

A Scoping Review of Advance Care Planning Support for Patients in Intensive Care Units

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Abstract: Deciding whether to stop life-saving treatment for patients receiving intensive care, and who have poor recovery prospects, is challenging. Due to patients' inability to make these decisions and the difficulties in fulfilling their wishes regarding treatment, family members often need to decide themselves. Advance care planning support has been expanding to improve the quality of end-of-life care, but its effectiveness in intensive care units is unclear. This scoping review aimed to elucidate the effectiveness of advance care planning interventions for patients entering intensive care units, and their families.

The PRISMA-ScR checklist was used to report this review. We searched the databases of BNI, CINAHL, EMBASE, Ichushi-Web, PsycINFO, PubMed, The Cochrane Library, OpenGrey, and the Trip medical database for published and unpublished studies in intensive care units from January 2000 to March 2020. Studies on adult patients admitted to intensive care units were included, while studies on patients being treated for mental health conditions, terminally ill patients, new mothers, and patients in nursing homes and hospices were excluded.

Three quantitative studies and one qualitative study were included in this review. Literature analysis revealed that an advance care planning intervention involving patients in intensive care units in the perioperative period and their families significantly improved their knowledge; documenting the patient's intentions helped reduce decision-making conflicts and enhanced care satisfaction. Barriers to preparing advance care planning included a lack of information and support by healthcare providers. The reviewed studies indicated that medical professionals and families could make surrogate decisions based on patients' wishes and values by supporting advance care planning.

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Introduction

As the worldwide population is aging, medical care is also changing. An increasing number of older people and multi-disease patients are undergoing high-risk surgeries.¹ Surgery itself may not be overly risky, however, such patients may have lower

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recovery rates and tend to become frail. Postoperative complications are likely to occur, causing loss of consciousness or death in some cases.^{2,3} To avoid undesirable treatment outcomes, care teams can implement the advance care planning (ACP) approach. The ACP includes an advance directive (AD), living will (LW), do not attempt resuscitation order (DNAR), and surrogate decision-maker.⁴ AD is documented through conversations regarding ACP, which include selecting a surrogate decision-maker and creating an LW. The patient's LW may also contain a DNAR order. ACP is essentially a life plan for people to live their own lives and receive respect for their autonomy, even when they are incapable of decision-making. However, ACP interventions in hospitals tend to focus on terminal patients or those receiving palliative care. ACP support is generally implemented primarily by the patient's physician. However, several studies have evaluated whether nurses can take the lead in support of patients with ACP.^{5,6} Nurse navigator-led ACP support has been reported to increase the frequency of discussion and documentation.⁵ By contrast, nurses face problems in supporting ACP when there is no definite program or a lack of knowledge and confidence.^{7,8}

Intensive care units (ICUs) are recognized as places where life-saving care is the presumed end-goal. In this context, initiating or considering end-of-life care is deemed a taboo.⁹ For example, when treating patients who have undergone surgery and are expected to recover, medical professionals tend to recognize that patients' wishes should not be confirmed during a sudden change in medical care.^{10,11} Similarly, people who undergo high-risk surgery may feel anxious or afraid that they might not receive appropriate medical care if they inform their healthcare providers about their wishes for treatment in case complications develop.^{12,13} Therefore, there are few opportunities to implement ACP for people who need high-risk surgery and subsequent critical care. Nonetheless, the fact remains

that healthcare providers should help people live their lives as desired in any situation.

Clarifying the issues related to ACP support, and its effectiveness for patients undergoing high-risk surgery and those undergoing treatment at ICUs, may provide crucial information regarding the appropriate protection of patients' autonomy as well as recognition of effective support methods. Many ACP studies have been conducted with patients receiving end-of-life care¹⁴ and have established whether ACP implementation can avoid ICU admission.^{15,16} However, few studies have considered ACP in ICU patients. New evidence is needed to establish the need and benefits of ACP for ICU patients. We conducted this scoping review in the hope that ACP will not become obsolete and will continue to be used in patient care. In addition, we identified the benefits and drawbacks of introducing ACP in ICUs and its usefulness in clinical interventions.

A scoping review is an exhaustive search of existing literature on the topics of interest. Thus, scoping review studies allow researchers to answer wide-ranging exploratory questions. There is currently no systematic scoping review for ACP.

This study evaluated the usefulness of ACP in ICU patients and their families while the review aimed to address the following research questions:

- 1) What is the impact of ACP on ICU patients?
- 2) What impact do the experience of ACP and AD discussions have on the families of patients treated in the ICU?
- 3) What are the needs for ACP interventions for patients admitted to the ICU and their families?

Methods

Research Design: We used a scoping review approach in this study. Scoping reviews are conducted to identify gaps in knowledge and clarify concepts by examining a series of documents or investigating the conduct of studies.^{17,18} Our review process was guided

by the framework proposed by Arksey and O’Malley¹⁹ and Levac et al.¹⁷ The framework includes the following steps: 1) identify the research questions, 2) identify relevant research, 3) choose a study to conduct, 4) show the data in tables, and 5) summarize and present the results of the studies. This report followed checklist for Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR).^{20,21} During scoping reviews, the focus is not on critical scrutinization but on integrating information on topics. Hence, these reviews help integrate evidence, assess the scope of the literature on a topic, and determine whether a systematic literature review is necessary.²¹ The present scoping review was conducted according to a previously published protocol.²²

Eligibility Criteria and Participants: We selected studies that met the following criteria:

- 1) The year of publication was between January 2000 and March 2020.
- 2) Studies in both English and Japanese were used for the review.
- 3) The study design was either quantitative or qualitative. Quantitative studies included intervention studies, like randomized and non-randomized controlled trials, and post-intervention studies. Qualitative studies were included with no limitation on the analytical methods. However, retrospective cohort and case-control studies were excluded from the analysis of observational studies.
- 4) Studies on adult patients (aged 18 years or above) admitted to ICUs. Studies on patients younger than 18 years old, those receiving treatment for mental

health, those with a terminal-stage disease, pregnant women, and patients in nursing homes or hospices were excluded.

