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Barriers and facilitators to end-of-life care in the adult intensive care unit: A scoping review

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ABSTRACT

Aim: To identify qualitative studies that describe the barriers and facilitators nurses perceive and experience when delivering end-of-life care in the Adult Intensive Care Unit.
Design: The design was a scoping review that followed the Joanna Briggs Institute methodology.
Methods: There were four selected databases searched electronically to identify published qualitative studies. Data extraction was with a standard data extraction tool and independently extracted by two reviewers.
Results: In total, 20 qualitative studies were eligible for result extraction. The majority of studies (19; 95%) presented findings on the barriers to end-of-life care, and a few (11; 55%) focused on the facilitators of end-of-life care. The provision of adequate end-of-life care training and education for nurses, formulation of policies and guidelines in the ICU, and working with family members are vital measures to enhancing the quality of care patients and families receive at the end of life.
No Patient or Public Contribution: In this study no patient and members of the public were involved. Only published existing literature was used, hence, no patient or public contribution was needed.

1. Introduction

The intensive care unit (ICU) is an organised setting in the hospital that provides specialised nursing and medical care to the patients with life-threatening illnesses using highly sophisticated technology. The aim of intensive care is to comprehensively manage patients, support the further damage to failing organ systems (such as lung, kidneys and heart) and ensure patients are in an acceptable state on discharge (Marshall et al., 2017). Despite the remarkable advances in technology, pharmaceuticals and patient care, the mortality rate in the intensive care unit (ICU) remains high (Azoulay et al., 2009; Capuzzo et al., 2014), approximately 20%, with a considerable variation noted across regions and countries. It is also estimated that 60–70% of these deaths occur after a decision to limit life-sustaining treatments (Connolly et al., 2016; Sprung et al., 2015); thus, either withdraw or withhold treatments. These statistics make caring for critically ill and dying patients at the end of life and their family members an integral part of the care provided in the ICU.

End-of-life (EOL) care is the holistic and supportive care rendered to patients at the end of their lives and their family members, as curative care and therapies become physiologically inappropriate. The ultimate focus is on promoting comfort, relieving burden and suffering, and maintaining dignified death (Badır et al., 2016; Mistry et al., 2015). This form of care begins the moment a patient's condition worsens, despite continued treatment, and deemed to be at high risk of dying. It also encompasses multi-disciplinary discussions around the possible limitation of life-sustaining treatments, possible withdrawal of treatment, support for both dying patients and family members, and bereavement care (Ranse, Yates & Coyer, 2012; Truog et al., 2008).

Nurses and physicians remain the dominant healthcare providers when it comes to providing EOL care to patients and their families. In literature, nurses are described as suitable and appropriate candidates for providing EOL care in the ICU owing to their continuous bedside presence, the paradigm of caring and the therapeutic relationship created with patients and family members (Ranse, Yates & Coyer, 2012; Vanderspank-Wright, Efstathiou & Vandyk, 2018). In the provision of EOL care in the ICU, nurses play essential roles in the care of the ICU patient and their family members, and in creating a serene ICU environment to support the care of the dying patient (Noome et al., 2016a). Their roles include the provision of pain and symptom management for

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patients, offering frequent information about treatment and emotional support to the family and creating a serene and less technical ICU environment for patient care. Similarly, nurses also attend to the needs and wishes of patients and their family members, ranging from comfort care, information sharing, spiritual care and cultural support, and emotional support to bereavement care (Ranse et al., 2012; Taylor et al., 2020).

Despite the unique roles nurses play in the ICU, it is evident in literature, through nurses lived experiences, that the provision of EOL care comes with attached emotional burden, stresses, high levels of conflicts and ethical dilemmas (Efstathiou & walker, 2014; Kisorio & Langley, 2016). As they support the patient and family, nurses frequently bear the burden and challenges that come with caring for the dying patient and their family (Taylor et al., 2020). Nurses describe the care provided to patients and family members at the end of life as a source of emotional distress and moral dilemmas (Vanderspank-Wright et al., 2018). The provision of EOL care represents a significant professional and personal struggle, thus nurses have to navigate through several conflicts and challenges at different levels along the EOL trajectory while providing care for patients and their families.

There can be modification to the current ICU setting to accept and support peaceful and dignified death (Jang et al., 2019). There can be several interventions implemented, according to nurses, which are necessary to humanise patient care and shift the focus to comfort care (Holms et al., 2014; Ranse et al., 2012). The provision and optimum delivery of EOL care, however, depends on nurses' understanding of personal beliefs about death and dying, strong EOL care knowledge base, professional and personal experiences and support resources (Hall, 2020; Kirchhoff & Kowalkowski, 2010). Nurses have described various barriers and their perceived facilitators to providing EOL care in the ICU in most of their shared experiences of such care across the globe. Existing studies have looked at the subject from a quantitative point of view (Attia et al., 2013; Beckstrand et al., 2017; Iglesias et al., 2013). The main barriers to the provision of EOL care identified included ICU environment (e.g. heavy workload, poor ICU design), attitude and reactions from family members (e.g. not accepting patient's prognosis) and physicians' behaviours, such as inadequate communication. Attia et al. (2013) and Brooks et al. (2017) also identified collaboration among the ICU team, support for nurses and making changes in the ICU environment as main facilitators of EOL care in the ICU.

Few studies, however, have looked at the subject from their reported lived experiences while delivering EOL care to patients and their families in the ICU. A review aimed at identifying and synthesising the barriers and facilitators to EOL care in the adult ICU nurses' describing their shared experiences will help understand the subject from their voices. This paper aims to identify qualitative studies that describe the challenges and supportive behaviours nurses perceive and from their experience when delivering end-of-life care in the adult intensive care unit.

