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The Patient's Situation During Interhospital Intensive Care Unit-to-Unit Transfers: A
Hermeneutical Observational Study

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Abstract

Interhospital intensive care unit-to-unit transfers are an increasing phenomenon, earlier mainly studied from a patient safety perspective. Using data from video recordings and participant observations, the aim was to explore and interpret the observed nature of the patient's situation during interhospital intensive care unit-to-unit transfers. Data collection from eight transfers resulted in over 7 hours of video material and field notes. Using a hermeneutical approach, three themes emerged: being visible and invisible; being in a constantly changing space; and being a fettered body in constant motion. The patient's situation can be viewed as an involuntary journey, one where the patient exists in a constantly changing space drifting in and out of the health personnel's attention and where movements from the journey become part of the patient's body. Interhospital transfers of vulnerable patients emerge as a complex task, challenging the health personnel's ability to maintain a caring atmosphere around these patients.

Keywords

Critical care; Hermeneutics; Intensive care; Participant observation; Patient safety; Patient transfer; Qualitative studies; Transportation of patients; Video recording

Introduction

In recent years, internationally, the trend of intensive care unit-to-unit transfers outside hospitals—also called interhospital transfers—has increased (Blakeman & Branson, 2013; Swedish Intensive Care Registry, 2014). These transfers can be complex and challenging for health personnel and potentially hazardous for critically ill patients. This is because during transfers, intensive care is taking place in a mobile environment that moves across different high-tech contexts (Figure 1). While on the road, the accompanying health personnel are responsible for maintaining the same high-quality intensive care as in the intensive care unit (ICU). In addition, staffing and opportunities for care are often altered in these mobile environments (Adam & Cebollero, 2011).

The reasons behind interhospital transfers of intensive care patients vary, but one reason is when specialized intensive care is only accessible in a specific geographic area (Blakeman & Branson, 2013; Morton & Fontaine, 2013; Sethi & Subramanian, 2014). Another is organizational reasons, such as a lack of health personnel or intensive care facilities (Barratt, Harrison, Rowan, & Raine, 2012; Sethi & Subramanian, 2014; Swedish Intensive Care Registry, 2014). The centralization of specialized intensive care services combined with the existing lack of resources will likely increase the future demand for intensive care unit-to-unit transfers even further. Intensive care unit-to-unit transfers are often seen as a process consisting of several separate phases (Adam & Cebollero, 2011); these phases are transfer preparations, internal and external transfers, ambulance, and the handover procedure at the receiving ICU (Figure 1).

Figure 1. Example of the interhospital transfer process and its contexts and phases.

Sweden lacks national guidelines for interhospital intensive care unit-to-unit transfers. However, national recommendations state that the equipment used and accompanying health personnel's competence must be adapted to the needs of the patient and that changes in a patient's condition should be resolved immediately and adequately (Swedish Association for Anesthesia and Intensive Care and the Swedish Intensive Care Society - SFAI, 2015). Hence, local guidelines are usually created for each region or hospital. Although dedicated transfer teams are becoming more common internationally (Droogh, Smit, Absalom, Ligtenberg, & Zijlstra, 2015), these are rare in the Swedish intensive care context. During the transfer process, different health personnel may be involved (Droogh et al., 2015). In the Swedish context, a critical care registered nurse (CCRN) or a Certified Registered Nurse Anesthetist (CRNA) is responsible for the patient's care. In special circumstances, an anesthesiologist is involved during transport and accompanies the nurse. This differs from the international context, where physicians are more often involved in the actual transportation phase (van Lieshout et al., 2016). In addition, the ambulance is staffed with two nurses who are

responsible for the vehicle and for assisting in the transfer; however, they are not directly involved in the intensive care of the patient.

Previous research regarding intensive care unit-to-unit transfers is limited and has focused on patient safety (Iwashyna & Courey, 2011; Valentin & Schwebel, 2016). Some studies have shown a connection between the interhospital transfers of critically ill patients and adverse events (Droogh et al., 2012; Flabouris, Runciman, & Levings, 2006; Ligtenberg et al., 2005; van Lieshout et al., 2016). Transfers carried out because of a lack of either health personnel or intensive care facilities have been associated with a prolonged ICU stay, but here, the mortality rate has been shown to vary (Barratt et al., 2012; Droogh et al., 2015; Swedish Intensive Care Registry, 2014).