5) Literature that considered the family members of patients admitted to the ICU or those who served as surrogate decision-makers. One family member was defined as the patient’s surrogate decision-maker, regardless of kinship.

6) The target environment and facilities of this review were hospital ICUs. All reasons for ICU admission were included, not just planned or emergency admissions, as in the perioperative period.

Studies involving only medical personnel were excluded. We also excluded studies that used non-ICU high-care rooms, general wards, and emergency departments as research settings.

Search Strategy: This involved a two-step process, beginning with a restricted search of the PubMed and EMBASE databases. Academic librarians supported the search terms used in this study. We then used two major databases to conduct our search strategy. To ensure the quality of the review, our team discussed the search terms repeatedly and identified the terms accordingly.

Next, according to the retrieval formula shown in **Table 1**, we completed the retrieval of studies using the following electronic databases: BNI, CINAHL, EMBASE, Ichu Web (for Japanese studies), PsycINFO, PubMed, and The Cochrane Library. In addition, we conducted searches for grey literature and unpublished literature on OpenGrey and Trip Database. Literature searches were performed in both English and Japanese and were conducted in May 2021.

Table 1 Search strategies

A. BNI
1. Advance Care Planning/ OR /Advance Directive*/ OR /Living Will/ OR Advance Healthcare Planning/ OR /Advance Medical Planning.
2. Intensive Care Unit/ AND /at.exact("Article"/ AND la.exact("ENG")
3. Perioperative/ OR /Post Operative/ OR Preoperative
4. 1 AND 2 AND 3

Table 1 Search strategies (Cont.)

B. CINAHL
S5 (MH "Intensive Care Units") OR "intensive care unit" OR (MH "Coronary Care Units") OR (MH "Post Anesthesia Care Units") OR (MH "Respiratory Care Units") OR (MH "Stroke Units")
S6 (MH "Advance Care Planning") OR "advance care planning" AND (MH "Advance Directives+") OR "advance directive" AND "living will"
S7, S5 AND S6
S9 (MH "Perioperative Care") OR (MH "Perioperative Nursing") OR "perioperative"
S10 (MH "Surgery, Operative") OR "post operative"
S11 (MH "Observation Units") OR "pre operative"
S12 "surgery operative"
S13, S9 OR S10 OR S11 OR S12
C. PICO Search
Population: Intensive care unit/ OR / Perioperative. ti.ab
Intervention: advance care planning/ OR / living will. ti.ab.
D. The Cochrane Library
1. Intensive care unit/ AND / Advance Care Planning
2. Intensive care unit/ AND /Advance Directives
3. Intensive Care Unit/ AND Living Will
E. PuBMed
1. Intensive Care Unit/ AND/ Advance Care Planning/ AND/ (Perioperative Period/ OR/ Perioperative). ti.ab
2. Intensive Care Unit/ AND/ ((Advance Directives) OR (Advance Directives)). ti.ab.
3. Intensive Care Unit/ AND Living Will. ti.ab.
4. Intensive Care Unit / AND ((Advance Directives) OR (Advance Directives))/ AND / (Perioperative period OR Perioperative). ti.ab.
5. Intensive Care Unit/ OR/ Living Will AND (Perioperative Period) OR Perioperative)ti.ab.
6. Intensive Care Unit/ AND / Advance Care Planning AND (Perioperative Period) OR (Perioperative)).ti.ab.
F. PsycINFO
1. .S7S5 AND S6
S5 (MH "Intensive Care Units") OR "intensive care unit" OR (MH "Coronary Care Units") OR (MH "Post Anesthesia Care Units") OR (MH "Respiratory Care Units") OR (MH "Stroke Units")
S6 (MH "Advance Care Planning") OR "advance care planning" AND (MH "Advance Directives+") OR "advance directive" AND "living will"
2. S13 S9 OR S10 OR S11 OR S12
S9 (MH "Perioperative Care") OR (MH "Perioperative Nursing") OR "perioperative"
S10 (MH "Surgery, Operative") OR "post operative"
S11 (MH "Observation Units") OR "pre operative"
S12 "surgery operative"
G. Ichu-shi web
1. Adobansukeapuranningu OR Adbansudhirekuthibu OR rivinguwiru OR jizenshiji
2 Syutyuchiryousitu OR ICU
3. Syusyujyutuki OR Syujyutuki OR jyutuzenn OR Syujyutu OR Syusyujyutukikanri
4. 1 AND 2
5. 1 AND 3

Analysis: We exported the database search results to Rayyan (<https://rayyan.qcri.org/welcome>)²³ and removed duplicates from the list of obtained citations. As the primary screening for our study, two investigators independently reviewed the list of titles and summaries to identify studies that met the inclusion criteria. The two researchers individually reviewed the entire literature meeting the eligibility criteria, as a part of the secondary screening. During the screening of the summary and full-text review, discrepancies between the investigators involving the literature selection were discussed until a consensus was reached. The researchers attempted to improve the quality of the analysis by carrying out these tasks. Gray literature was screened and analyzed according to similar criteria. Finally, we analyzed the reference lists of the included studies to identify additional papers.