2. Methods

2.1. Study design

A scoping literature review identified and synthesised qualitative evidence. The framework proposed by Joanna Briggs Institute (Peters et al., 2020) guided the review and reported according to the PRISMA-ScR checklist (Tricco et al., 2018). The reviewers did not develop a prior protocol before conducting the study.

2.2. Study question

The following question guided the review "What are the barriers and facilitators nurses perceive and experience when delivering end-of-life care in the intensive care unit?"

2.3. Data sources and search strategy

There were four electronic databases, namely SCOPUS, PubMed, CINAHL (Cumulative Index to Nursing and Allied Health Literature) and MEDLINE searched to identify existing published literature from 2007; as the first accessible study published that indicated both barriers and facilitators to end-of-life care was in 2007. The focus mainly was qualitative studies that looked at nurses' experiences in the provision of EOL care, however, it described the barriers and facilitators to EOL care. Before the detailed literature search, there was an initial search conducted using PubMed database to identify the search and text words appropriate for an exhaustive data search (Fig. 1). When developing the search strategy, there was a specialist librarian consulted. The search terms: end-of-life care/palliative care/withdrawal of treatment, nurses/intensive care nurses, experiences/challenges/barriers/facilitators and intensive care unit/critical care unit, guided the detailed literature search. Table 1 presents the inclusion and exclusion criteria.

A second comprehensive computerised database search was undertaken using the four selected databases, as well as a hand search of specific intensive care journals. A reference list of retrieved literature underwent screening for possible articles for inclusion. There was no particular author contacted for specific studies.

2.4. Selection of evidence

To track the studies and remove duplicates, there was collation and uploading of all identified articles onto the referencing tool (Mendeley). Two reviewers (EK and SS) independently examined the titles and abstracts of the retrieved studies together for their inclusion in the study. First, the titles of the retrieved studies were read, followed by the abstract; full-text of 72 articles considered relevant were read by both reviewers. The inclusion and exclusion criteria guided the selection of studies at each stage, with 52 studies further excluded. Consultation with a third independent reviewer occurred at every point of disagreement; however, there was consensus reached in most cases.

2.5. Search outcome

A PRISMA flow diagram described the detailed search outcome. Refer to Fig. 1.

2.6. Extraction of evidence

Upon achieving consensus, the reviewers developed a standardised data extraction tool to extract essential items from each included article. The data extraction tool was pilot-tested by reviewers before its use to ensure it captured all the relevant information needed. Two reviewers independently extracted the data from each eligible article, and discussed and constantly updated the results if there were any discrepancies. Data retrieved were summarised according to headings: author (s), year, setting of publication, study objective, research methodology, data collection, population and sampling approach and key findings (Table 2).

2.7. Analysis and synthesis of the evidence

Results extracted from the included sources were descriptively mapped using simple frequency counts for headings such as study setting, study population and study design, with the key findings section, extracted from each included article, brought together. The thematic analysis principles of Braun and Clarke (2006) grouped the findings into themes, barriers to EOL care and facilitators of EOL care. Two reviewers independently read the findings repeatedly to thoroughly familiarise themselves with them. After comparing and contrasting the themes generated, subsequent reporting was in a narrative format.

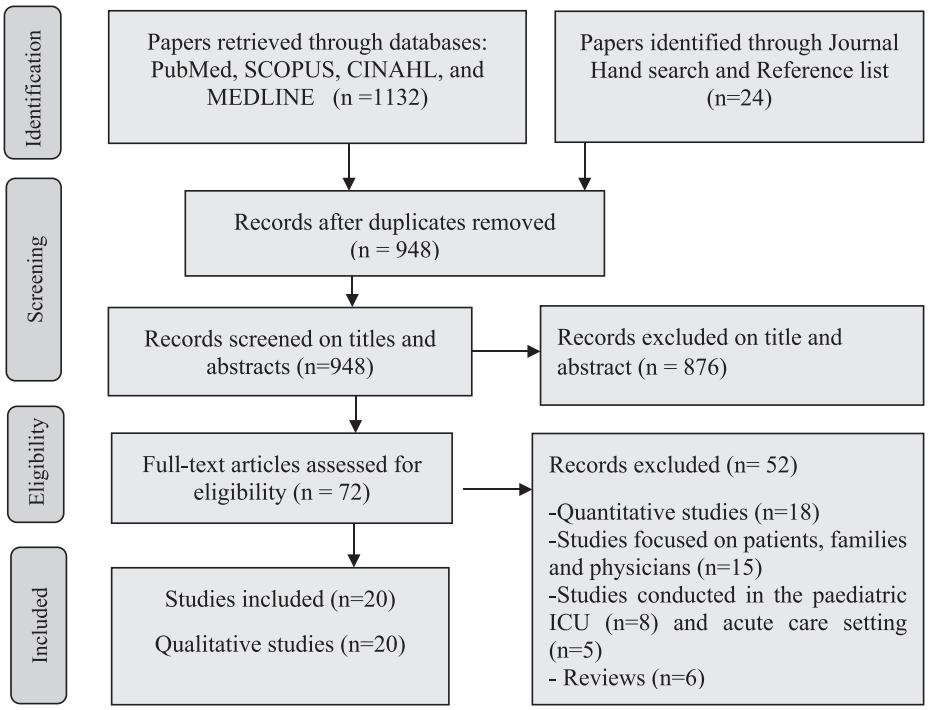

Fig. 1. PRISMA Flow diagram of the Literature Search.

Table 1
Inclusion and exclusion criteria.

Inclusion criteria
• Published qualitative studies • Published in English language • Studies that focused on nurses experiences of end-of-life care • Qualitative studies that described the barriers and facilitators of EOL care • Studies conducted in the adult intensive care unit • Studies published from 2007
Exclusion criteria:
• Unpublished literature, quantitative and mixed methods studies • Reviews, commentaries and editorials • Studies conducted in the paediatric ICU and acute care settings • Studies that focused of patients, family members and doctors

2.8. Ethics

This was a scoping review, thus there was no research ethics committee approval necessary.