Patients in need of intensive care are considered a vulnerable group. Research from a patient perspective has described the patients' situation as being in an unknown and daunting health care environment, one where their existence is characterized as drifting between authentic and fictitious worlds and where the past and present are fused into a mixed temporality (Egerod et al., 2015; Svenningsen, Egerod, & Dreyer, 2016). A patient's memories from intensive care often carry traces of being in motion, both physically and in time and space (Storli, Lindseth, & Asplund, 2008; Svenningsen et al., 2016). Even after the intensive care experience, patients can struggle with the secondary effects of critical illness, such as memory problems, depression, and anxiety, for a long period of time (Karnatovskaia, Johnson, Benzo, & Gajic, 2015; Kean et al., 2017).

There is a significant lack of research focusing on the patient's situation when being transferred between ICUs. This argument is supported by Barratt et al. (2012) and Gustafsson,

Wennerholm, and Fridlund (2010), who ask for a broader and deeper understanding of the area, calling for further research addressing the patient's perspective. Focusing on the patient's situation, the current study addresses this gap, helping promote a caring atmosphere during transfers. In the context of the increasing demands for interhospital intensive care unit-to-unit transfers, such knowledge can be of fundamental importance to provide the best possible care for this vulnerable group of patients.

Aim

The aim of the current study was to explore and interpret the observed nature of the patient's situation during interhospital intensive care unit-to-unit transfers.

Method

Setting and participants

The current study was based on interhospital transfers into or out of two general ICUs at two different regional hospitals in Sweden. The ICUs were located within the same geographical region, which has a population of approximately 314,000. Between January 2016 and December 2017, the two units had 2,261 intensive care admissions, of which 350 became subject to interhospital intensive care unit-to-unit transfer into or out of these two ICUs. During data collection—which occurred between December 2016 and April 2017—the units had 443 admissions, of which 70 were transferred (Swedish Intensive Care Registry, 2018). The ICUs contain six and seven beds, respectively, with one to two beds in each patient room. Both ICUs provide general intensive care to adult patients who have medical and surgical conditions. The CCRN-to-patient ratio at both ICUs varies between 1:1 and 1:2, and the CCRN is assisted by one or two assistant nurses (AN), depending on the workload.

The health personnel involved in the different phases of the transfer process could consist of CCRNs, CRNAs, ANs, or physicians with a specialization in anesthesiology. In Sweden, registered nurses undergo 1 year of postgraduate qualification in intensive or anesthesia care to become a CCRN and CRNA. No dedicated transfer teams were available at the hospitals. All transfers were carried out in a normally staffed ambulance using a 48 cm wide conventional stretcher. The ambulances were staffed with two nurses not directly involved in the intensive care of the patient. During each transfer, a CCRN or CRNA was responsible for the patient's care. Occasionally, but not always, the patient was previously known to the CCRN or CRNA who was responsible for the transfer.

The criteria for participating in the study were adult patients undergoing interhospital intensive care unit-to-unit transfers by ambulance into or out of the two ICUs and where a CCRN or CRNA (from now on referred to as nurse) was responsible for the patient's care. All who were invited to participate consented to take part in the study. However, on two occasions, the decision to withdraw from the study was made after data collection had been completed. Consequently, these data were deleted. A purposeful sample with an emphasis on variation among the transfers and patient characteristics finally resulted in eight transfers with seven men and one woman, age between 63–81 years. The transfer characteristics are shown in Table 1.

Table 1

Transfer characteristics, phases included in data collection, and type of data collected.

