

RESEARCH ARTICLE

Intensive care professionals' perceptions of the quality of counselling provided in the ICU: A cross-sectional study

Minna Vanhanen PhDc, MHSc, RN, Senior Lecturer^{1,2}   |

Merja Meriläinen RN, PhD, Chief Nursing Officer^{3,4} |

Tero Ala-Kokko MD, PhD, Chief of ICU, Professor^{4,5} |

Helvi Kyngäs RN, PhD, Professor, Part-time Nursing Chief Officer^{1,6} |

Pirjo Kaakinen PhD, Adjunct Professor of Nursing Science^{1,7} 

¹Research Unit of Nursing Science and Health Management, University of Oulu, Oulu, Finland

²Oulu University of Applied Sciences, Oulu, Finland

³Oulu University Hospital, Medical Research Center Oulu, Oulu, Finland

⁴Oulu University Hospital, Oulu, Finland

⁵Research Group of Surgery, Anesthesiology and Intensive Care Medicine, University of Oulu and Medical Research Center (MRC), Oulu University Hospital, Oulu, Finland

⁶Northern Ostrobothnia Hospital District, Oulu, Finland

⁷Medical Research Centre, Oulu, Finland

Correspondence

Minna Vanhanen, Research Unit of Nursing Science and Health Management, University of Oulu, P.O Box 5000, FI-90014 Oulu, Finland.

Email: minna.vanhanen@oamk.fi

Abstract

Background: Intensive care professionals (ICPs) have a key role in counselling adult intensive care unit (ICU) patients and their family members. The counselling provided to ICU patients and their family members can be described based on the content, implementation, benefits, and resources.

Aims: The study had two specific aims: first, to assess ICPs' perceptions of the quality of counselling provided to ICU patients and their family members; and second, to explore which factors ICPs feel is associated with the quality of counselling.

Design and Methods: A cross-sectional survey of ICPs working in adult ICUs in Finnish university hospitals. Data were collected using the Counselling Quality Instrument. The data were analysed by descriptive statistics and chi-square and *t*-test statistical methods.

Results: A total of 182 ICPs returned the questionnaire, reflecting a response rate of 18.6%. Most of the respondents were nurses (97%) and the mean age was 42 years. The ICPs reported having adequate time for patient- (77%) and family-centered (73%) counselling, but only 47% felt that their units had the appropriate facilities. There were statistically significant differences between patient- and family-centered counselling and the ICP's self-assessed competence ($p < .001$), goal-oriented counselling ($p < .001$), and atmosphere during counselling ($p < .001$). ICPs' attitudes towards counselling impacted how these professionals assessed patients' and family members' confidence, along with patient recovery ($p < .001$).

Conclusions: This study confirms that the provision of high-quality counselling has beneficial effects; however, it also indicates that there is a need for training that considers each ICP's professional experience and patient- and family-centered factors, which may differ from one another.

Relevance to Clinical Practice: According to ICPs, the quality of counselling can be enhanced by empowering ICPs to improve counselling and providing appropriate ICU facilities for counselling, such as a private room for family members.

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1 | INTRODUCTION

Information provided in the adult intensive care unit (ICU) setting falls under patient and family member counselling, which is a broad term for the education, guidance, tips, and information that patients and their family members receive from intensive care professionals (ICPs).^{1,2} In this study, counselling concerns the mutual interactions between patients and family members and ICPs, whereas information only concerns relevant materials and explanations received by patients from ICPs. The counselling provided to adult ICU patients and their family members by ICPs can be described based on the content, implementation, benefits and resources.¹⁻⁴

ICU patients and their family members need good quality counselling to both adapt to the distressing situation during intensive care and recover from it. Provided counselling is based on the patients' and family members' needs and, as such, the ICPs' background and competence are key factors in determining the quality of provided counselling. For example, well-trained ICPs will know that goal-oriented counselling provides a good start to counselling. Furthermore, successful counselling requires active interaction between the ICU patients, their family members and ICPs.³⁻⁵

2 | BACKGROUND

ICPs need to find ways to inform and interact with both intubated and heavily sedated patients.⁶⁻⁹ Approaches for interacting with ICU patients – which should always be based on individual patient needs – include following head movements (nodding and shaking), mouthing words, writing, and pointing to letters or pictures.¹⁰⁻¹⁴ Previous research has found that ICU patients want to interact with ICPs and actively participate in medical discussions.^{4,5,15,16} However, it may be challenging for an ICP to interact with each of their patients on a daily basis; this is because ICPs have several short periods during which they can interact with patients. For instance, a patient may interact with 11–25 people, resulting in up to 288 interactive sessions, over a 24-h period.⁹ It is known that interactions with ICPs influence both patients' well-being during mechanical ventilation and their satisfaction with care.^{7,17}