3. Results

In total, there were 1156 potential studies identified from the electronic database search and review of article references. Two hundred and eight citations were duplicates and so removed, and 948 underwent further screening based on the title and abstract. This resulted in the exclusion of 876 studies, with 72 full-text articles retrieved and assessed for eligibility. Exclusion of a further 52 studies, on the basis that 18 were quantitative studies, eight were conducted in the paediatric ICU, five in the acute care setting, 15 focused on family members, patients and physicians' experiences and six were existing review studies, resulted in 20 (n = 20) qualitative articles finally included (Fig. 1).

Participants included in the various studies were intensive care nurses working in the ICU. The sample size for each study ranged from four to 24 intensive care nurses. The total sample size for all the included studies was 245 participants. The settings specification was as general ICUs, which included medical, surgical and trauma ICUs. The review presented data from studies conducted in four continents, representing 13 countries; six (6) of the papers were from North America (USA-three; Canada-three), four (4) from Africa (South Africa-three; Rwanda-one), Asia (Iraq, Hong Kong, Nepal, South Korea and Singapore) and Europe (Norway - two, Sweden, UK and Scotland). The included studies presented findings on either the barriers nurses experience while providing end-of-life care to patients and families, or the supportive behaviours and facilitators of EOL care in the ICU or both barriers and facilitators. In the majority of studies, 19 (95%) presented findings on the barriers to end-of-life care. Few studies (n = 11), representing 55% of the total 20 presented data on the facilitators of end-of-life care.

Seven supporting themes emerged after data analysis that described the barriers and facilitators nurses report in qualitative literature through their experiences when delivering end-of-life care in the ICU. Four (4) supporting themes described the barriers to end-of-life care: (a) behaviours and attitudes of patients' families; (b) barriers attributed to nurses; (c) barriers attributed to physicians; (d) the nature of the ICU environment. Three (3) of the supporting themes described the facilitators of end-of-life care: (a) support for nurses, (b) working with patients' families, and (c) changes in the ICU environment (Refer to Table 3).

3.1. Barriers to end-of-life care

In the majority of studies, 19 (95%) presented findings on the barriers to end-of-life care. The barriers to delivering end-of-life care in the ICU were attributed to behaviours and attitudes of patients' family members, intensive care professionals (nurses and physicians), and the ICU environment.

Five studies (Espinosa et al., 2010; Kisorio & Langley, 2016; Leung et al., 2017; Rafii et al., 2016; Taylor et al., 2020) identified the behaviours and attitudes of a patient's family as a barrier to the provision of EOL care in the ICU. The authors explained such behaviours as unrealistic expectations during the patient's hospitalisation, naïve expectations of preventing death, resistance, conflict among patients' families

Table 2
Study characteristics of included studies.

	"Author(s), year & setting	Aim of the study	Research Design/data collection technique	Population & Sample	Key Findings on barriers and facilitators of EOL care
1	Arbour & Wiegand (2014) USA	To understand nurses experiences and perceptions while caring for patients at end-of-life and their family	A descriptive phenomenological study Interviews	Purposive sampling 19 Intensive Care nurses	Facilitators to EOL care – Educating the family on the treatment plan – Supporting family presence – Mentoring and teaching which included assistance to new and novice nurses
2	Brysiewicz & Bhengu (2010) South Africa	To explore the experiences of nurses in the provision of support to families of critically ill patients in the ICU	Qualitative Semi-structured interview	Purposive sampling 9 Intensive Care trained nurses from three hospitals, with at least 6 months experience	Barriers to EOL care – Communication challenges between healthcare professionals (nurses and doctors) and that between healthcare professionals and family members – Lack of training for nurses: insufficient resources and training
3	Calvin et al (2009) United states	To understand nurses feelings for caring for patients who are approaching end-of-life	Descriptive qualitative approach Interviews	Purposive sampling 19 nurses from one Cardiovascular ICU	Barriers to EOL care – Physicians do not perceive the medical treatment has been exhausted and patient's condition is irreversible (unwilling to let go) – physician reluctance to discuss with family members the option to stop medical and surgical treatments
4	Efstathiou & Walker(2014) UK	To explore the experiences of Intensive Care nurses in the provision of end-of-life care for patients and families	Qualitative study. Semi -structured face-to-face interview	Purposive sampling 13 Intensive Care nurses from a major university ICU	Barriers to EOL care – Uncertainties on relationships, what to do and not to, – lack of clear communication between nurses and doctors – the lack of clear end-of-life care guidelines at the ICU – ICU environment: monitoring equipment, invasive lines Facilitator of EOL care – Create a less a less technical environment for the family
5	Espinosa et al (2010) United States of America	To understand the experiences of nurses in the provision of end-of-life care in the ICU	Explorative qualitative study Interviews and focus group	Purposive sampling 18 registered nurses working in five different ICUs in a teaching hospital, with 2 to 40 years of experience	-Barriers to EOL care – lack of nurses' involvement in the plan of care – the differences in the nursing practice model and the medical model, – disagreement between doctors and other members of the health care team – perception of futile care and unnecessary suffering – unrealistic expectations from family members – lack of experience and education of nurses
6	Fridh et al (2009) Sweden	To describe nurses experiences of caring for the dying in the ICU	An explorative qualitative design Interview	Purposive sampling 9 ICU nurses	Barriers to EOL care – Difficulties in creating privacy and dignified good-byes for the relatives (multiple bed rooms, no private rooms) – Lack of influence in the decision-making process (Lack of collaboration in the decision making process) – Lack of time and support (Multi-bed rooms restricted the number of family members visits) Facilitator of EOL care-Information sharing, open visitation
7	Holms et al (2014) Scotland	To explore nurses experiences of providing end-of-life care for patients and families	Qualitative study In-depth interviews	Purposive sampling Five Intensive Care nurses	Barriers to EOL care – The Intensive Care environment affected EOL care: the busy, noisy and multi-bed rooms environment – Communication breakdown, disagreement with decisions lead to inconsistencies in end-of-life practice