Transfer	Transfer phases included in data collection and type of data collected		
	Transfer preparation to internal and external transfer	Ambulance transport	Internal and external transfer to handover procedure
#1 – Specialized ICU to general ICU because of care needs. Aftercare for thoracic surgery, congestive heart failure. Spontaneous breathing, no sedation.			Video and field notes
#2 – Specialized ICU to general ICU because of care needs. Aftercare for thoracic surgery, cardiac arrest and therapeutic hypothermia, sepsis. Ventilator dependent, sedated with propofol, ongoing norepinephrine.			Video and field notes
#3 – General ICU to specialized ICU because of care needs. Complications after thoracic surgery, sepsis. Ventilator dependent, sedated with propofol and fentanyl, ongoing norepinephrine.	Video and field notes	Video and field notes	Field notes
#4 – General ICU to general ICU because of care needs. Need for intensive care lung consultation. Ventilator dependent, no sedation.	Video and field notes	Video and field notes	Video and field notes
#5 – Specialized ICU to general ICU because of care needs. Aftercare for thoracic surgery. Ventilator dependent, ongoing weaning, sedated with propofol.	Field notes	Video and field notes	Video and field notes
#6 – General ICU to general ICU because of a lack of resources. Respiratory insufficiency, exacerbation chronic obstructive pulmonary disease. Intermittently ventilator dependent with noninvasive ventilation. Intermittently sedated with propofol.	Video and field notes	Video and field notes	Video and field notes
#7 – Specialized ICU to general ICU because of care needs. Aftercare for thoracic surgery. Ventilator dependent, sedated with propofol, ongoing norepinephrine and milrinone.	Field notes	Video and field notes	Video and field notes
#8 – Specialized ICU to general ICU because of care needs. After care for multiple trauma. Ventilator dependent, sedated with propofol and fentanyl, ongoing norepinephrine.			Video and field notes

Design

The current study is based on a naturalistic observational approach (Angrosino, 2007); it was carried out in a natural setting represented by intensive care and pre-hospital contexts. Data collection consisted of video recordings and participant observations throughout the transfer process. The analysis was inductive and based on a hermeneutic approach (Gadamer, 1994). Gadamer (1994) used the idea of looking at theater play and art work when explaining the

process of interpretation. Thus, an observation can be seen as a play containing different scenes that speak with meaningful content and take place in front of the observer. This philosophical idea has been the foundation of the current study's observations and analysis. This approach has earlier been used in scientific observations (Eriksson, Lindahl, & Bergbom, 2010) and takes into account the dynamic complexities found within high-tech environments. In the present study, which comprised severe ill patients, most of the participants were cognitively impaired, and we considered patients lived experiences almost impossible to gather and explore in this situation.

Observational research

Through participant observation, researchers can create knowledge and understanding of others and their situations. According to Dwyer and Buckle (2009), the ideal is to seek a degree of participation that provides the best possible data while also providing an optimal balance between participation and analytical distance. In the current study, the approach was to be in the space between and move between the roles of the participant as observer and observer as participant, depending on the clinical situation (Dwyer & Buckle, 2009).

Video recordings have the potential to accurately capture and preserve reality in situations as they happen, providing rich data that are suitable for a variety of analytical methods (Latvala, Vuokila-Oikkonen, & Janhonen, 2000). According to Angrosino (2007), video recordings give an opportunity to relive the field experience and distinguish elusive nuances. Video recordings, therefore, have the potential to eliminate some of the challenges associated with observation research (Asan & Montague, 2014). As a data collection method, it is particularly suitable in complex nursing environments, such as intensive care (Latvala et al., 2000).

Data collection

When eligible transfers appeared in the two ICUs, a nurse received approval from the patient's family to contact Karlsson. In some cases, organizational priorities or Karlsson's unavailability to conduct data collection prevented an eligible transfer from being included in the study. The purposeful sampling used here meant a strategy to actively, and as far as possible, include different types of transfers, such as transfers because of both increased and reduced care needs and lack of resources. After consent was obtained, video recording and participant observation were conducted for each interhospital transfer process. All data collection was conducted by Karlsson. In one of the ICUs, Karlsson was previously known as a nurse to some of the health personnel. For video recordings, a GoPro Hero 5 Black was used. Accessories in the form of a tube mount and flex clamp were used to mount the camera in a suitable position on telescopic intravenous poles or tubes on the stretcher. During the specific route between the ICU and the ambulance area, the camera was primarily used in a hand-held position to optimize recording when on the move (Haidet, Tate, Divirgilio-Thomas, Kolanowski, & Happ, 2009).

When possible, data collection was carried out during the entire transfer process, from the time of patient preparation until handover at the destination ICU. This required Karlsson to follow the patient throughout the transfer, performing video recording and participant observation in the ICU, in hospital corridors, and in the ambulance care area. This meant that in some cases, data collection began in one ICU and ended in another. When this was not possible because of organizational issues or because of the patient's situation, data were collected during specific phases within the transfer process, such as patient preparation or handover. The transfer phases included in the data collection and type of data collected are shown in Table 1.