An ICU patient's social environment includes not only ICPs, but also family members.⁹ Thus, both ICU patients and their family members should receive relevant counselling, and the specific goals of a care plan should be created in consultation with the patient, their family and other care team members.^{11,16,18-20} This type of approach is termed family-centered care, and it was designed to respect and respond to individual family member needs and values.²¹ The quality of counselling is based on how well it meets an individual's needs, provides financial, emotional, practical, and spiritual support, as well as helps patients and their family members cope with the intensive care environment and everyday responsibilities.²² However, ICPs are not always aware that the families of intensive care patients require

What is known about this topic

- ICU patients and their family members need good quality counselling to both adapt to the distressing situation during intensive care and recover from it.
- Counselling provision is based on interaction and relationship-building skills

What this paper adds

- ICPs do not have enough knowledge of how to provide high-quality counselling in the ICU setting
- ICPs' attitudes towards counselling are associated with the perceived confidence of patients and family members
- Patient-centered counselling in the ICU is associated with ICP competence, goal-oriented counselling and the atmosphere during counselling provision.
- The perceived quality of family-centered counselling in the ICU is influenced by the implementation and time for the provision of counselling.

practical counselling to adjust to new circumstances and manage ICU-related stress.²³ Moreover, patients need family support, a sense of belonging and motivation as they transition towards increased independence after an ICU stay.²⁴

Family-centered care recognizes that family members are crucial to a patient's recovery, with family members' presence and involvement key elements of family-centered care.²¹ Involvement can be achieved through the provision of family-centered counselling; there is evidence that family members should be included in decision-making processes and supplied with honest, consistent, and understandable counselling.²⁵⁻²⁸ Furthermore, honestly answering questions is important because this can influence family members' participation in care and increase their awareness of the patient's expected outcomes.^{29,30} Family-centered care also covers the responsibilities of ICPs, that is, supporting ICU patients and their families²¹ and interacting with family members to provide social support and alleviate stress during intensive care visits.^{31,32} Hence, it is important that ICPs understand the perspectives of both ICU patients and their family members; more specifically, ICPs should understand that being admitted to the ICU is associated with extensive uncertainty.³³

3 | AIMS OF THE STUDY

The aim of the study was two-fold: first, to assess ICPs' perceptions of the quality of counselling provided to ICU patients and their family members; and secondly, to explore which factors ICPs feel influence the quality of counselling in the ICU.

The following specific research questions were addressed:

1. What is the quality of counselling provided to adult ICU patients and their family members according to ICPs' perceptions?
2. Which background variables do ICPs feel to be associated with the quality of counselling provided in adult intensive care?

4 | DESIGN AND METHODS

4.1 | Setting and sample

This cross-sectional and exploratory study employed a quantitative approach. The research was based on the ICPs' (registered nurses, practical nurses, physicians, physiotherapists, clinical nurse specialists) perceptions. A principal component analysis (PCA) with varimax rotation was conducted to analyse the relationships among multiple variables.³⁴ Sum variables were created based on the results of factor analysis.

4.2 | Data collection

Data were collected using the Counselling Quality Instrument (CQI³⁵©), which was developed to determine the quality of counselling across four main areas.³⁵ Previous studies have determined that the CQI shows adequate internal consistency and structural validity.^{3,4,36} Respondents score each item using a four-point Likert scale (4 = totally agree, 1 = totally disagree). An additional item, which was scored on a five-point Likert scale (1 = poor – 5 = excellent), asked the respondents to evaluate the overall quality of the provided counselling. The instrument developer modified the content of the instrument to fit the study group. Instrument content validity was tested by two registered nurses at the ICU department, three assistant department nurses, one clinical nurse specialist, and one physician based on their ICU expertise. The experts evaluated the items of the questionnaire using a four-point scale of relevance (1 not relevant – 4 highly relevant).³⁴ Content Validity Indices (CVIs) were then calculated for each section of the questionnaire based on expert panel responses, with a CVI value >0.79 applied as the threshold for acceptable content validity.^{37,38}

Questionnaires were sent via e-mail to research coordinators at eight adult ICUs to forward to ICPs ($N = 976$). The inclusion criteria for participation were: being a health care professional (registered nurse, physician, practical nurse, physiotherapist, or clinical nurse specialist); working in an adult ICU at a university hospital; providing counselling to patients and their family members during the time of the study. A link to the questionnaire was sent via e-mail between September and December 2017, and participants could respond during the shift. The researcher was able to follow the number of responses without identifying any respondent, and the questionnaire was resent three times to maximize the response rate. A total of

182 completed questionnaires were received, representing a response rate of 18.6%.