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Table 2 (*continued*)

	"Author(s), year & setting	Aim of the study	Research Design/data collection technique	Population & Sample	Key Findings on barriers and facilitators of EOL care
					– Inadequate training and education on end-of-life care, nurses learn from their experiences Facilitators of EOL care – the use of integrated care systems such as guidelines use e.g. Liverpool Care Pathway, improved end-of-life care practice – Good communication with the multidisciplinary team was vital to EOL care
8	Hov, Hedelin & Athlin(2007)	To understand what it is to be a nurse in end-of-life care situations	Qualitative interpretive phenomenology Group interview	Purposive sampling 14 Intensive Care nurses, with at least 15 months working experience	Barriers to EOL care included: – constant ethical dilemmas between accepting a natural death and saving – vague and unclear goals for the patients' treatment, physicians conflicting messages. – Different perspectives of nurses and physicians, and their interaction. Physicians only occasionally listen to nurses
9	Jang et al (2019) South Korea	To explore the in-depth thoughts of nurses on end-of-life care in the ICU	Qualitative design Focus group interviews	Purposive sampling 12 ICU nurses	Barriers to EOL care – Inadequate knowledge and training to manage the dying patient in the ICU Facilitators of EOL care – Involve family in the care of the patient – Allow the family the change to be with the patient – Effective communication among the team and family members – Team work – Support nurses through education and training
10	Jordan et al. (2014) South Africa	To explore and describe nurses experiences with regards to end-of-life issues in the ICU	Qualitative, explorative, descriptive contextual design Semi-structured interview	Purposive sampling Nine Intensive Care nurses	Barriers to EOL care – lack of support from hospital management – Nurses do not feel part of the team Facilitators of EOL care – multidisciplinary team relations: the need for collaborative work approach, teamwork. – the need for supportive strategies such as debriefing sessions, psychological support and education
11	Kisorio & Langley(2016) South Africa	To explore the experiences of nurses regarding end-of-life care in the Intensive Care Unit	Qualitative approach Focus group	Purposive sampling 24 Intensive Care nurses from adult ICUs with more than 6 months of bedside experience	Barriers to EOL care – Family members denial to patient's condition; wanting to hear what they want to hear – lack of nurses involvement in end-of-life discussions and decision making Facilitators of EOL care – Meeting the challenges nurses face through teamwork, training, counselling, debriefing sessions session during and after end-of-life care, having someone to talk to, shift changes, having extra time to adjust – Support the family members: open visitation, information sharing, bedside presence and education
12	Leung et al. (2017) Canada	To understand nurses experiences of caring for chronically ill patients and their families in the CIU	Qualitative study Semi-structured interviews	Purposive sampling 16 ICU nurses with at least 4 years of experience	Barriers to EOL care – internal tension during communication with the family and the healthcare team – Family members naïve expectations on preventing death – Family interest conflicting with patient's wishes: the believe in the possibility of recovery – interpersonal dynamics conflicting messages within the interprofessional team and with the family – Lack of access to expertise in palliative care delayed the introduction of palliative care services

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Table 2 (*continued*)

	"Author(s), year & setting	Aim of the study	Research Design/data collection technique	Population & Sample	Key Findings on barriers and facilitators of EOL care
13	Limbu et al (2018) Nepal	To describe Intensive Care nurses lived experiences of caring for the critically ill patients in the Intensive Care Unit	Qualitative In-depth individual interviews	Purposive sampling, recruited 13 nurses from 3 ICUs	Barriers – low technology of care (old machines and equipment) – insufficient resources (nursing personnel and space in the ICU) to care for patients Facilitators – realising team work
14	Nankundwa & Brysiewicz (2017) Rwanda	To explore the lived experiences of nurses caring for a patient with a DNR order in an Intensive Care Unit	Qualitative Semi-structured in-depth interviews	Purposive sampling Six Intensive Care nurses from an ICU in a tertiary hospital	Barriers to EOL care – Nurses activities are not well done, negative impact of care given – Not part of decision-making: Doctors make the decisions, nurses are not involved
15	Ong et al(2018) Singapore	To understand critical care nurses perceptions towards the provision of end-of-life care	Qualitative descriptive design interviews	Purposive sampling 10 Intensive Care nurses with 2 or more years of experience	Barriers to EOL care – the lack of autonomy due to power imbalance between nurses and doctors – Superficial and limited communication between healthcare providers and family members – under-preparedness to provide end-of-life care: Lack of education
16	Rafii et al (2016) Iraq	To explore nurses' lived experiences of providing end-of-life care for terminally ill patients in the ICU	Qualitative study In-depth semi structured interviews	Purposive sampling 10 registered Intensive Care nurses, working in the ICU, with at least 2 years of experience	Barriers to EOL care – insufficient resources (shortage of staff, lack of equipment, medicine) – poor coordination among healthcare professionals (nurse-physician) – the behaviour of the family members: demand to take patient home
17	Stokes et al (2019) Canada	To explore what nurses describes as meaningful EOL care in the ICU	An interpretive phenomenology Face-to-face unstructured interviews	Purposive sampling Six (n = 6) intensive care nurses	Barriers to EOL care – The busy nature of the ICU environment (high acuity and multiple admissions) makes it difficult to build relationship with patient and family – Nurses not on the same page with attending doctors – Disagreement among other health team members – Lack of communication and teamwork Facilitators of EOL care – Support for colleague nurses – Create space in the ICU for the family, remove all technical equipment from patient's bedside – Involve the family in the care of the patient – Establish a good relationship with the family and be there for them
18	Taylor et al (2020) Norway	To explore ICU nurses experiences of participating in the withdrawal of treatment process for patients	A descriptive and exploratory qualitative design Semi-structured Interviews	Purposively sampled nine (n = 9) intensive care nurses	Barriers to EOL care – Disagreement with the medical team and other healthcare professions – Family members disagreement with the treatment withdrawal decision – Conflict with patients family when attempting to conduct treatment withdrawal – The lack of information for the patient's family – Lack support for nurses – lack of communication and irregular meetings on the withdrawal process Facilitators of EOL care – Interdisciplinary support and cooperation – Team work – Regular interdisciplinary meetings and discussions on the withdrawal process – Having a thorough plan to ensure a peaceful death – Communication with the family