Data Extraction: To explain the search results, we prepared a research flow chart as per PRISMA protocol. We also prepared a narrative synthesis to explain the findings, as recommended.¹⁶ For reliability purposes, the first author consolidated and validated the data extraction form by comparing the form to the original article. The data presented in the included papers and for the purpose of this review were consolidated and discussed between the authors until a consensus was reached. A biased assessment of the literature was

not conducted in this study. Additionally, data on the author, publication date, country of origin, purpose, population, age, study design, setting, intervention, results, and main outcomes were included. The relevant data of the extracted articles were summarized in a tabular form for review using an Excel sheet. Regarding the research questions of this study, the impact of ACP on patients and their families included benefits and demerits, as shown in the results and main outcome.

Ethical Considerations: This literature study was conducted without an ethical review. We explicitly declared the conflicts of interest concerning all documents included or not included in the review and ensured that the meaning of the documents was not altered.

Results

According to the eligibility and exclusion criteria, about 269 out of 1078 articles were extracted, including duplicate literature, language, and target age. After screening, 265 articles not meeting the eligibility criteria were excluded. The excluded literature included participants like healthcare providers, terminally ill patients, patients not admitted to the ICU, and study designs like retrospective or chart reviews. Finally, after the primary and secondary screening, four articles were included in this review (Figure 1).

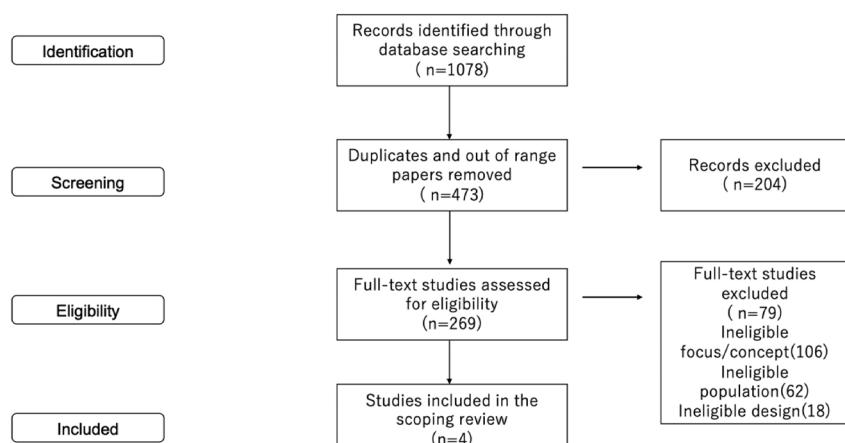


Figure 1 Flow diagram of study selection and inclusion process

Literature Overview

The authors, publication information, country, study objectives, subjects (population), and study design of the four studies are presented in **Table 2**. This study included three quantitative studies, that is, two randomized controlled trials (RCT) and one prospective cohort study, and one qualitative study. In terms of participants, two articles focused on both patients and families, one on patients, and another on

families. Three studies were from the United States and one from France; none of the Asian studies met the inclusion criteria of this review. Of the four studies, one was associated with ACP, two with AD, and one with DNAR. The status setting (before, during, or after ICU admission), results, and main endpoints of the samples in the four studies are shown in **Table 3**. In terms of the reason for ICU admission, one study of perioperative patients and their families was included.

Table 2 Summary of included articles

Study #	First author	Publication date	Country of origin	Purpose	Type	Population	Study design
1	Andreu	2018	France	Evaluate patient preference processes for AD preparation after ICU discharge	AD	Patient and Family	Qualitative study
2	Chiarchiaro	2015	USA	Measure decisional conflict in surrogate decision makers of critically ill patients and examine whether prior ACP is associated with less decisional conflict	ACP	Surrogates	Prospective cohort study
3	Song	2005	USA	Introduce ACP in patients who have undergone cardiovascular surgery and their family members, and clarify the effects	ACP	Patient and Surrogate	Randomized controlled trial
4	Wilson	2015	USA	Determine if a video depicting cardiopulmonary resuscitation and resuscitation preference options improves knowledge and decision making among patients in the ICU and their surrogate decision makers	DNAR	Patient and Family	Randomized controlled trial

NOTE AD: advance directives; ACP: advance care planning; DNAR: do not attempt resuscitation

Table 3 Description of ACP intervention

Study #	Setting (ICU)	Intervention	Results and Main outcomes
1	After	None	<p>For the patients</p> <ul style="list-style-type: none"> • What does the term AD bring to mind for you? Do you know what ADs might be for? • What was your position regarding ADs before being admitted to the ICU? • In your opinion, what are the barriers to writing ADs? • If you were to prepare ADs, what would you put in them? <p>For the family members</p> <ul style="list-style-type: none"> • Can you tell me anything about ADs? • Has being there for your loved one through a stay in the ICU changed your view about ADs for yourself?
2	During	None	<ul style="list-style-type: none"> • Surrogates' burden of decision making as measured using the DCS • Whether they had had any prior ACP conversations with patients • Association between decisional conflict and ACP, measured with multilevel linear regression modeling

Table 3 Description of ACP intervention (Cont.)