Observations were conducted in the clinical work associated with the transfers, with Karlsson wearing the same uniform as the nurses. This involved assisting in moving the patient between the bed and ambulance stretcher, holding or straightening out monitoring leads or invasive tubes or lines, and repositioning infusion pumps. The researcher's participation did not involve any decision making regarding medical treatment or care, or any priorities or concerns regarding how specific situations or problems would be solved. During observation sessions, the hermeneutical approach was characterized by openness, reflection, and an interpretative attitude. To keep the experience close to the transfer events, short field notes were written, and more detailed and rich descriptions were developed immediately after each observation. The observations lasted between 26 minutes to 1 hour and 37 minutes.

After each data collection phase, the video file was exported to a password-protected and encrypted external hard drive and then deleted from the camera's memory card. Using GoPro Studio (version 2.5) for video editing, each video file was then prepared for analysis and imported to MAXQDA 12 software (VERBI-Software, 2015) to manage the analysis. Field notes were attached to each video file within MAXQDA 12 to be a part of the analysis. Consequently, the video recordings and field notes were analyzed as a whole. Finally, data collection resulted in eight separate video files with field notes, one for each included transfer process, totaling 7 hours and 24 minutes of video material.

Data analysis

Analysis was conducted using a hermeneutical approach inspired by Gadamer (1994) and thus consisted of interpretations made to reach a deep understanding of the observed nature of the patient's situation. According to Gadamer (1994), prejudices are prerequisites for

understanding and hence can act as a base for interpretation. In the present study, Karlsson's prejudices include several years of experience as a nurse and as a teacher in intensive care nursing. This also applies to Eriksson, Lindahl and Fridh, who are well experienced with intensive care research and with using various qualitative methodologies. During both data collection and analysis, Karlsson also made notes about how the understanding and prejudices developed over time. We followed an open-minded and reflective approach that forced us to proceed slowly during the analysis and in relation to our understanding.

The analysis began with multiple viewings of the video and field note material, which here were regarded as a play containing a variety of scenes. This play spoke of meaningful content and took place in front of the researcher, who took the role of audience. The first analysis phase aimed to get to know the material and gain an initial sense of the whole. Moving between closeness and distance to the material scenes with content that appeared as striking or aroused interest evolved into initial expressions of meaning and understanding. This part of the analysis was conducted by all authors, both individually and together, where the initial meaning was further developed through discussion. The expressions of meaning were described in written form and attached to each specific scene within MAXQDA 12 (VERBI-Software, 2015). To structure the material in smaller parts, each video file was then divided according to the different phases of the transfer process. With support from the initial expressions of meaning and understanding of the whole, each set of transfer phases was analyzed with an inductive interpretative approach. This process generated a variety of short scenes expressing meanings that were extracted and documented as text units loaded with meaning and attached in connection to the related scene in MAXQDA 12. This phase in the analysis was mainly conducted by Karlsson.

This process was followed by a shift in attention to the different emerging meanings in relation to each video of the transfer process. Again, all the authors were involved. This meant moving between the parts and the whole with an open-minded approach and between the known and unfamiliar (otherness) to search for meaning. The interpreted meanings were further developed and refined by putting them in relation to each other and the data. Finally, all the interpreted meanings were placed in relation to each other and the material as a whole. Patterns emerged, making it possible to abstract and construct three themes, each representing an interpreted understanding of the patient's situation. A negotiated interpretation was reached through discussions among the authors. We reflected on what we saw, what the scenes spoke about, and how this could relate to our interpretations and understanding, which Gadamer (1994) described as a fusion of horizons. We agreed that the themes represented a trustworthy understanding.

Ethical considerations

The present study was conducted according to the Declaration of Helsinki (World Medical Association, 2013) and approved by the Regional Ethical Review Board in Gothenburg (Dnr 507-16). The heads of the involved settings gave written permission for the study.

Everyone involved in the transfer process was subject to ethical thoughtfulness, which is especially important in the context of participant observation in a complex and constantly changing health care environment (Dahlke, Hall, & Phinney, 2015). The current study was preceded by rigorous and multiple types of information both verbally and in writing at the involved clinics. The nurse responsible for the transfer gave written consent for data collection. Other health personnel temporarily or shortly involved in the transfer verbally gave consent, or otherwise, they were offered the option not to participate in the transfer process.

