Appendix 1. Findings related to RQ A: "What are the obstacles to the realization of good death in ICU?"

Categories		
Sub-categories	**Study number & Code**	
A-1 Although ICU nurses value end-of-life care for patients, it is difficult to carry it out for subjective and objective reasons.		
1) ICU nurses value the caring for dying patients.	#1	Nurse would like to do whatever they can.
	#1/2/5/8/9/12	Nurses consider that caring for dying patient and their family is honorable.
2) ICU nurse bowed to public pressure to turn on the monitor.	#1	Nurses will not turn the machine off to let the patient die in their shift.
	#3	Nurses turn monitor on to make relative believe nurses still work hard.
3) Important decision is limited by law, ethics and morality.	#1	Fear of suing and legal accountability lead to the afraid of doing written directive for do not resuscitate [DNR) and palliative or other comfort care.
	#1/3/4/11	Nurses' participation in the decision-making process is influenced by moral factors
4) Ineffective treatment and the nurses' own religious beliefs influenced hospice care.	#5	Nurses felt conflicted about the dual effects of drug therapy, ineffective treatment, and patient self-determination difficulties
	#4	Nurses' degree of uncertainty about the efficacy of treatment and their religious beliefs affected their participation in EOL decision-making.
5) The purpose and treatment status of ICU conflicted the nurses.	#5/12	Nurses always thought the treatment is taken too far.
	#2/5/11	The ICU is focused on preventing death, nurses are conflicted about providing hospice care.
A-2 ICU nurses lack formal education and policy support to care for dying patients and their families.		
6) Most ICU nurses, especially junior nurses, have difficulty coping with dying patients and their family because of a lack of formal education.	#2/3/9	Nurses learn EOLC skills primarily through the accumulation of good and bad experience and observing other staff, and also rely on the college network for support, but the results are not satisfactory.
	#2/12	The junior nurses just extubate and then start the morphine.
	#10	The junior nurses deliberately will leave the family alone in the room because they are not prepared to face the family.
7) The particularity and uncertainty of ICU lead to the lack of targeted policies and guidelines.	#3	The focus of care before and after the decision of withdrawing treatment is not clear.
	#2/3/13	Nurses feel uncertainty in the delay between the decision to withdraw treatment and the actual occurrence and whether patients should be removed.

	#8	It is important to let families accompany dying patients, while at the emergency moment it is not sure.
	#9	LCP improved end-of-life practices, but was not suitable for ICU.
	#2/3/13	Nurses are not sure of any specific policies or protocols that can be used to guide end-of-life care.
A-3 ICU nurses do not have extra time and energy to provide specific care for emotional and workload reasons.		
9) The particular nature of the care given to dying patients leads to emotional exhaustion among ICU nurses and this is often overlooked.	#3	Nurses can't resolve emotional questions then lead to unsure of level of participation in hospice care.
	#5	Nurse had the emotional distress since they experienced not keeping their words.
	#2/8/9	Nurses felt exhausted and needed time to recover before they could care for new patients, especially ones who were dying.
	#10	It is more traumatizing if the patient is either of young or developes good relationships with nurses.
	#2	Although frequently feel grief and suffering, nurses believe that they have responsibility to face death and dying.
10) Lacking of emotional support for ICU nurses.	#10	Emotional supports are not available during the caring process and after the patient's death for nurses.
	#2/10	Nurses thought that some external support services existed but they are not accessed.
11) Variable illness leads to sudden death, which is not conducive to providing sufficient nursing time for dying patient.	#7	Nurse thought the time is too short to care for dying patient.
	#7	Death cannot be accelerated or delayed.
	#11	Nurses had no time to give any support to patients, letting them be upset.
12) Shortage of caregivers and overwork load lead to lack of time and energy to provide quality care for dying patients.	#11	Beds, staff workload, staff shortages have influence on the quality of care.
	#10	Shortage of staff leads to no enough time to spend with patients.
A-4 In the face of death, families and patients always cannot make wise and correct decisions.		
13) Patients cannot speak to express themselves.	#1	Patients cannot speak to express themselves.
14) There are two extremes of truth facing the family: withdraw of treatment or denial.	#10	Families' harsh reactions could be due to their emotional distress.
	#1	Stopping the treatment also a choice of many families.