Study#	Setting (ICU)	Intervention	Results and Main outcomes
3	Before	A trained nurse provides support by giving the subject a 20-40 minute information card with ACP knowledge.	<ul style="list-style-type: none"> Change in anxiety levels (pre/post) Patient-surrogate congruence regarding goals for future medical care Anxiety and patient decision conflict Knowledge of ACP (patients and surrogate)
4	During	A description of CPR (e.g., full cord, DNR, do not intubate) and a pamphlet are distributed to all subjects (usual care). In addition to usual care, the intervention group listens to an eight-minute CPR video. The team discusses the code status with the doctor.	<ul style="list-style-type: none"> Improved knowledge of DNAR Improved understanding of the terms "intubation," "cardiopulmonary resuscitation," "no resuscitation," "no intubation," and "code status" Documentation of post-intervention CPR intentions Discomfort with watching the video and opinions about intervention

NOTE AD(s): advance directives; ACP: advance care planning; CPR: cardiopulmonary resuscitation; DCS: decision conflict scale

Main Endpoints and Results of the ACP Studies

In one patient study, the outcome was defined as reducing decision-making conflict to enhance satisfaction and confidence.²⁴ Outcome measures included whether the ACP intervention documented the patients' intention to receive treatment (documentation of the ACP) and whether the patients remembered past AD reviews.^{24,25} It also included whether the intervention improved the patients' understanding and knowledge of ACPs and DNARs.^{24,25} The results of one family-focused study evaluated the degree of confidence that surrogate decision-making offered amid conflicting decisions or the degree to which it reflected the patient's wishes.²⁶ One study of both patients and their families evaluated whether patients and their families agreed on decision-making on ACP and whether consideration of ACP before surgery increased anxiety.^{24,25} Additionally, the qualitative study identified factors that hindered the consideration of AD.²⁷

Survey Results

Impact of ACP on ICU patients and their families and surrogate decision makers

One study evaluated improved knowledge and decision-making in patients and their families within 48 hours of ICU admission by viewing a video of

cooperative participants explaining treatment options related to cardiopulmonary resuscitation (CPR).²⁵ In the intervention group, patients and family members had the opportunity to watch the video and then talk to the doctor if they had questions. This study included 235 patients and 208 surrogate decision-makers as participants, with 27 (3.9%) recruited patients refusing to participate. In the intervention group, both patients and surrogate decision makers showed improved CPR knowledge ($p < .001$). Moreover, treatment preferences for DNAR were not significantly different between the intervention and control groups ($p = .81$). None of the patients reported feeling uncomfortable with the intervention in the ICU.

Another study reported the level of understanding of AD among patients and their surrogate decision-makers several months after ICU discharge.²⁴ The study included 94 patients and 64 surrogates, with 78 (83.5%) patients and 49 (76.5%) surrogates reporting they have never heard of AD. Those who had heard about AD did not understand the exact content. Two participants had considered AD before entering the ICU, and six expressed a desire to prepare for AD before their future admission to the ICU. Barriers to the development of AD included: 1) lack of information, 2) lack of healthcare providers' support or encouragement

to prepare an AD, 3) the timing of support, 4) a sense of futility, 5) transfer of responsibility, 6) guilt about discussing AD, 7) misconceptions on the part of patients (e.g., thinking that AD meant euthanasia or that AD could not be changed), 8) the perceived complexity of management processes, 9) a feeling of distress over the process, and 10) disagreement with family members regarding the discussion of AD.

Impact of ACP discussions on patients' family or surrogate decision makers

One study focused only on surrogate decision-makers, like family members.²⁵ The study included 275 (67.9%) surrogate decision-makers of patients on ventilators with acute respiratory distress syndrome; 57% had conducted a prior discussion on ACP with the patient. Surrogate decision-making at patients' end of life has been reported to cause moderate to high decision conflict. However, surrogate decision-makers who had previously discussed ACP with the patients reported significantly lower decision-conflict ($p < .001$). Additionally, surrogate decision-makers who discussed ACP with patients in advance had significantly higher self-assessments of their knowledge of patient treatment preferences ($p < .001$) than surrogate decision makers who did not.

Benefits and needs of ACP support for patients admitted to the ICU and their families

One study investigated the effect of ACP interventions on patients undergoing cardiovascular surgery and their families, in which ACP was introduced before surgery.²⁴ The study recruited 88 patients and their families, 33 of whom declined to participate. The ACP intervention before surgery did not increase patients' anxiety, although the surrogate decision-makers of patients who had not studied ACP previously had higher anxiety than the patients, as assessed in 16 participants in both the intervention and control groups. The introduction of ACP significantly improved the concordance of treatment intent between patients and their surrogate decision-makers ($p < .002$). The study also considered patients who had studied ACP

years ago to see their previous treatment intentions. However, most patients did not remember their previous decisions. The study found no difference in improving knowledge regarding ACP with or without ACP intervention. However, patients who were previously expected to be admitted to the ICU were supported with ACP prior to surgery, with benefits to patients and their families.