So as not to delay or hinder the transfer process, this verbal consent strategy was considered the most suitable and ethically applicable. The patients were unable to give their informed consent because of critical illness and sedation. In these situations, consultation for participation was sought from the patient's family. This is in accordance with Swedish law (Government Offices of Sweden, 2018). The family was informed both verbally and in writing and gave their written approval for the patient to participate in the study. With respect to the patient's condition, the patient's own consent was sought as soon as possible. The participating patients were all in a vulnerable and dependent situation because of their critical condition and ICU stay. Karlsson had mental preparedness to discontinue data collection during the transfer if ethically questionable situations were to arise or if patient safety was threatened. Video recording and participant observations were carried out in a respectful way to maintain integrity and dignity and to avoid harm. To safeguard patient integrity, this also meant excluding the patient's face from video recordings, which was a requirement from the Regional Ethical Review Board to obtain permission to conduct the study. Directly after each data collection, the material was visually examined and, if necessary, edited to protect patient integrity by ensuring that the patient's face did not appear and that audio tracks with personal data did not exist.

Findings

Three themes emerged from the analysis: (1) *being visible and invisible*; (2) *being in a constantly changing space*; and (3) *being a fettered body in constant motion*. The interpreted meanings within the themes are presented below and illustrated using six short scenes (scenes 1-6 in italics) collected from the observational data, namely the video recordings and field notes.

Being visible and invisible

During certain phases of the transfer process, the patient was captured in a situation of being metaphorically either visible or invisible. This was characterized by either being seen as a human being or not being seen and thereby risked to be objectified by the health personnel.

Scene 1

In the following scene, which is situated in an ICU room, six health personnel have just moved the patient to the ambulance stretcher. 'So, now you're on a stretcher, it may feel a bit different', someone says. The patient, who is ventilator dependent and sedated, gives no visible response to this information. Preparation continues, and a nurse first places the intra-arterial pressure bag on the patient's chest and then an infusion pump on the patient's knee. This equipment remains placed on the patient's body while the nurse switches the patient to the transport ventilator. Eventually, someone hangs the pressure bag and attaches the infusion pump in the right place on the stretcher, freeing the patient's body from the equipment. Just when all the preparations have been completed, a nurse places the patient chart, two extra syringes with medications, and a jacket over the patient's lower body. The journey then proceeds into a corridor, going out of the ICU to the waiting ambulance.

(Transfer 3, Patient 3)

During the transfer process, the intensity of the work was high, and various necessary tasks performed by the health personnel—primarily related to maintaining patient safety—were intensively in the foreground, obscuring the view of the patient. Being transferred meant that the patient's body was at risk of being used as a working surface and a place to rest various medical equipment. In this way, the patient's body became free for the health personnel to use

for their own purposes, that is, as an extra shelf or desk. When the body was used in such a way, the patient became objectified and invisible.

Scene 2

This scene took place outside the ICU in corridors on the way to the waiting ambulance. The patient, moderately sedated, travels through a narrow corridor together with the three nurses. Present are several loud and intrusive sounds, such as air flowing through the ventilator circuit, alarms from the patient monitor, and the sound of vibrations from the ambulance stretcher. Everything forms an almost impenetrable sphere around the patient. During the journey, the group encounters two persons in the corridor whose eyes are drawn to and follow the patient as we pass them. Suddenly, the transfer stops. The nurse has noted a rhythmic movement in the patient's left hand. The nurses' attention is directed to the patient, and their eyes meet when trying to understand what the patient wants. The effort is explicit; the patient breathes against the ventilator, and new alarms are triggered. Finally, it is clear that the patient is freezing, whereupon the nurse provides two extra blankets and sweeps them around the patient. (Transfer 4, Patient 4)

During the transfer, when it came to the nurse's attention, the patient existed either in front of or behind the technology. Both in terms of visual impairment and its noise, the technology dominated the nurse's attention and could obscure the patient's existence, thereby strengthening the patient being invisible for the nurse. When the patient's needs were noted and met by the nurse, this meant coming into sight and appearing in front of the technology, thereby being temporarily visible as a human being. Needs that were given attention could have varied, such as physical comfort, information about what happened or protecting the patient's integrity. In these situations, it emerged how the patient's needs now were valued

and favored above the technology. Many times, it was as though time stood still when the patient ended up within the nurse's field of attention, showing how the patient's existence suddenly became visible and how the patient was regarded as a subject. Being transferred through public places such as corridors also meant being visible to the staring eyes of others and thereby being involuntarily exposed and observed. Here, the patient's situation could also be temporarily perceived as simultaneously being metaphorically visible as objects by others but invisible as a subject by the nurse.