A-5 The collaborative and physical environment of the ICU is not conducive to the care of dying patients.		
15) ICU complex and noisy environment and lack of privacy increase the distance between patients and their families.	#5	ICU is surrounded with machines and noises.
	#9/10	Noise is normal in the ICU.
	#8/11	The small size of the unit had bad effect on privacy.
	#3/5	Monitoring equipment and invasive lines limits the intimacy between the family and the patient
16) There is a lack of clear communication and teamwork among doctors and nurses especially regarding important decisions.	#1/3/13	Lacking of clear communication between doctors and nurses about the processes following the decision to withdraw treatment.
	#3	Lacking of communication is a barrier to effective end-of-life care.
	#2	After the decision of withdrawing treatment, some nurses feeling less supported.

Appendix 2. Findings related to RQ B: "How to help ICU dying patients to get good death?"

Categories			
Sub-categories	**Lower categories**	**Study number & Code**	
B-1 To provide humanized emotional support and educational training for ICU nurses, the education of family members and patients is also essential.			
1) Providing emotional support to ICU nurse through humanized working adjustment.	Providing emotional support to ICU nurse through humanized working adjustment.	#10	Nurses need to be given enough time to recover after death.
		#10	Nurses who have recently lost a loved one should not be immediately assigned to care for dying patients.
		#10	Arranging the length to take care of the same dying patient according to nurses' wishes.
2) Regularly formal training and education is needed to ICU nurses, patients and family members.	Regularly formal training and education is needed to ICU nurses, patients and family members.	#9	Nurses expected to know how best to provide EOLC and how to deal with the challenges.
		#13	ICU nurses hope to be present in multidisciplinary meetings on a regular basis to share their knowledge with other professionals and entails also an explicit role in decision making.
		#13	EOLC education is required for patients and their families from other cultures and religions
B-2 Creating a suitable working environment.			
3) Creating an equal, cooperative and safe working environment.	Trying to establish an equal and cooperative relationship of between doctors and nurses.	#9	Keeping constant contact with physicians who are the key role to manage dying patients.
		#8/10	There was a need to assist each other and eliminate discrimination against nurses.
	Strengthening multidisciplinary teamwork and creating a sense of security.	#1/4/10/13	Physiotherapists, social workers, family care nurses and other professionals' cooperation is essential.
		#11	The medical staffs protected each other by caring for each other.
		#2	Camaraderie among employees and a team-centered work environment can create a sense of security and ease pain.
4) To provide a satisfactory environment	Arranging the environment according to the wishes of family members and	#6	Arranging the environment according to the wishes of family members and patients.

for patients and their families.	patients.		
	To create a serene atmosphere.	#6	Don't rush things and create a calm atmosphere.
		#6/7/8	Closing the curtain and lowering nurses' voices during a time of death.
	Creating a sense of less clinical and homely.	#2	Removing clinical equipment, dim lights, replacing hospital linens with colored sheets and quilts, posting photos, and playing music
		#3	Creating a less technical environment.
	To protect privacy.	#4/11	Pulling the curtains around the patient and family.
		#2/4/8/11	A single ward creates a private space that also protects other patients from distractions.
		#7/8	Providing a suitable space at the bedside of dying persons.
B-3 Providing care opportunities to family members before the end of life through timely identifying deaths and arranging time and space for visits and farewells to ensure family members have no regrets.			
5) Identifying the signs of death in time to create more time and space for the family, leaving no regrets.	Experience and monitoring indicators and warnings are needed to identify early signs of death.	#1/5/6/11	Soon knowing that the patients are passing away by hypotension, pants, double dilatation of pupils, bradycardia, GCS 3 and hypernatremia.
		#8	Turning off alarms but leaving the ECG-monitor on, especially when the patient is on the ventilator to identify patients' death.
	Creating positive memories and increasing the intimacy of patients and their families, making sure families do not have regrets.	#2/4/8/13)	Relatives are encouraged to contact and talk with patients.
		#2	Memory-making activity: remove a patient's handprint and collect a lock of the patient's hair and their identification tape for family members to keep.
		#6/13	Patients' family members are encouraged to say goodbye and show gratitude and love to the dying patients.
		#3	Allowing the time and space for intimacy to reconnect the patient and family.
6) Increasing the intimacy between family members and patients and try to make a good farewell.	Time is suitably provided for patients and family in the final stage.	#4	Anticipating suitable timing for family members to come in and be with the patient.