Discussion

Few ACP studies have focused on ICU patients in the previous literature. RCT studies were also included, but few studies provided valuable evidence because of the small number of participants and high dropout rates. The reasons may be as follows. Many patients in ICUs are depressed and incapacitated because of sedative use or illness. Therefore, it is difficult to commence ACP after admission to an ICU as it becomes difficult to identify the patient's values and treatment preferences and initiate support. One patient-focused study in the reviewed literature included pre-and post-ICU patients and described the difficulty of introducing an ACP intervention during ICU admission. A study on the ability of ICU patients and family members to understand DNAR after ICU admission used a decision-making intervention. This study reported difficulties in determining the time for helping the patients consider DNAR in the ICU.²⁶ It was also reported that patients who were previously admitted to an ICU and had prepared their AD did not remember their thoughts regarding treatment after discharge. These results are consistent with those introducing ACP to healthy people.²⁹ Patients seem to have little opportunity to reconsider their end-of-life transition after overcoming illness and returning to society.¹³ However, reconsideration of the ACP after discharge is important, and medical providers should recognize a need for the same when providing support.

Moreover, the ICU is equated with lifesaving treatment, and it is difficult to initiate conversations on ACP in a life-threatening situation. This can be inferred from the high dropout rate of study participants in the RCT studies reviewed. The studies found no significant difference in the presence or absence of ACP in increased anxiety in patients undergoing ACP intervention before surgery. However, some patients opted out of the intervention because of increased anxiety while confirming their participation in the study. This behavior indicates that the method of assisting patients with ACP before surgery should be considered. Indeed, many practitioners are concerned that introducing ACP to ICU patients will cause significant stress,³⁰ and they tend to avoid discussing end-of-life scenarios with patients.¹⁰ However, the results of the studies reviewed also showed that the introduction of ACP does not increase patient anxiety and that this process leads to improved patient satisfaction and decision-making quality. These results are consistent with the findings of ACP studies conducted with other participants and ICU patients.^{31,32} ACP can work for patients depending on the way it is supported. The literature review was based on Western studies as no Asian studies were found. The influence of culture, values rising from views on life and death and respect for autonomy could explain the lack of Asian studies. For instance, the Japanese believe that there are positive aspects to death, like peace of mind and body, freedom from being a burden to others, and also they value good relationships with medical staff.³³ Compared with Western cultures, where individual autonomy is highly valued, Asian cultures respect the family's wishes.³⁴ Thus, practitioners need to consider patients' cultural backgrounds when broaching the topic of ACP.

The outcomes of ACP studies on ICU patients and their families included improved knowledge and awareness of ACP, AD, and DNAR. Appropriate knowledge must be established before actual ACP can be conducted. Some ACP studies have implemented video-based ACP support, which has improved the

knowledge of ACP significantly.³⁵ Patients and their families may have specific perceptions and understanding of resuscitation options, particularly DNAR, whose accuracy has not been established. Since patients in critical care areas, like the ICUs, often have complex medical conditions and treatments, surrogate decision-makers may have difficulty fully grasping the condition and the effects and implications of treatment. According to reports, 50% to 70% of ICU patients' surrogate decision-makers have little understanding of the patient's condition or treatment.^{36,37} To determine the treatment level a patient would want to receive if they fall into a critical situation during the treatment, practitioners offering ACP should educate the patient and their family on treatment for resuscitation (like DNAR), its meaning, and its effects. Most studies used a survey format to assess whether patients and their families understood ACP. The period shortly before or during ICU admission may be too late to start engaging in activities that promote understanding of ACP. Before entering the ICU, patients should understand the process and be able to consider their treatment preferences, increasing the likelihood of those preferences being reflected in the patient's treatment after ICU admission. Medical professionals should use appropriate methods and tools to convey information to surrogate decision-makers in a short time.

The review also suggested that discussing ACPs could reduce decision-making conflict among family members and other surrogate decision-makers, and the burden on family members when surrogate decision-making tests are conducted. In an ICU, treatment intends to save the patient's life, but the patient may progress to the end of life during treatment. Therefore, the introduction of ACP to ICU patients protects patients' autonomy and is critical to reducing the psychological burden of surrogate decision-makers.

These results suggest the possibility of introducing ACP to surrogate decision-makers, ICU patients, and their families. The scoping review was limited to

surrogate decision-makers. However, it was intended for healthcare providers who support ACP-centered decision-making. Currently, ICU doctors and nurses have difficulty assessing a patient's presumed best interests.^{28,38} ICU patients, likely to lose decision-making capacity, must identify their values and treatment needs. Despite the absence of studies on ACP being evaluated by the three groups (i.e.) patients, families, and healthcare providers, the need for ACP in ICUs is expected to be clarified by elucidating the relationships among the three groups and their implications. The review also highlighted the need for physicians to recognize that they may have patients and patients' families who do not want to consider ACP. ACP may increase patients' likelihood of receiving their desired treatment by discussing treatment preferences with a surrogate decision-maker in advance. Still, healthcare providers need to help patients and their surrogate decision-makers understand ACP's purpose rather than merely discuss it. In clinical practice, time constraints and personnel problems often lead to a lack of explanation, and many healthcare providers have emphasized the importance of documenting ACP. Healthcare providers should be prepared to explain the pros and cons of ACP to patients and initiate support when patients and family members need it.