4.3 | Data analysis

The data were statistically analysed using IBM SPSS Statistics 27.0 (IBM Corporation, Armonk, NY). A statistician assisted the researchers in conducting the analyses. The quality of the counselling in intensive care was analysed in terms of ICPs' perceived competence, implementation, benefits, and resources (Table 1). Twelve distinct sum variables were constructed from items of the instrument used in this study. The communalities for sum variables varied from 0.34 to 0.86, while the Cronbach's alpha values for sum variables varied from 0.66 to 0.88 (Table 1); hence, the sum variables demonstrated good internal consistency³⁹ (Table 1).

The responses were grouped into two categories: scores of 1.00–1.99 reflected adequate counselling; while scores of 2.00–4.00 reflected inadequate counselling based on the histogram bars and frequencies. Relationships between background and sum variables were assessed using the χ^2 test and *t*-test in cases with normal distribution based on Kolmogorov–Smirnov test. The threshold for statistical significance was set as $p < .05$.³⁴

4.4 | Ethical and institutional approvals

The Research Ethics Committee of the Northern Ostrobothnia health care district approved this study (EETMK: 28/2016). All five university hospitals in Finland also gave authorization for this study. Participation in the study was voluntary and anonymous, and data were collected in compliance with the concept of privacy established in the General Data Protection Regulation (GDPR) of the European Union. Based on the research design, the researchers cannot identify which ICPs responded to the survey. The collected electronic data do not include personal data and were saved on a password-secured computer. Only the researchers had access to this computer.

5 | RESULTS

5.1 | Background information and respondents' perceptions of the counselling provided in the ICU

A total of 182 completed questionnaires were received, representing a response rate of 18.6%. The ICPs were nurses, practical nurses, physicians, physiotherapists and clinical nurse specialists; 96% of the respondents were nurses. They were between 23 and 63 years of age (mean 41.7, median 42), and had an average of 13.7 years (median 12) of experience in intensive care. The respondents scored the overall quality of the patient counselling provided in their ICUs as 3.94 and the quality of the family member's counselling provided 4.05 on a scale of 1 (poor) to 5 (excellent).

TABLE 1 Sum variables, number of included items and Cronbach's alpha values

Sum variable	Number of items	Cronbach's alpha	Background variable	<i>p</i>
ICP competence				
Counselling skills	6	0.862		
Knowledge of challenging counselling situations	3	0.832		
Attitudes towards counselling	4	0.690	Age	0.03
Implementation of counselling				
Patient-centered counselling	8	0.880	Work experience/Age	0.01/0.001
Family-centered counselling	4	0.802	Work experience/Age	0.001/0.002
Interaction during the provision of counselling	9	0.869	Work experience/Age	0.001/0.001
Atmosphere during the provision of counselling	6	0.786	Work experience	0.001
Goal-oriented counselling	9	0.837	Work experience	0.002
Benefits of counselling				
Impact on patient/family member confidence	4	0.730		
Impact on patient's recovery	3	0.658		
Resources				
Resources for the development of counselling	5	0.772		
Time for the provision of counselling	4	0.671		

An ICP's work experience was found to have a statistically significant association with how they rated their interactions with patients and goal-oriented counselling provision. More specifically, ICPs with over 10 years of experience in intensive care rated items related to interactions ($t = 4066$, CI 0.114–0.330, $p < .001$), goal-oriented ($t = 3.132$, CI 0.190–0.395) $p < .002$) counselling provision, as well as patient- ($t = 2.595$, CI 0.139–0.292, $p < .010$) and family-centered ($t = 3.676$, CI 0.1332–0.443, $p < .001$) counselling higher than ICPs with less than 10 years of intensive care experience. Also, an ICP's work experience was found to significantly influence their attitude towards counselling. ICPs with less than 10 years of intensive care experience had more positive attitudes towards the counselling provided in an ICU ($t = 1.44$, CI 0.408–0.045, $p < .001$) than ICPs with over 10 years of intensive care experience. Additionally, ICPs over 40 years of age scored their interactions ($t = 3.737$, CI 0.1975–0.316, $p < .001$), knowledge ($t = 2.208$, CI 0.0214–0.382, $p < .03$) of the provided counselling, and patient- ($t = 3.415$, CI 0.190–0.339, $p < .001$) and family-centered ($t = 3.139$, CI 0.1939–0.413, $p < .002$) counselling higher than their younger counterparts (Table 1).

