of nurses, or the lack thereof, aimed to optimize the continuation of care in the ward. For example, visiting patients in the ICU prior to discharge, preparing handovers, ensuring a noise-free handover environment and being sensitive to the information exchange of patient's psychosocial care needs. In the literature, these every day, often subtle, actions are referred to as soft or non-technical skills [20,21]. These skills often result from nurse's instinctive response to the specific needs and the changing circumstances in which they provide care. Therefore, they are difficult to protocolize. Although these skills were observed in daily practice, they are not consistently utilized in the right circumstances by all nurses while having a significant impact on the quality of care and patient well-being. Therefore, they deserve our attention.

The findings also indicate that some established work agreements (Work-As-Imagined) do not align with what is needed in the everyday practice (Work-As-Done). For example, coordinating patient transfers through a liaison service may enhance the logistical care process but may simultaneously hinder the direct contact and care coordination between departments. Another example is the use of specific information systems and procedures that work well for care delivery in the individual ward but impede inter-departmental coordination of care. In addition, ambiguity about work agreements, for example regarding the role and deployment of the consultative ICU nurse, may result in valuable care being underutilized [22].

### Strengths and limitations

By using various methods of data collection in three hospitals we obtained a comprehensive and reliable picture of relevant everyday actions and mechanisms. By collecting data prospectively and shortly after patients were transferred, we minimized the likelihood of inaccurate event recollections. Consistent with the Safety II approach, our focus was on "the entire scope of work, rather than just failure" [10]. The findings serve as important reflective material for the ICU and wards to raise awareness among staff about what works well in practice alongside following procedures. Previous studies have demonstrated that collective reflection on care practice prompts healthcare providers to change their behavior [23,24]. Positive feedback and input from patient experiences are crucial in this regard [25,26].

The study also has several limitations. Despite purposive sampling, the vast majority of studied cases involved patient transfers to one type of ward. Consequently, the findings may be less representative for care transitions to other wards. Compared to ICU nurses, relatively few ward nurses were interviewed. Because of time constraints, we decided not to include physicians as part of our sample. It also proved challenging to prospectively examine the patient perspective. Many patients, upon leaving the ICU, were in a very vulnerable state and unable to recollect, write or articulate their experiences. Specific insights may therefore have been underemphasized as we could not follow up on them with an interview. Finally, observations may have been influenced by socially desirable behavior (Hawthorne effect).

### Implications

This research may inspire healthcare providers and policymakers to improve care processes by learning from everyday practice. The methodology used in this study can be a good alternative to other methods, such as the retrospective Functional Resonance Analysis Method (FRAM). However, similar to FRAM [27], this method was time-consuming and likely impractical for healthcare providers or quality officers in the clinic with little knowledge of qualitative research. Further adjustments are therefore necessary to translate the used method into a practical tool that can be regularly used for mapping and improving quality of care (e.g., by briefly reflecting together as nurses

on how things went after each handover).

Further research is needed to prove that this methodology demonstrably contributes to quality improvement. Learning and improving based on everyday practice often imply an enhancement of the use of soft skills whose added value strongly depend on local circumstances (patient characteristics, context, and timing). Therefore, it is challenging to objectively evaluate such improvement actions. Future research should focus on the development of proper evaluation frameworks and the collection of evidence using qualitative and quantitative methods [28].

Nevertheless, the study findings offer concrete reflection material and clues for improving care transitions of ICU patients. The outcomes of this research were followed-up in all three participating hospitals. For each hospital, a reflection session was organized and attended by ICU and ward nurses as well as patients. During these 2-hour sessions, participants discussed the recognizability of the findings, identified lessons and listed suggestions to improve the transition process. Table 4 provides an overview of improvement suggestions that were most often mentioned. It is up to healthcare providers and policymakers to locally assess where improvement potential lies and how improvement suggestions can best be translated into practice.

### Conclusions

This study contributes to a better understanding of Work-As-Done in the transfer of ICU patients to the ward. The quality of these care transitions is influenced by a set of subtle, non-protocolized skills of nurses. Established work agreements sometimes hinder what works best in practice. The insights that are gained by using a multicenter and multi-method approach are valuable for healthcare providers and policymakers who seek to enhance care transitions of ICU patients in their hospital.