The results of the ICU-set ACP study were limited to the short-term effects on patients, family members, and other surrogate decision-makers. This study also showed that implementing ACP support for ICU patients was challenging. This study revealed a lack of understanding with respect to helping healthcare providers and emphasized the need for timely discussions. It is necessary to clarify the development and education methods of programs and tools for smooth implementation of ACP in a clinic. Based on the study's findings, clarifying the effectiveness of ACP support for ICU patients and their families via RCTs is highlighted as a future task.

Limitations

This scoping review collected literature from many databases. However, since we included only English and Japanese documents, the scope of the study was limited. In addition, some literature might have been missed out due to the search strategy, including manual search. Moreover, new articles may have been published in the intervening time period. Hence, we recognize the possibility that not all of the literature was collected and reviewed.

Conclusions and Implications for Nursing Practice

Four studies were reviewed and showed the effects of ACP on ICU patients, their families, and other surrogate decision-makers in our study. However, the evidence remains inadequate. These studies suggested that surrogate decision-makers, patients, and their families should consider ACP to promote their understanding and decision-making based on the patients' wishes and values for treatment. The studies suggested that an important first step is to promote a better understanding of the purpose of ACP. Other future challenges include whether prior consideration of ACP may cause anxiety for patients, family members, and other surrogate decision-makers. Future studies need to assess ACP's impact on patients recovering from ICU treatment and surrogate decision-makers, and its long-term outcomes. Such an assessment could help increase the acceptance of ACP among medical professionals, which can help expand the scope of ACP.

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References

1. Schmick AE, Brasel KJ, Schwarze ML. Engaging patients, health care professionals, and community members to improve preoperative decision making for older adults facing high-risk surgery. *JAMA Surg.* 2016;151(10):938-45. doi:- 10.1001/jamasurg.2016.1308.
2. Nepogodiev D, Martin J, Biccadi B, Makupe A, Bhangu A, National Institute for Health Research Global Health Research Unit on Global Surgery. Global burden of postoperative death. *Lancet.* 2019 Feb 2;393(10170):401. doi:10.1016/S0140-6736(18)33139-8.
3. International Surgical Outcomes Study Group. Global patient outcomes after elective surgery: prospective cohort study in 27 low-, middle- and high-income countries. *Br J Anaesth.* 2016 Oct 31;117(5):601-9. doi:10.1093/bja/aew316.
4. Adach, T. What's advance care planning? In: Sumita, M, editor. Advance care planning. Mejikarufurendosya; 2019, pp. 3-28.
5. Gabbard J, Pajewski NM, Callahan KE, Dharod A, Foley KL, Ferris K, Moses A, Willard J, Williamson JD. Effectiveness of a nurse-led multidisciplinary intervention vs usual care on advance care planning for vulnerable older adults in an accountable care organization: a randomized clinical trial. *JAMA Intern Med.* 2021 Mar 1;181(3):361-9. doi: 10.1001/jamainternmed.2020.5950.
6. Head BA, Song MK, Wiencek C, Nevidjon B, Fraser D, Mazanec P. Palliative Nursing Summit: nurses leading change and transforming care: the nurse's role in communication and advance care planning. *J Hosp Palliat Nurs.* 2018 Feb;20(1):23-9. doi: 10.1097/NJH.000000000000406.
7. Disler R, Cui Y, Luckett T, Donesky D, Irving L, Currow DC, Smallwood N. Respiratory nurses have positive attitudes but lack confidence in advance care planning for chronic obstructive pulmonary disease: online survey. *J Hosp Palliat Nurs.* 2021 Oct 1;23(5):442-54. doi: 10.1097/NJH.0000000000000778.
8. Whitehead P, Frechman E, Johnstone-Petty M, Kates J, Tay DL, DeSanto K, Fink RM. A scoping review of nurse-led advance care planning. *Nurs Outlook.* 2022 Jan-Feb; 70(1):96-118. doi: 10.1016/j.outlook.2021.08.002.
9. Heng J, Sedhom R, Smith TJ. Lack of advance care planning before terminal oncology intensive care unit admissions. *J Palliat Med.* 2020 Jan;23(1):5-6. doi:10.1089/jpm.2019.0391.
10. Gigon F, Merlani P, Ricou B. Swiss physicians' perspectives on advance directives in elective cardiovascular surgery. *Minerva Anestesiol.* 2015;81(10):1061-75.
11. Laroche MR, Rodriguez KL, Arnold RM, Barnato AE. Hospital staff attributions of the causes of physician variation in end-of-life treatment intensity. *Palliat Med.* 2009 Jul;23(5):460-70. doi:10.1177/0269216309103664.
12. National Guideline Centre (UK). Evidence review for information and support needs: perioperative care in adults. London, National Institute for Health and Care Excellence (UK). August 2020.
13. Yamamoto K, Yonekura Y, Hayama J, Matsubara T, Misumi H, Nakayama K. Advance care planning for intensive care patients during the perioperative period: a qualitative study. *SAGEOpenNurs.* 2021 Oct 1; 7:23779608211038845. doi:10.1177/23779608211038845.
14. Gilissen J, Pivodic L, Smets T, Gastmans C, Vander Stichele R, Deliens L, et al. Preconditions for successful advance care planning in nursing homes: systematic review. *Int J Nurs Stud.* 2017;66:47-59. doi:-10.1016/j.ijnurstu.2016.12.003.
15. Ashana DC, Chen X, Agiro A, Sridhar G, Nguyen A, Barron, J, et al. Advance care planning claims and health care utilization among seriously ill patients near the end of life. *JAMA Netw Open.* 2019;2(11):e1914471. doi:- 10.1001/jamanetworkopen.2019.14471.
16. Khandelwal N, Long AC, Lee RY, McDermott CL, Engelberg RA, Curtis JR. Pragmatic methods to avoid intensive care unit admission when it does not align with patient and family goals. *Lancet Respir Med.* 2019 Jul;7(7):613-25. doi:10.1016/S2213-2600(19)30170-5.
17. Levac D, Colquhoun H, O'Brien KK. Scoping studies: advancing the methodology. *Implement Sci.* 2010;5:69.
18. Munn Z, Peters MDJ, Stern C, Tufanaru C, McArthur A, Aromataris E. Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Med Res Methodol.* 2018;18(1):143. doi:-10.1186/s12874-018-0611-x.