5.2 | Perceived competence in counselling

Although competence has a noticeable impact on the quality of counselling, 42% of the ICPs reported that they had inadequate knowledge of different methods for providing counselling. According to the ICPs, family members consider websites to be an important resource, but a quarter of the ICPs (26%) was unsatisfied with the frequency at which websites were updated. The respondents (45%) also stated that they did not have adequate skills to address demanding

patient counselling situations. Nevertheless, 39% of the ICPs felt that the provided counselling benefits patients.

The ICPs had positive attitudes towards counselling (62%) and considered counselling important in their work (97%). A majority (66%) of the ICPs reported that they respect patients while providing counselling, and 84% of respondents completely agreed that they have a responsibility to provide family members with relevant counselling. An ICP's perceived competence in counselling was found to exert a statistically significant effect on whether the ICP felt that they had adequate time resources for counselling ($\chi^2 = 27.411$, $p < .04$).

5.3 | Implementation of counselling in intensive care

Almost all of the ICPs (96%) felt that patient-centered counselling can reassure the patient. Patient-centered counselling was provided in certain clinical situations, e.g., to optimize breathing (97%) and to help the patient move in a safe way (88%). The respondents had the perception that the provision of patient-centered counselling was significantly affected by ICP competence (skills, knowledge, attitudes) ($\chi^2 = 41.175$, $p < .001$), goal-oriented counselling ($\chi^2 = 85.65$, $p < .001$), and atmosphere during the provision of counselling ($\chi^2 = 44.485$, $p < .001$).

Two-thirds of the ICPs (67%) were satisfied with how counselling was provided to patients' family members in their units. Most of the ICPs (95%) stated that they encourage family members to ask questions during counselling. The respondents (97%) also felt that family-centered counselling can encourage family members to engage with the ICU patient. Most ICPs agreed that they met all of

TABLE 2 Associations between various factors and both patient- and family-centered counselling, according to ICPs' perceptions of ICU counselling

	p-value/ χ^2 test	
	Patient-centered counselling	Family-centered counselling
ICPs' competence (skills, knowledge, attitudes)	0.001/41.175	0.001/19.729
Goal-orientated counselling	0.001/85.65	
Atmosphere during counselling	0.001/44.485	
Implementation of counselling	0.001/90.059	
Time for the provision of counselling	0.04/27.411	

the ICU patient's family members at the same time (82%), while 52% of the professionals reported meeting family members separately. The provision of family-centered counselling was significantly influenced by the ICP's perceived competence (skills, knowledge, attitudes) ($\chi^2 = 19.729$, $p < .001$), implementation of counselling ($\chi^2 = 90.059$, $p < .001$), and time resources ($\chi^2 = 34.577$, $p < .001$) (Table 2).

Most of the ICPs (73%) were satisfied with the interactions during counselling provision and stated that patients had opportunities to express emotions (98%) and family members were allowed to ask questions (95%). The ICPs' perceptions of the atmosphere during counselling provision impacted the confidence of patients and their family members, as assessed by the ICPs ($\chi^2 = 51.184$, $p < .05$) (Table 2).

Most of the ICPs (62%) stated that counselling goals were set in consultation with the patient, with 77% of the ICPs setting concrete goals. The respondents (76%) agreed that family members actively participate in counselling by determining goals. A third of the respondents were unsatisfied with the counselling process (33%) and their own learning (42%). Half of the ICPs (51%) stated that the provided counselling was documented in patient records, while 64% stated that the counselling was not documented in care plans.

5.4 | Benefits of counselling

The ICPs were aware of the benefits of counselling, that is, most of them felt that counselling reduces patients' anxiety (81%), increases patients' confidence in intensive care (83%), and improves perceived safety (88%). Furthermore, 67% of the respondents also stated that patient counselling influences patients' memories of intensive care. A majority of the ICPs (89%) felt that counselling improves family members' confidence in ICPs and in engaging with intensive care patients. Moreover, most of the respondents (72%) stated that counselling helps family members continue their normal life as much as possible while their loved one is in the ICU. According to the ICPs' responses, the provision of counselling significantly influences the

confidence of ICU patients and their family members ($\chi^2 = 36.832$, $p < .001$).