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Table 2 (*continued*)

	"Author(s), year & setting	Aim of the study	Research Design/data collection technique	Population & Sample	Key Findings on barriers and facilitators of EOL care
					– Create a serene environment, less technical for patient care
19	Vanderspank-Wright et al. (2011) Canada	To explore the experiences of nurses providing care for patients during the withdrawal of life-sustaining treatment in the Intensive Care Unit	Qualitative - In-depth interviews	Purposive sampling Six Intensive Care nurses from a 24-bed medical-surgical ICU, with at least 6 months experience in caring for patients	Barriers to EOL care – Disagreement between healthcare professionals and the family on patient care – Conflict that arose from direction of care; physicians wanting to continue or discontinue and family wanting otherwise – Changes in attending physicians: constant fluctuation of different physicians in and out of the ICU.
20	Yu & Chan (2010) Hong Kong	To describe the response of Intensive Care nurses to death of patients and how it influenced the care offered to dying patients	Qualitative study Interview	Purposive sampling 12 Intensive Care nurses with work experience from 3 to 14 years	Barriers to EOL care – Lack of manpower (shortage of staff) – Conflicts between nurses and doctors on the treatment plan and the philosophy of caring for dying patient Facilitators – Education on end-of-life and bereavement care facilitated care – Peer support was also useful

Table 3
Barriers and facilitators of End-of-life care.

Concept	Supporting theme	Explanations
Barriers of end-of-life care	behaviours and attitudes of patients family	– unrealistic expectations on preventing death – Refusal and denial to accept patient state
	ICU personnel (Nurses)	– Lack of knowledge in providing EOL care – Lack of involvement in EOL care decision
	ICU personnel (Physicians)	– Paradigm of care – Attitude of not letting go – Communication preference and challenges
	The nature of ICU environment	– Lack of private rooms, multi-bed rooms – Busy and noisy environment – insufficient Resources – Lack of manpower
Facilitators of end-of-life care	Support for nurses	– Provision of adequate training and education – Peer support – Mentoring sessions – Counselling – Debriefing
	Working with patients family	– information sharing – family involvement – effective communication – open visitation
	Changes in the ICU environment	– Policies and guidelines – Effective Communication – Teamwork

and unwillingness to accept the transition to end-of-life care, and continuously wanting nurses to do everything possible to save their family member. These, according to Espinosa et al. (2010), are attributable to families' limited medical knowledge of patients' conditions and plans of care. Leung et al. (2017) also reported that certain family expectations were contradictory to the patient's wishes. Some family members want the medical treatment continued or to take the patient home while the intensive care thinks otherwise (Rafii et al., 2016). These behaviours delay the plan of care and shift the focus to the family.

Several studies attributed the barriers to EOL care to nurses, such as inadequate training and education on end-of-life care (Brysiewicz & Bhengu, 2010; Espinosa et al., 2010; Holms et al., 2014; Jang et al., 2019) and lack of involvement in EOL care decisions (Espinosa et al., 2010; Fridh et al., 2009; Jordan et al., 2014; Kisorio & Langley, 2016; Nankundwa & Brysiewicz, 2017; Ong et al., 2018; Taylor et al., 2020; Yu & Chan, 2010). The majority of nurses reported they had little to no formal education on EOL care. Five participants from Holms et al. (2014) described how they learned on the job and from experienced colleagues. Nurses also felt that they had a limited role in EOL care decisions and discussions. Most nurses in Kisorio and Langley's (2016) study felt they spend most time with a patient and therefore should be part of the team that discusses and plans patient care, but unfortunately, physicians solely decide the plan of care and nurses operationalise their written plans.

The differences in the medical and nursing paradigm of care, power imbalance, an attitude of not letting go, physicians conflicting messages, multiple physician differences and opinions, and vague goals of care were identified (Calvin et al., 2009; Espinosa et al., 2010; Holms et al., 2014; Hov, Hedelin & Athlin, 2007; Leung et al., 2017; Ong et al., 2018; Stokes et al., 2019; Taylor et al., 2020; Vanderspank-Wright et al., 2011; Yu & Chan, 2010) as barriers to EOL care attributed to the physicians. Participants in studies (Calvin et al., 2009; Espinosa et al., 2010) described certain attitudes of most attending physicians, such as exhausting all treatment while the patient's condition was irreversible, and disagreement with other colleagues as challenging. Nurses expressed that some attending physicians' are unwilling to let go when a patient's prognosis is poor. At certain times, attending physicians perceive the patient's condition can be reversed, and exhaust all possible treatments. Nurses often assume a tight and challenging position to prepare the minds of family members as the patient's end-of-life approaches, however, the attending physician thinks otherwise as they hold the authority to make the final end-of-life decision (Calvin et al., 2009).