19. Arksey H, O'malley L. Scoping studies: towards a methodological framework. *Int J Soc Res Methodol.* 2005;8(1):19–32.
20. Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Ann Intern Med.* 2018;169(7):467–73.
21. Peters MDJ, Marnie C, Tricco AC, Pollock D, Munn Z, Alexander L, et al. Updated methodological guidance for the conduct of scoping reviews. *JBI Evid Implement.* 2021;19(1):3–10. doi: 10.11124/JBIES-20-00167.
22. Yamamoto K, Hayama J, Nakayama K, Yonekura Y, Ota E. Intervention and efficacy of advance care planning for patients in intensive care units and their families: a scoping review protocol. *Nurs Open.* 2021;8(2):997–1001. doi: 10.1002/nop2.722.
23. Ouzzani M, Hammady H, Fedorowicz Z, Elmagarmid A. Rayyan—a web and mobile app for systematic reviews. *Syst Rev.* 2016 Dec 5;5(1):210. doi: 10.1186/s13643-016-0384-4.
24. Song MK, Kirchhoff KT, Douglas J, Ward S, Hammes B. A randomized, controlled trial to improve advance care planning among patients undergoing cardiac surgery. *Med Care.* 2005;43(10):1049–53.
25. Wilson ME, Krupa A, Hinds RF, Litell JM, Swetz KM, Akhouni A. A video to improve patient and surrogate understanding of cardiopulmonary resuscitation choices in the ICU: a randomized controlled trial. *Crit Care Med.* 2015; 43(3):621–9. doi: 10.1097/CCM.0000000000000749.
26. Chiarchiaro J, Buddadhumaruk P, Arnold RM, White DB. Prior advance care planning is associated with less decisional conflict among surrogates for critically ill patients. *Ann Am Thorac Soc.* 2015;12(10):1528–33. doi: 10.1513/AnnalsATS.201504–253OC.
27. Andreu P, Dargent A, Large A, Meunier-Beillard N, Vinault S, Leiva-Rojas U. Impact of a stay in the intensive care unit on the preparation of advance directives: descriptive, exploratory, qualitative study. *Anaesth Crit Care Pain Med.* 2018;37(2):113–9. doi: 10.1016/j.accpm.2017.05.007.
28. Yamamoto K, Yonekura Y, Nakayama K. Healthcare providers' perception of advance care planning for patients with critical illnesses in acute-care hospitals: a cross-sectional study. *BMC Palliat Care.* 2022 Jan 7;21(1):7. doi: 10.1186/s12904-021-00900-5.
29. Sudore RL, Fried TR. Redefining the “planning” in advance care planning: preparing for end-of-life decision making. *Ann Intern Med.* 2010;153(4):256–61. doi: 10.7326/0003-4819-153-4-201008170-00008.
30. Schwarze ML, Bradley CT, Brasel KJ. Surgical “buy-in”: the contractual relationship between surgeons and patients that influences decisions regarding life-supporting therapy. *Crit Care Med.* 2010;38(3):843–8. doi: 10.1097/CCM.0b013e3181cc466b.
31. Detering KM, Hancock AD, Reade MC, Silvester W. The impact of advance care planning on end-of-life care in elderly patients: randomised controlled trial. *BMJ.* 2010;340:c1345. doi: 10.1136/bmj.c1345.
32. Wright AA, Zhang B, Ray A, Mack JW, Trice E, Balboni T. Associations between end-of-life discussions, patient mental health, medical care near death, and caregiver bereavement adjustment. *JAMA.* 2008;300(14):1665–73. doi: 10.1001/jama.300.14.1665.
33. Miyashita M, Sanjo M, Morita T, Hirai K, Uchitomi Y. Good death in cancer care: a nationwide quantitative study. *Ann Oncol.* 2007;18(6):1090–7.
34. Masujima M. Development on the nursing practice based on advance care planning to support the person in the end-of-life period to live a fulfilling life. *J Jpn Soc Intensive Care Med.* 2017;22(4):203–8.
35. Jain A, Corriveau S, Quinn K, Gardhouse A, Vegas DB, You JJ. Video decision aids to assist with advance care planning: a systematic review and meta-analysis. *BMJ Open.* 2015;5(6):e007491. doi: 10.1136/bmjopen-2014-007491.
36. Azoulay E, Pochard F, Kentish-Barnes N, Chevret S, Aboab J, Adrie C, et al. Risk of post-traumatic stress symptoms in family members of intensive care unit patients. *Am J Respir Crit Care Med.* 2005;171(9):987–94. doi: 10.1164/rccm.200409-1295OC.
37. Debaty G, Ageron FX, Minguet L, Courtirol G, Escallier C, Henniche A, et al. More than half the families of mobile intensive care unit patients experience inadequate communication with physicians. *Intensive Care Med.* 2015;41(7):1291–8. doi: 10.1007/s00134-015-3890-2.
38. Kressel K, Kennedy CA, Lev E, Taylor L. Managing conflict in an urban health care setting: what do “experts” know? *J Health Care Law Policy.* 2002;5(2):364–446.