Most of the ICPs (98%) stated that the quality of counselling impacts a patient's recovery and the duration of an ICU stay (82%). All of the ICPs agreed that the provision of high-quality counselling improves ICU patients' well-being. An ICP's self-assessed competence in counselling was found to significantly affect their ratings of family-centered counselling ($\chi^2 = 68.431$, $p < .05$) and the rate at which a patient recovered ($\chi^2 = 106.368$, $p < .001$).

5.5 | Resources for counselling

ICPs were satisfied with how new employees are introduced to the provision of high-quality counselling to ICU patients and their family members (54%). However, 39% of ICPs were dissatisfied with the possibilities to improve counselling, while 52% were dissatisfied with the availability of evidence-based studies on counselling provision.

Respondents reported having time to provide counselling to patients (77%) and family members (73%), but only half (47%) felt that their units had appropriate facilities for conveying counselling, for example, a room for family members. Time resources for counselling were associated with ICP competence ($\chi^2 = 15.518$, $p < .04$).

6 | DISCUSSION

According to the ICPs, patients and family members received high-quality counselling. Nevertheless, the analysis of ICP perspectives identified certain aspects that could be developed to strengthen the quality of counselling provided in ICUs.

ICPs require knowledge about various means to provide counselling and how to manage demanding situations. Interaction strategies that assist patient-ICP communication can improve patient satisfaction with interaction and reduce difficulties in the interactions; nevertheless, the lack of available studies means that the most effective strategy for counselling cannot be reliably identified.^{6,12} Most ICPs felt that they had good nonverbal communication skills despite previous findings that this aspect of provided counselling is demanding and requires goal-oriented dialogue.^{9,11,12,14} Previous studies have also emphasized that ICPs need to understand the importance of their presence and support.^{29,39}

There is evidence that intensive care nurses lack knowledge about the needs of intensive care patients' family members.²³ Our results indicate that most ICPs inform family members based on their needs, which is beneficial as this facilitates interactions between family members and ICPs.⁴⁰ According to our study, most ICPs encourage family members to ask questions about intensive care and visit the patient. This behaviour could increase family involvement in intensive care and improve their understanding of the patient's situation,³⁰ both of which could further enhance interactions between family members and ICPs.^{27,40} The ICPs mainly provided counselling to family members at the patient's bedside; previous

studies have shown that family members benefit from open interactions with bedside professionals in terms of improved understanding and involvement in care.²⁷ The ICPs reported that family members take on an active role by influencing the content of counselling, which is a prerequisite of goal-oriented counselling. Although family member involvement is important, our results also indicate that ICPs are aware that family members should continue living their normal lives, as much as this is possible, while their loved ones are in intensive care.

Accordingly, interaction between family members and ICPs is crucial to balancing social support and the stress associated with intensive care visits.³² Factors that influence satisfaction with care include expectations of care, knowledge, and interaction,²⁸ all of which are addressed by providing patients and their family members with high-quality counselling. In other words, the need for high-quality counselling is based on patients' and family members' needs and implemented using interactions that strengthen family members' involvement in care. The involvement of patients' family members in acute care has been linked with better health outcomes and family members' satisfaction with care.^{17,18,21,31}

The ICPs felt as though they set goals in consultation with the patient. This is in line with previous results, that is, ICPs should be able to determine a patient's ability to interact,¹⁰ prioritize patient needs and involve patients in decision-making related to their care.¹⁶ Patients who have been informed of what will happen feel prepared for examinations and interventions, while concrete goals can help them reach appropriate decisions.¹⁹ Only half of the ICPs stated that counselling was documented in the patient records, while more than half stated that the provided counselling was not documented in the care plan. This contrasts with the general consensus that ICPs should create a customized care plan with the patient and ensure that the plan is visible.¹¹

The professionals agreed that the provision of high-quality counselling yields significant beneficial effects; for example, it can increase patients' feelings of safety. This corroborates previous findings that interaction enhances trust, confidence in staff, and a sense of security.^{19,29,39} The results of this study demonstrate that ICPs clearly feel that the provision of counselling increases confidence and reduces anxiety among ICU patients. The presence of ICPs also helps foster hope and faith in recovery, which can strengthen a patient's will to fight during care.¹³ Most of the ICPs in this study also reported that the provision of counselling also affects a patient's memories of intensive care. This is relevant because earlier studies of ICU patients have reported memories of pain, anxiety and panic, along with nightmares or distress as well as trouble breathing.^{19,39} Additional physical (e.g., pain, cold and thirst) and psychological symptoms (e.g., disorientation³⁹ and feelings of being isolated, breathless and inability to speak¹²) have been described in other studies. Furthermore, the results suggest that ICPs do not have enough evidence-based studies concerning the provision of counselling to guide their daily work.