Espinosa et al. (2010) described how the medical paradigm of care that focuses on only curative measures delays the decision-making process and provision of EOL care. Participants reported that the attending physician only focuses on one aspect without considering the whole picture. Participants in Hov et al.'s (2007) study reiterated these findings, reporting that attending physicians occasionally listened to nurses' contributions. Some physicians preferred information from

colleague physicians, objective signs in patients and laboratory results. Studies conducted by Espinosa et al. (2010) and Vanderspank-Wright et al. (2011) also emphasised how constant changes in attending specialist physicians affected and delayed the early provision of EOL care. Some nurses reported the conflicting opinions and discrepancies regarding prognosis in such instances, made it challenging to initiate early end-of-life care. Several studies (Brysiewicz & Bhengu, 2010; Efstathiou & Walker, 2014; Espinosa et al., 2010; Holms et al., 2014) also reported the lack of formal meetings, communication challenges and breakdown among attending physicians, nurses, and family members affect the smooth provision of EOL care in the ICU.

The nature of the intensive care environment also emerged as a barrier to the provision of end-of-life care. Numerous aspects of the intensive care environment challenged the standard delivery of EOL care. Participants in two studies (Fridh et al., 2009; Holms et al., 2014) mentioned the lack of private rooms, the environment's busy and noisy nature, and multi-bed rooms in the ICU. Reportedly, the lack of private and single rooms compelled nurses to put in extra effort to create privacy for the family, which is sometimes difficult to achieve. Nurses described caring for dying patients in multi-bed rooms as frustrating as they had to focus on patients' families in addition to the well-being of other patients and their families. The belief was multi-bed rooms denied family members quality time with dying relatives and the opportunity to express their sorrows fully (Fridh et al., 2009). The dynamic nature of the ICU due to numerous tasks, crowded situations and high levels of noise from monitors and ventilators made the ICU an unfriendly setting to care for dying patients and their families (Efstathiou & Walker, 2014; Fridh et al., 2009; Holms et al., 2014). Participants in Efstathiou and Walker's (2014) study described the presence of numerous monitoring equipment and invasive lines attached to patients as frightening for family members and restricting them from getting close to their relatives.

Rafii et al. (2016) expressed the view that the shortage of staff and inadequate resources to work with made it difficult to attend to all the scheduled tasks and have less time with the patient and family. Nurses in Limbu et al. (2018) and Yu and Chan's (2010) study, which described the lack of workforce and insufficient resources as a significant challenge when caring for dying patients in the ICU, shared similar findings. Poor coordination and lack of collaboration among healthcare professionals, and with patients and families in the intensive care environment also appeared as a predominant barrier to the provision of EOL care for patients and their families (Rafii et al., 2016).

3.2. Facilitators of End-of-life Care

Few studies (11), representing 55% of the 20 studies, presented data on the facilitators of end-of-life care (Arbour & Wiegand, 2014; Brysiewicz & Bhengu, 2010; Efstathiou & Walker, 2014; Fridh et al., 2009; Holms et al., 2014; Jang et al., 2019; Jordan et al., 2014; Kisorio & Langley 2016; Stokes et al., 2019; Taylor et al., 2020; Yu & Chan, 2010). The essential areas nurses described as key to facilitating effective EOL care delivery included support for nurses, working with patients' families, and intensive care environment changes.

Support for nurses was identified as a fundamental facilitator to the adequate provision of end-of-life care for patients and families in the ICU across four studies (Arbour & Wiegand, 2014; Holms et al., 2014; Jang et al., 2019; Jordan et al., 2014; Kisorio & Langley, 2016; Stokes et al., 2019). These identified forms of support were the provision of adequate training and education on EOL care, end-of-life care guidelines, psychological support and counselling, debriefing sessions, mentoring and teaching. Several studies found formal education and training on EOL and bereavement care a useful supportive strategy to support the knowledge base of nurses (Holms et al., 2014; Jordan et al., 2014; Yu & Chan, 2010).

Participants from Kisorio and Langley (2016) and Jordan et al.'s (2014) studies, expressed the view that formal supportive strategies in the form of immediate debriefing and counselling sessions were important in dealing with the challenges related to caring for the dying patient. The use of EOL care guidelines standardised patient care and alleviated some forms of distress (Holms et al., 2014). The Liverpool Care Pathway made EOL care easy, but nurses needed training. Providing extra support for new and less experienced nurses through mentoring sessions, teaching and peer support was also useful in supporting the younger nurses. Arbour and Wiegand's (2014) study found the teaching and mentoring of new nurses useful to help them get used to the job and gain confidence along the journey. Similarly, Yu and Chan (2010) found support from peers useful for younger nurses.

Working with patients' family members was also identified as an essential measure to facilitate EOL care (Efstathiou & Walker, 2014; Fridh et al., 2009; Jang et al., 2019; Kisorio & Langley, 2016; Stokes et al., 2019; Taylor et al., 2020). Working with the patient's families encompasses information sharing, family involvement in patient care, effective communication, education on the treatment plan and open visitation. Generally, as described, family members of many dying patients receive insufficient information about the patient's condition and are not prepared for the death of their relatives. Consequently, they have unrealistic and naïve expectations regarding the plan of their relative's care. In Fridh et al. (2009) and Kisorio and Langley's (2016) studies, nurses strongly identified information sharing, family presence and involvement in patient care as supportive practices to prepare and educate families on how to behave at the patient's bedside. Participants also expressed the family having adequate time with the patient as a helpful and supportive approach to the provision of EOL care. Communicating effectively with families was an important measure strongly identified by nurses (Brysiewicz & Bhengu, 2010; Holms et al., 2014).