Being in a constantly changing space

This theme captures the patient's situation as a journey characterized by being in a constantly changing space throughout the transfer process.

Scene 3

The following scene unfolds in the ICU room during transfer preparation. The ambulance stretcher is ready at the patient's bedside. Five members of the health personnel gather around the wide ICU bed, surround the patient, and start preparing to move the patient to the stretcher. They are close, forming a wall around the bed. Hands grip the sheet near the patient, and the nurse at the head uses one hand to fix the endotracheal tube and the other hand to support the patient's head during the movement. In two distinctly defined steps, the patient is being moved to the stretcher, and the body occupies its entire surface. The stretchers metal frame for attaching the transport ventilator and infusion pumps creates a wall on the patient's right side. Infusion bags, infusion pumps, and other medical devices are attached to the stretcher obliquely above the patient and further reduce the patient's physical space. (Transfer 3, Patient 3)

As the patient was prepared for the journey, it became evident that certain activities affected the patient's space. Being placed on the narrow ambulance stretcher meant being surrounded and moved into a very limited space. Even though the health personnel distanced themselves when the move to the stretcher was completed, the patient remained surrounded, though now by the stretcher itself. At the same time, technology sneaked in closer to the body and rose like an impenetrable wall, further intruding and limiting the patient's physical space. The patient was found to be in a space that had become even smaller. Being a patient during the preparatory phase meant existing in a dwindling space.

Scene 4

This next scene took place in the hospital's corridors and ambulance. The patient travels out of the intensive care unit through large and long corridors. The road goes through a narrow elevator down to the waiting ambulance. Inside the elevator, the bodies of the accompanying nurses stand close around the stretcher to find space. The group gets into a big garage, and the patient is carefully rolled into the ambulance. The walls and ceiling of the ambulance surround the patient and create a very limited space. Once again, the nurses must ensure secure fixation of a variety of equipment, and they are constantly leaning over the patient to manage their work. (Transfer 5, Patient 3)

To be transferred meant being in a physical space that varied throughout the journey. When being transferred into the ambulance, the dwindling space became more apparent: the walls and ceiling surrounded the body and intruded on the patient's space and field of view. Being in the ambulance's confined space and sharing it with others meant being exposed to further intrusion. Arriving at the new hospital meant being in a gradually widening physical space. The narrow space of the ambulance was now replaced by new large corridors, the new ICU

room and finally leaving the narrow stretcher for the wide ICU bed. Although episodes of dwindling spaces were observed even during this phase of handover, the patient's situation consisted of being in motion, moving toward a larger physical space.

Being a fettered body in constant motion

During transfer, the patient's situation was characterized as being fettered while at the same time being in constant motion.

Scene 5

In the following scene, inside the ambulance, the patient on the stretcher is strapped with safety belts over the chest and legs. Arms and legs are barely visible. To prevent the arms from falling outside the stretcher, the patient is wrapped inside sheets and blankets. Technology in the form of invasive lines, cables for monitoring, the ventilator circuit, and infusion lines are attached to the patient's body and run on to various equipment attached to the stretcher and ambulance. (Transfer 7, Patient 6)

Being transferred meant that the patient's body became fixed to the stretcher in a variety of ways, which were all done for of safety reasons. Because the stretcher is smaller than an ICU bed, the patient became wrapped, like being inside a cocoon that attached the body to the stretcher and significantly reduced the possibility for movement. The situation of lying on the stretcher during the transfer thus meant being constrained. At the same time, various forms of technology, much like chains, attached the patient to the stretcher. This further contributed to the body being in an attached and fixed state.

Scene 6

This scene unfolds during ambulance transport. Now, the ambulance travels at a high speed, and movements created from the road and the vehicle are transferred into the patient's body, setting the body in constant motion. Even if the body is fettered, it has not been still but in constant motion since the journey out of the ICU began 53 minutes earlier. (Transfer 7, Patient 6)

When being moved from the ICU bed to the ambulance stretcher, a movement in the patient's body became apparent. Being moved out of the ICU to the waiting ambulance meant that movements from the journey became part of the patient's body, setting the body in motion. The fettered body was put in motion by the position of the stretcher and the vibrations that occurred during the transfer. Inside the ambulance and during transport, the movements became even more pronounced, meaning that the patient's body constantly moved around in all directions. Being transferred meant being in a situation that was never still and the patient became a fettered body in constant motion.