We found it challenging to compare the results of this study with earlier findings because the quality of ICU counselling has not previously been studied. However, research on the quality of

counselling for chronically ill patients as well as genetic counselling is available.^{3,33,41} The development of ICU counselling should involve interprofessional collaboration, as 96% of the respondents in this study were nurses. The importance of interprofessional collaboration has already been recognized, with this form of collaboration improving interaction with nonverbal patients,¹¹ interdisciplinary understanding, research, and team interactions.¹⁹ Thus, other professionals' perceptions of the current level of ICU counselling is warranted as this knowledge could improve the development of an interprofessional model of counselling provision. Moreover, the impact of counselling on ICU patients' recoveries, as well as the well-being of relatives, should be further investigated.

7 | LIMITATIONS

This study had some inherent limitations. The small sample size means that the results are not generalizable. Although the average response rates of a survey are typically between 20% and 40%,³⁴ this study fell short with a response rate of 18.6%. Nevertheless, a total of 182 staff members from five university hospitals shared their points of view. It should be noted that it was impossible to know how many ICU staff members opened the questionnaire link. Although the survey was interprofessional, the results mainly represent nurses' perceptions because 96% of the respondents were nurses. This arguably provides a clear indication of nurses' perceptions, as these opinions were not confounded by the views of other professionals; nevertheless, this requires further investigation.

This study also had some methodological strengths. For instance, the questionnaire has shown excellent validity and reliability in previous studies^{2,3,35,41,42}; in this study, the calculated Cronbach's alpha values (0.66–0.88) showed good internal consistency. The questionnaire was modified for this study, with content validity assured by experts and a content validity index (S-CVI) of 0.79 applied as the threshold for acceptable content validity.³⁷ Validity describes how methodological choices will provide counselling on the investigated phenomenon, and can only partially be justified through statistical tests. During the analysis phase, only questionnaires that were completely answered were assessed. To cover all areas of counselling, it was necessary that respondents replied to all of the items, which is a weakness of the employed questionnaire. A total of 12 questionnaires were not filled out entirely, and could not be included in the analysis. Another strength of the research was that all of the employed statistical methods were checked by a medical biostatistician.

8 | IMPLICATIONS AND RECOMMENDATIONS FOR PRACTICE AND FURTHER RESEARCH

According to ICPs, the quality of counselling can be enhanced by empowering ICPs to improve counselling and providing appropriate

facilities for counselling in the ICU, such as a private room for family members. Furthermore, there is a need to create a standard for how adult ICU patients and their family members receive counselling; in this case, it could be possible that attitudes towards counselling, as well as other personal characteristics (e.g., competence), would not affect the quality of counselling received by the patient or family member(s). The resources for counselling could also be strengthened, for example, through the provision of links to relevant websites.

ICPs' perceptions of the quality of counselling provided in the ICU should be further investigated. Another relevant avenue of research would be the creation of an interprofessional model of counselling dissemination. More research on the role of counselling in ICU patient recovery is also needed.

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DATA AVAILABILITY STATEMENT

Legally cannot assign to a third party repository but data can be obtained through a separate request from the first author.

ETHICS STATEMENT

The study was approved by the Research Ethics Committee of the health care district of Northern Ostrobothnia Hospital (EETTMK: 28/2016) and authorized by all five Finnish university hospitals. Participation in the study was voluntary and anonymous, and data were collected in compliance with the concept of privacy by design and default established in the general data protection regulation (GDPR) of the European Union. The researchers cannot identify which ICPs did or did not respond to the survey. The collected electronic data do not include personal data and were saved on a computer secured with a password. Only the researchers had access to this computer.

ORCID

Minna Vanhanen  <https://orcid.org/0000-0002-7771-9756>

Pirjo Kaakinen  <https://orcid.org/0000-0002-4991-671X>

TWITTER

Minna Vanhanen  @vanhanen_minna

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