Another commonly cited facilitator of end-of-life care was making changes within the intensive care environment. Nurses in four (4) of the studies identified effective teamwork and communication, and creating a less technical ICU environment as valuable to the delivery of EOL care (Efstathiou & Walker, 2014; Holms et al., 2014; Jordan et al., 2014; Limbu et al., 2018; Taylor et al., 2020). The creation of space, through the removal of technical equipment and technology, allows the family to be with the patient until the end (Stokes et al., 2019; Taylor et al., 2020). Teamwork and proper coordination among nurses, doctors and the family were also fundamental to optimise the intensive care provided to the critically ill patient and families (Limbu et al., 2018; Jordan et al., 2014). Also identified was effective and open communication within the multidisciplinary team, patient and family as a critical factor in providing successful EOL care (Holms et al., 2014). Open and honest communication between physicians and family members, nurses and doctors and nurses and patients' families contributed to positive experiences for ICU nurses and made intensive care work easier. Participants in Holm et al.'s (2014) study identified the use of an integrated care system, such as guidelines, as a useful approach to delivering EOL care to patients in the ICU. Some nurses believed the existence of the Liverpool Care Pathway reduced some forms of distress, gave them more autonomy and reduced the regular phoning of doctors. Efstathiou and Walker (2014) and Kisorio and Langley (2016) emphasised the need for practice guidelines to streamline EOL care activities in the ICU.

Efstathiou and Walker (2014) reported the creation of a less technical environment that promotes family involvement, supports family presence and increases privacy as key to successful EOL care in the ICU. Nurses supported the idea of allowing enough time and space to reconnect patients and their families, in an environment that promoted patient and family privacy and facilitated family visitation. According to most studies (Fridh et al., 2009; Kisorio & Langley, 2016), these can be achieved by instituting private rooms for patients, flexible visiting hours, and a noise-free and serene environment.

4. Discussion

It was evident from nurses reported experiences that several areas

pose challenges to the optimal delivery of EOL care in the ICU. Likewise, there were areas reported that when strengthened assured patients and families of excellent EOL care. The literature describes the current intensive care environment as an unfavourable setting for the provision of excellent EOL care for patients and their families (Noome et al., 2016b; Ranse et al., 2012).

The review found the behaviour of patient's families, the nature of the intensive care environment, physician behaviour, and nurse-attributed factors considerably hindered the delivery of optimum end-of-life care in the ICU. As described, family members' limited knowledge of lifesaving measures, unrealistic expectations, and refusal to accept patients' prognoses are the most significant challenges to providing effective EOL care (Beckstrand et al., 2017; Brooks et al., 2017). These findings support that of an earlier study by Beckstrand et al. (2017), which described the behaviours of patients' families as one of the biggest obstacles to appropriate EOL care in the ICU. Such behaviours take the healthcare professionals' attention away from patient care, and lead to inconsistencies in EOL care (Attia et al., 2013; Iglesias et al., 2013).

Similarly, nurses in Beckstrand and Kirchhoff (2005) and Crump et al.'s (2010) studies also perceived family members who continuously demand updated information on a patient's condition as a significant setback to the provision of EOL care in the ICU. The family is an extension of the patient admitted into the ICU; therefore, working with patients' families through information sharing, family involvement, effective communication and open visitation was among the supportive measures to promote EOL care. Iglesias et al. (2013) agree with the family being present at the patient's bedside as a supportive practice and beneficial to educating families on the necessary behaviour around the dying patient. Similarly, Attia et al. (2013) and Beckstrand et al. (2006) found family-centred care as supportive behaviour for providing EOL care. Beckstrand et al. (2006) also found educating patients' families on dying in the ICU, and the way to behave a useful measure to providing good death in the ICU. This implies that during patients' admission, the ICU team should constantly educate the family on the possible outcome and the supports systems available for easy access.

The provision and excellent delivery of EOL care depend on nurses' understanding of personal beliefs about death and dying, strong EOL care base, professional and personal experiences and support resources (Hall, 2020). Intensive care nurses receive limited training and education at basic nursing levels to provide adequate EOL care (Attia et al., 2013; Kirchhoff & Kowalkowski, 2010). Literature provides adequate documentation about the need for formal training and education on EOL care; nevertheless, there continues to be limited formal training and EOL care education for nurses (Kirchhoff & Kowalkowski, 2010). In the absence of formal supportive structures, most nurses rely on previous experiences and support from colleagues to inform practice (Rafii et al., 2016). This was apparent across the reviewed findings as a significant barrier to EOL care. Intensive care nurses need training on how to provide EOL care. This finding resonates with the findings of other studies that nurses identified adequate training and education as a means to improve their knowledge and skills in providing EOL care (Fridh, 2014; Langley et al., 2014). The provision of adequate institutional support for nurses through adequate training and education, formal end-of-life care guidelines, and debriefing and mentoring sessions are essential requirements for the successful delivery of EOL care. Several studies have emphasised the importance of ICU nurses' education in EOLC (Fridh, 2014; Noome et al., 2016b; Ranse et al., 2012). This calls for hospital management to have supportive systems, such as in-service end-of-life care training, in place for ICU nurses and develop appropriate ICU protocols to guide the delivery of optimal end-of-life care.

The perception was that medical paradigm of care, physician unwillingness to let go, the conflicting opinions and discrepancies among multiple attending physicians regarding prognosis and patient's direction of care were barriers to the provision of EOL care. This finding supports those of earlier studies (Brooks et al., 2017; Iglesias et al., 2013) that reported differences and conflicting opinions from multiple physicians and ineffective communication as one of the largest obstacles to providing EOL care. It was also evident from the findings that physicians preferred information from colleague physicians and objective signs in patients. This finding was similarly raised by Hansen et al. (2009), and congruent with other research findings (Beckstrand & Kirchhoff, 2005), which found that physicians neglecting the opinions of nurses in EOL decisions was detrimental to EOL care delivery. Studies by Beckstrand and Kirchhoff (2005) and Iglesias et al. (2013) reported physicians' constant disagreement about the plan of care as another obstacle to appropriate EOL care in the ICU. Evidence suggests that when family members receive adequate support, physically, emotionally, and psychologically, they feel satisfied with the care provided for their relatives and appreciate the healthcare team's efforts (Henrich et al., 2011).