### CRedit authorship contribution statement

**Gijs Hesselink:** Writing – original draft, Supervision, Project

**Table 4**

Overview of nursing improvement suggestions derived from three reflection meetings.

Preparation for ICU discharge	Inform patients in time (not hours before discharge) and multiple times about nearing discharge and upcoming care changes.
	Reduce or drop non-essential monitoring, catheters and arterial lines in the ICU in the final days prior discharge to help the patient acclimate to the ward setting. Make possible fears, questions and expectations regarding discharge discussable with an initial question (e.g., "How do you feel about discharge/ being transferred to the ward?"). Invite the ward nurse to the ICU prior (at least one day) discharge for patients with complex needs or a prolonged ICU stay.
Patient transfer to the ward	Perform transfers with one ICU and one ward nurse (hybrid form). Simulation (e.g. nurses experiencing the transfer from the patient's perspective).
Handover and installation in the ward	Share information regarding patient mobilization, ADL-assistance and psychosocial care needs. Discuss the various tasks of the consultative ICU nurse and share contact information.
First 24 h in the ward	Screen patients for emotional distress and provide support if needed (e.g., a listening ear, easily accessible consultative ICU nurse). Apply flexible visiting rules for patients who have been just transferred, especially for those with a prolonged ICU-stay. Pay sufficient attention to the recovery of patient's self-reliance to help them regain a sense of control.

administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Stan Bins:** Writing – review & editing, Writing – original draft, Investigation, Formal analysis, Data curation. **Ingrid Bonte:** Writing – review & editing, Resources, Methodology, Investigation. **Brigitte Westerhof:** Writing – review & editing, Resources, Methodology, Investigation. **Nande Hoek:** Writing – review & editing, Resources, Methodology, Investigation. **Janneke van Strien:** Writing – review & editing, Resources, Methodology, Investigation. **Miriam Moviat:** Writing – review & editing, Resources, Methodology, Investigation. **Marieke Zegers:** Writing – review & editing, Methodology, Funding acquisition, Formal analysis, Conceptualization.

### Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

### Acknowledgements

The authors thank all patients, relatives and healthcare professionals for their participation and those who helped facilitating this study.

### Funding Source

This study was funded by ZonMw, the Netherlands Organisation for Health Research and Development (number: 10130022210003). This organization was not involved in the design of the study nor with the data collection, analysis, interpretation or writing of the manuscript.

### Ethical Statement

The local medical ethical committee of the Radboud University Medical Center approved the study (number: 2022-16097), which was conducted in accordance with the Helsinki Declaration for the protection of human subjects.

### Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.iccn.2024.103797>.