Discussion

To our knowledge, the current study is the first to use observations and video recordings to explore the patient's situation during the entire interhospital transfer process. One could argue that intensive care unit-to-unit transfers nowadays are relatively safe considering the low mortality rates and fewer number of adverse events (Broman, Holzgraefe, Palmér, & Frenckner, 2015; Janz et al., 2017; Lyphout et al., 2018). Yet based on our results, we argue that interhospital transfers of this vulnerable group of patients may have a variety of consequences for the patient.

When an event such as a transfer needs to be efficiently conducted, there is the risk for dehumanization (Galvin & Todres, 2013). For safety reasons, transfers demand efficiency to minimize patients' time outside of the ICU. Our findings showed that maintaining patient safety and the intensity required during transfers stood in the foreground and obscured the health personnel's view of the patient. Being in a constantly changing space and entering a widening and public sphere often meant simultaneously being metaphorically invisible for the health personnel and involuntarily visible and exposed to the staring eyes of others. Objectification also took other expressions, such as when the body was cluttered with medical equipment or when technology dominated and obscured the patient's existence. We argue that this can mean that the patient is not seen from a holistic perspective, thus risking objectification. In caring, there is always an emphasis on the patient, the human being who is a subject and an indivisible entity. If the health personnel are unable to see the patient's situation in a reflective and sensitive way, the patient risks being cared for as an object, and dehumanizing care may occur (Arman, Ranheim, Rydenlund, Rytterstrom, & Rehnsfeldt, 2015). Bodily exposure and not being seen as a person can violate a patient's dignity (Lykkegaard & Delmar, 2015; Moen & Naden, 2015). Hawley and Jensen (2007) argued that health personnel can make a humanizing difference by avoiding unnecessary bodily exposure and reducing the audience around the patient. Protecting patient dignity also requires the ability to shift attention toward the patient and to use technology in a more sensible and worthy way. Otherwise, technology poses a risk for obstructing the health personnel's view of the patient and overshadows the human being, leading to objectification and dehumanization (O'Keefe-McCarthy, 2009; Wassenaar, Schouten, & Schoonhoven, 2014). Modern intensive care must focus on developing and using equipment and technology specifically intended for transfers. To improve the patient's situation, this kind of equipment should be developed through research considering the perspectives of both the health personnel and the patient.

However, McLean, Coombs, and Gobbi (2016) argued that effective and safe critical care requires a focused task-orientated and sometimes impersonal way of thinking. Responding to human needs in such situations, that is, when efficiency and technology are in the foreground, becomes more complicated (Galvin & Todres, 2013). Indeed, interhospital transfers would not be possible without skilled accompanying health personnel and their use of medical technology. Our findings showed that physical comfort and compassionate care still can be favored in some ways over technology, despite the intensity and extraordinary circumstances during the transfer process. However, transfers are known to be stressful for nurses. Being involved with unfamiliar colleagues and handling unfamiliar medical equipment can be stressful and burdensome (Gustafsson et al., 2010; Ringdal, Chaboyer, & Warrén Stomberg, 2016). As a result, their focus can be directed toward the equipment and away from the patient (Tunlind, Granstrom, & Engstrom, 2015). We argue that to carry such a major responsibility in a high-technology mobile setting where patient safety is the primary goal requires further research and development. Future improvement may involve the use of simulation in an authentic transfer environment to train how one should act among unfamiliar technology and colleagues. Increasing the skills and sense of security may help health personnel direct their focus and facilitate the patient in becoming more visible.