Another identified barrier to optimal EOL care was the poor layout of the ICU, characterised by high levels of noise, lack of private rooms, heavy workload, and multi-bed rooms. The heavy workload compels nurses to manipulate highly sophisticated equipment, satisfy family needs, and provide quality care for patients. These findings support the evidence from the study of Zomorodi and Lynn (2010), which indicated the nurses are often in between satisfying the needs of newly admitted intensive care patients, dying patients' families, other healthcare providers and their other responsibilities. This also confirms the findings from Brooks et al. (2017) that described the lack of privacy due to multi-bed rooms and constant noise from alarming ventilators and monitors as a major barrier to EOL care. These findings resonate with the evidence from several studies that report the ICU layout as a major barrier to the provision of EOL care (Attia et al., 2013; Zomorodi & Lynn, 2010).

The modern approach to intensive care delivery lies in the multidisciplinary model, where there is collaboration and sharing of responsibility between nurses and physicians. Considered fundamental to the successful delivery of EOL care is effective collaboration and open communication between all parties involved in the discussions and decision-making process regarding EOL care plans. It was emphasised that teamwork and effective communication between healthcare providers improve family satisfaction, reduce the incidence of conflicting opinions on EOL care and contribute to positive experiences for nurses and family members (Attia et al., 2013; Beckstrand et al., 2006; Hansen et al., 2009). Similarly, Brooks et al. (2017) reported that effective collaboration, teamwork and open communication among nurses, physicians and families facilitated safe and high-quality EOL care. Effective and improved communication between nurses and other members of the intensive care team facilitates a good death, as all members work towards the same goal (Beckstrand et al., 2006). This implies that in the ICU, attending physicians should see other healthcare professionals, including nurses, as partners in providing holistic care to patients and their family members.

The nature of the ICU design has a profound impact on organisational performance and clinical outcomes (Thompson et al., 2012). Described as crucial to providing excellent EOL care was making changes and modifications in the ICU setting to include care for the dying; the provision of private rooms, liberalisation of visiting hours for dying patients' relatives, and regulation of noise from monitors promoted a favourable and peaceful environment for providing EOL care. This finding is consistent with other studies (Ranse et al., 2012), which reported that proper modification of the ICU creates an intimate and peaceful environment for patients and family members. Interventions such as a single room for the patient, removal of clinical equipment, and allowing visitors at the patient's bedside assist in humanising the patient and shift family focus to comfort care. These reviewed findings are consistent with the evidence from several studies that reported having time for the family at the patient's bedside as a supportive practice and beneficial to educating them on how to behave around their patient (Attia et al., 2013; Beckstrand & Kirchhoff, 2005; Iglesias et al., 2013).

Having private rooms, playing soothing music, allowing the family at the patient's bedside and having quiet places for family prayer and meditation facilitate dying with dignity (Beckstrand et al., 2006). There should be separate rooms created within the ICU setting for the nursing of patients at the end-of-life. Hospital policies on visiting hours need to be flexible for affected family members.

4.1. Implications for practice and future research

There has been extensive study across the globe of the barriers and facilitators of EOL care from nurses' experiences and perspectives. Despite nurses being committed to the care of dying patients and their families, it is evident from this review that they are greatly challenged while executing these roles. These challenges, however, can be reduced through adequate EOL education and training, the development of context based EOL guidelines, a structured mentoring system, and intentional post-EOL care debriefing sessions. Healthcare organisations can support nurses by providing opportunities such as routine and compulsory EOL care continuous professional development programme, and a designated place within the unit for immediate debriefing and counselling for all healthcare providers involved in EOL care. Perhaps a resident psychologist or counsellor in the ICU will also be beneficial to the emotional well-being of nurses and meeting their needs during EOL care. Due to the nurses limited EOL knowledge and training while working in the ICU, various nursing training institutions could introduce EOL care into their curriculum at the early stages of the training and education process.

Future research should consider the development of EOL guidelines, especially for the African context, where the population has a different disease profile and strong cultural and spiritual ties to dying compared to the western world. In the absence of a supportive system, future studies should investigate the coping strategies and behaviours used by nurses while providing care in the adult ICU. This evidence could benefit bedside nurses, patients, their families, and ultimately the healthcare institution. The development of a robust EOL care educational intervention, for instance, an EOL care simulation program, could benefit nurses and boost their confidence when providing care in the ICU.

4.2. Strengths and limitations

The review findings provided further understanding of the barriers and facilitators from nurses' perspectives. There was a systematic approach followed thoroughly, with a review framework, to arrive at the final answer to the research question. In addition, the researcher consulted an experienced librarian in the literature search and development of the search words and search strings. Due to the date limit and language restriction, we may have missed important studies published before and after the set dates and others published in other languages. There were only four databases used, which may have limited the search.

5. Conclusion

Nurses describe the current intensive care environment as an unfavourable setting to provide optimum end-of-life care for patients and their families. While they remain committed to supporting both patients and their families, they are faced with several challenges, including behaviours of patients' families, limited EOL training, the attitudes of attending physicians, and the unfavourable nature of the ICU setting. The provision of adequate end-of-life care training and education for nurses, the formulation of policies and guidelines in the ICU, and working with family members are vital measures for enhancing the quality of care patients and their families receive at the end of life.

Author contributions

E.K.K designed the review in consultation with S.S. E.K.K and S.S were involved in the idea conception, drafting and revising the manuscripts and final approval of the version to be published. E.K.K conducted the literature search. E.K.K with the help of S.S screened eligible studies and extracted the relevant data. E.K.K and S.S interpreted and synthesised the evidence. E.K.K wrote the manuscript in consultation with S.S. All steps were reviewed and verified by S.S.

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Declaration of Competing Interest

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

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