### References

- [1] Lin F, Chaboyer W, Wallis M. A literature review of organisational, individual and teamwork factors contributing to the ICU discharge process. *Aust Crit Care* 2009; 22:29–43.
- [2] Oerlemans AJ, van Sluisveld N, van Leeuwen ES, Wollersheim H, Dekkers WJ, Zegers M. Ethical problems in intensive care unit admission and discharge decisions: a qualitative study among physicians and nurses in the Netherlands. *BMC Med Ethics* 2015;16:9.
- [3] Plotnikoff KM, Krewulak KD, Hernández L, Spence K, Foster N, Longmore S, et al. Patient discharge from intensive care: an updated scoping review to identify tools and practices to inform high-quality care. *Crit Care* 2021;25:438.
- [4] Coyle MA. Transfer anxiety: preparing to leave intensive care. *Intensive Crit Care Nurs* 2001;17:138–43.
- [5] Häggström M, Asplund K, Kristiansen L. Struggle with a gap between intensive care units and general wards. *Int J Qual Stud Health Well-Being* 2009;4:181–92.
- [6] Saeidi M, Safaei A, Sadat Z, Abbasi P, Sarcheshmeh MSM, Dehghani F, et al. Prevalence of Depression, Anxiety and Stress Among Patients Discharged from Critical Care Units. *J Crit Care Med* 2021;7:113–22.
- [7] Niven DJ, Bastos JF, Stelfox HT. Critical care transition programs and the risk of readmission or death after discharge from an ICU: a systematic review and meta-analysis. *Crit Care Med* 2014;42:179–87.
- [8] Institute of Medicine, Committee on Redesigning Health Insurance Performance Measures, Payment, and Performance Improvement Measures, Board on Health Care Services, 2006. *Performance Measurement: Accelerating Improvement*. National Academies Press, Washington, DC.
- [9] Bice T. ICU Readmissions: Good for Reflection on Performance But Not a Reflection of Quality. *Crit Care Med* 2016;44:1790–1.
- [10] Hollnagel, E., Wears, R.L., Braithwaite, J. 2015. *From Safety-I to Safety-II: A white paper. The Resilient Health care Net.*
- [11] van Sluisveld N, Hesselink G, van der Hoeven JG, Westert G, Wollersheim H, Zegers M. Improving clinical handover between intensive care unit and general ward professionals at intensive care unit discharge. *Intensive Care Med* 2015;41: 589–604.
- [12] Op 't Hoog SAJJ, Dautzenberg M, Eskes AM, Vermeulen H, Vloet LCM. The experiences and needs of relatives of intensive care unit patients during the transition from the intensive care unit to a general ward: A qualitative study. *Aust Crit Care* 2020;33:526–32.
- [13] Herling SF, Brix H, Andersen L, Jensen LD, Handesten R, Knudsen H, et al. Patient and spouses experiences with transition from intensive care unit to hospital ward - qualitative study. *Scand J Caring Sci* 2020;34:206–14.
- [14] O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. Standards for reporting qualitative research: a synthesis of recommendations. *Acad Med* 2014;89:1245–51.
- [15] Häggström M, Asplund K, Kristiansen L. How can nurses facilitate patient's transitions from intensive care?: A grounded theory of nursing. *Intensive Crit Care Nurs* 2012;28:224–33.
- [16] Hesselink G, Flink M, Olsson M, Barach P, Dudzik-Urbaniak E, Orrego C, et al. Are patients discharged with care? A qualitative study of perceptions and experiences of patients, family members and care providers. *BMJ Qual Saf* 2012;21(Suppl 1): 39–49.
- [17] Spradley JP. *Participant observation*. Harcourt Brace College Publishers; 1980.
- [18] Bogdan RC, Biklen SK. *Qualitative Research for Education: An Introduction to Theory and Methods*. Boston: Allyn and Bacon; 1982.
- [19] Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006; 3:77–101.
- [20] Ng LK. The perceived importance of soft (service) skills in nursing care: A research study. *Nurse Educ Today* 2020;85:104302.
- [21] Touloumakos AK. Expanded yet restricted: a mini review of the soft skills literature. *Front Psychol* 2020;11:2207.
- [22] Top WM, Schultz MJ, Jurrjens FH, Rommes JH, Spronk PE. Workload and main activities of consultative ICU nurses: long-term experience in a large teaching hospital in the Netherlands. *Acta Anaesthesiol Scand* 2006;50:1187–91.
- [23] Iedema R, Ball C, Daly B, Young J, Green T, Middleton PM, et al. Design and trial of a new ambulance-to-emergency department handover protocol: 'IMIST-AMBO'. *BMJ Qual Saf* 2012;21:627–33.
- [24] Carroll K, Iedema R, Kerridge R. Reshaping ICU ward round practices using video-reflexive ethnography. *Qual Health Res* 2008;18:380–90.
- [25] Jones AS, Isaac RE, Price KL, Plunkett AC. Impact of positive feedback on antimicrobial stewardship in a pediatric intensive care unit: a quality improvement project. *Pediatr Qual Saf* 2019;4.
- [26] Jones J, Bion J, Brown C, Willars J, Brookes O, Tarrant C, et al. Reflection in practice: How can patient experience feedback trigger staff reflection in hospital acute care settings? *Health Expect* 2020;23:396–404.
- [27] McGill A, McCloskey R, Smith D, Salehi V, Veitch B. Building a functional resonance analysis method model: practical guidance on qualitative data collection and analysis. *Int J Qual Methods* 2023;22.
- [28] Verhagen MJ, de Vos MS, Sujjan M, Hamming JF. The problem with making Safety-II work in healthcare. *BMJ Qual Saf* 2022;31:402–8.