Our findings revealed that the patient's situation consisted of a variety of movements, such as traveling on the stretcher in corridors and outside hospitals in the ambulance, which were transmitted to the body, creating an existence of never being still. Any alteration in the body, such as critical illness and sedation, changes one's access to the world (Merleau-Ponty, 2002). Without any opportunity to choose, the patient travels through different environments where intense motions, constraints, and changing spaces involuntarily become available to the body and invade it. Being in constant motion while fettered on a journey through changing spaces

may create various bodily sensations. These sensations can become embodied but at the same time lack sense or can be transformed in terms of content and time (Merleau-Ponty, 2002). Previous studies have shown that transfers can have a negative impact on the intensive care patient in the form of sensations of motion, travels, and moving about, which could create unpleasant and frightening memories (Storli et al., 2008; Svenningsen et al., 2016; Uhrenfeldt et al., 2013). These memories—delusional or real—may persist a long time after the ICU stay (Palesjö, Nordgren, & Asp, 2015; Svenningsen et al., 2016). According to Palesjö et al. (2015), patients might need help to reflect on such memories together with nurses from the ICU, who also are capable of answering these experiences. Recently, Jonasdottir, Jones, Sigurdsson, and Jonsdottir (2018) found that structured nurse-led follow-up did not improve patients' health status compared with usual care; they argued for even more extensive tailoring of individual needs during an ICU follow-up because of the heterogeneous group of patients. We argue that an increased awareness of the patient's situation during transfers may help nurses meet such specific memories during follow-up visits, and this is an area for future research in relation to ICU follow-up. We claim this is a prerequisite in offering more fine-tuned nursing care. Interhospital transfers of vulnerable patients are a complex task that challenges the involved health personnel's ability to maintain dignity and a caring atmosphere.

Methodological considerations and limitations

Video recording and field notes can be recommended to capture situations in technologically complex environments that otherwise can be lost because of, for example, observer fatigue or subjectivity (Bailliard, 2015; Haidet et al., 2009). In the current study, the data collection captured rich and nuanced data reflecting the patient's situation during transfers. The method of handling the data by attaching field notes to each video file and scene to which they

belonged, and thereafter attaching expressions of meaning in written form to each specific scene, proved beneficial. This made it possible to view the complex data as a whole and to attach expressions of meaning in written form to each specific scene during the analysis. This methodological workflow contributed to the robustness and rigor of the analysis and the results. However, if we could have had the ability to check our interpretations of the situation with the patient, this may have further strengthened our findings because it is impossible to know if the patient perceived the situation in this way. The video material provided an opportunity for multiple viewings of the research material and to re-examine the analysis and results numerous times. This facilitated discussions toward a consensus, enabling a new and deep understanding of the patient's situation during the transfer process.

Observation and video recordings may affect participants' behavior and could have influenced the phenomena under study (Latvala et al., 2000). It is impossible to completely determine if, how, or what influence data collection had on the situation. Our view is that the involved health personnel acted in a natural way. One possible reason for this may be that the health personnel's behavior was not the primary focus. When using video recordings, technical problems, such as poor light or shaking when events or participants are mobile, may occur (Latvala et al., 2000). In the current study, no such technical issues occurred, probably because several testing sessions within the real ICU context were carried out before the start of the study.

In the current study, the participants consisted of seven men and one woman, all of whom were recruited from two ICUs in the same region. The age of the participants can be regarded as high, but corresponds to the age distribution within Swedish intensive care (Swedish Intensive Care Registry, 2018). The requirement to not film the patient's face along with very

sparse observable facial expressions because of critical illness and sedation can be regarded as a limitation. Despite this, the data collection resulted in an extensive volume of rich data, which we considered as thick descriptions and manageable for a solid analysis (Silverman, 2015). Because of the absence of transfer guidelines, various local routines for transfers exist. This could limit the transferability of the findings. Despite this, our findings can render new insights for understanding the phenomena.

Conclusion

By using video recording and participant observation, the current study offers unique, new, and deep insights into how the patient's situation during intensive care unit-to-unit transfers can present itself. Our findings highlight the risk for objectification and that the patient as a human risks drifting in and out of attention, depending on the accompanying health personnel's focus. To exist in constant motion while fettered may create various incomprehensible bodily sensations that do not have meaning and that could ultimately lead to unpleasant and frightening memories. To transfer highly vulnerable patients safely between ICUs in a gentle and dignified way emerges as an extraordinary complex task for those involved. Studies focusing on ICU patients' and health personnel's subjective experiences regarding interhospital transfers between ICUs are another important area of research. Despite methodological and ethical difficulties, we should, by means of creative approaches, adopt the challenge of capturing the patient's lived experiences of this phenomenon. A design where the patient engages in a research interview that includes reflection on the video recordings from the patient's own transfer could be fruitful and help the patient to share lived experiences more easily. The consequences for patients' future well-being in relation to transfers should also be studied. A challenge for future research is to examine the significance of invisibility and objectification in relation to patient safety.

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