การทบทวนวรรณกรรมแบบกำหนดขอบเขตของการสนับสนุนการวางแผนดูแลรักษาตนเองล่วงหน้าสำหรับผู้ป่วยในหอผู้ป่วยวิกฤติ

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บทคัดย่อ: การตัดสินใจว่าจะหยุดการรักษาช่วงชีวิตผู้ป่วยที่ได้รับการบริบาลแบบวิกฤติและผู้ที่มีโอกาสในการฟื้นตัวไม่ดีหรือไม่นั่นเป็นสิ่งที่ท้าทาย เนื่องจากการที่ผู้ป่วยไม่สามารถตัดสินใจได้อ่องและมีความยากลำบากในการตัดสินใจที่จะให้ต้นเองบรรลุเป้าประสงค์เกี่ยวกับการรักษาตนนั้น สามารถในครอบครัวมักต้องเป็นผู้ตัดสินใจ ในการดูแลผู้ป่วยระยะสุดท้าย การสนับสนุนการวางแผนดูแลรักษาตนเองล่วงหน้าได้มีการขยายมากขึ้นเพื่อปรับปรุงคุณภาพของการดูแล แต่ประลิทอิผลลัมสำหรับหอผู้ป่วยวิกฤติยังไม่ชัดเจน การทบทวนวรรณกรรมแบบกำหนดขอบเขตนี้มีวัตถุประสงค์เพื่อศึกษาประลิทอิผลของการวางแผนดูแลรักษาตนเองล่วงหน้าสำหรับผู้ป่วยที่รักษาในหอผู้ป่วยวิกฤติและครอบครัวของผู้ป่วย ผู้ศึกษาใช้รายการตรวจสอบ PRISMA-ScR เป็นแนวทางในการรายงานการทบทวนวรรณกรรมครั้งนี้โดยสืบค้นจากฐานข้อมูลของ BNI, CINAHL, EMBASE, Ichushi-Web, PsycINFO, PubMed, The Cochrane Library, OpenGrey และฐานข้อมูลทางการแพทย์ Trip สำหรับงานวิจัยในหอผู้ป่วยวิกฤติทั้งที่ตีพิมพ์และไม่ได้ตีพิมพ์ ตั้งแต่เดือนกรกฎาคม พ.ศ. 2543 ถึง มีนาคม พ.ศ. 2563 โดยคัดเลือกงานวิจัยในผู้ป่วยวัยผู้ใหญ่ที่เข้ารับการรักษาในหอผู้ป่วยวิกฤติ สำนักศึกษาในผู้ป่วยที่กำลังได้รับการรักษาสุขภาพจิต ผู้ป่วยระยะสุดท้าย ผู้ป่วยมารดาใหม่ และผู้ป่วยในบ้านพักคนชราและสถานดูแลผู้ป่วยระยะสุดท้ายจะถูกคัดออกจากการศึกษาครั้งนี้

ในการทบทวนวรรณกรรมนี้ มีงานวิจัยเชิงปริมาณ 3 งานและงานวิจัยเชิงคุณภาพ 1 งานที่ได้รับการคัดเลือกตามเกณฑ์ การวิเคราะห์วรรณกรรมพบว่าการวางแผนดูแลรักษาตนเองล่วงหน้าสำหรับผู้ป่วยในหอผู้ป่วยวิกฤติในระยะก่อนและหลังผ่าตัดและสำหรับครอบครัวของผู้ป่วยทำให้ผู้ป่วยและญาติมีความรู้เพิ่มขึ้นอย่างมีนัยสำคัญ การบันทึกความตั้งใจของผู้ป่วยช่วยลดความขัดแย้งในการตัดสินใจและเพิ่มความพึงพอใจในการดูแล อุปสรรคในการเตรียมการวางแผนดูแลรักษาตนเองล่วงหน้าคือ การขาดข้อมูลและการสนับสนุนจากบุคลากรด้านการดูแลสุขภาพ งานวิจัยที่ใช้ในการศึกษาทบทวนวรรณกรรมครั้งนี้ชี้ให้เห็นว่าบุคลากรทางการแพทย์และครอบครัวของผู้ป่วยสามารถตัดสินใจแทนผู้ป่วยได้ตามความตั้งใจและค่านิยมของผู้ป่วยโดยสนับสนุนการวางแผนดูแลรักษาตนเองของผู้ป่วยไว้ล่วงหน้า

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คำสำคัญ: การวางแผนดูแลรักษาตนเองล่วงหน้า การระบุแนวทางปฏิบัติทางการแพทย์ไว้ล่วงหน้า การดูแลผู้ป่วยวิกฤติ ระยะสุดท้ายของชีวิต หอผู้ป่วยวิกฤติ การดูแลแบบประคับประคอง ระยะก่อนและหลังผ่าตัด

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