		#8	Administering inotropic drugs and keeping the ventilator on and in order to create chance for final farewell.
		#4/10/12	Allowing family members to visit out of hours on the basis of practical situation.
	In the last stage, family members should strengthen their accompany and care for the patients.	#5/7/8/10/13	Family should be advised to stay nearby at critical times when a patient may die soon.
		#3/5/7/8	Liaising with family members to visit critically ill persons in hospital
		#7/10/12/13	Joining in the care for the dying patients can make families feel a relief.
B-4 Valuing terminal patients and their families, so that they are physically and mentally satisfied.			
7) Giving priority to dying patients and removing their loneliness at the end of their lives.	Giving priority to end-of-life patients and keeping an eye on their wishes and needs.	#6/11	According to the patients and families' wishes, allowing their families to be with them and providing water, food and supplies with the Buddhist monks.
		#4	Reminding doctors to continue to pay attention to the dying patient's needs.
		#7	Giving priority to the care for dying patients.
	Letting family focus on patient.	#2	Nurses think families should concern more of patients rather than watching a monitor.
		#8	Close relatives pay much attention to monitors.
	Caring for an unaccompanied patient as a family member	#1/8	Giving patients warm and humanistic care as their family members and to never let them to be lonely.
		#3/5/6/7/10/11	Treating the dying patients who do not have family members with him during the dying process like their family members.
8) Providing planned and ongoing end-of-life care.	Developing a timely and rational end-of-life care plan.	#2/8	Establishing a good relationship with the patient before he/she became unconscious through relatives' stories about them.
		#7	Nurses can start to prepare end-of-life care for patients after checking the condition of patients and physicians and families' suggestion.
		#6	Nurses need time to prepare for a good death.
	Continuing care for the patient and family, even after death.	#5/7/8/11	Caring for the patient include caring for the body and transferring the body for interment after death.
		#5/8/13	Caring for the family include psychological and emotional support after patients' death.

9) Ensuring the physical and mental comfort of dying patients and their family.	Trying to make patients feel physical comfort.	#1	Do not perform invasive procedures.
		#1	Nurses may reduce dopamine, serum therapy and even FIO2 according to the doctor's order.
		#1/4/6/12	Keeping patients' body clean and dry, keeping the wound clean and avoiding blood stains.
		#3/4/13	Maintaining a comfortable position, often turning over, preventing the occurrence of pressure sore, undertaking oral care, protecting oral lips.
		#8	Better to make patient do not struggle to breathe.
	Respecting the cultural practices and rituals of different religions.	#7/10/11	Respecting the patient's and families' cultural customs and rituals.
		#1/4/6	Cooperating to do religious rituals and pray for dying patients.
		#1/6	For Muslim patients, nurses and families perform rituals and take care of the corpse during the dying process.
		#6/7	For Buddhist Thais, upon death, nurses will provide opportunities for the patient and family to discuss and manage family affairs.
B-5 Mutually accepting the fact of death, winning the trust of family members to actively seek consistency in treatment decisions.			
10) ICU nurse should fully understand support and guide the families on practical issues.	ICU nurse should fully understand support and guide the families on practical issues.	#5/8/12	Understanding the complex needs of families with empathy.
		#4/8/10/11	Nurses provide families with practical arrangements and intimate gestures of support.
		#5/8/12	Developing an intimate relationship with the family.
		#2/3/4	Trying to make clear of the type of atmosphere the family wanted, the nursing support and the degree to participate in the care of their relatives.
		#4	Observing families to decide if they want nursing support.
		#8	Sometimes nurses can administer additional analgesics or sedatives at the request of the relatives.
		#13	Listening to the family, providing advice on the visit of children, providing practical suggestions

			concerning sleeping accommodations, offering the visit of a chaplain or social worker, and offering beverages and food.
		#6	Nurses take responsibilities of advising, guiding and supporting for preparation of death.
11) To mutually accept the fact of death.	Try to convey sufficient, truthful and understandable information to patients and their families.	#6	Let dying patients know about the environment, the health resuscitation process and their imminent death.
		#4	Participant the physicians' communication with relatives to know information exactly.
		#4/6/10/13	Attending family meetings to listen, add information, explain or clarify information, and observe whether family and patients [if possible] understood the information given to them during the meeting.
		#3/4/5/6/	Nurses must repeatedly inform the patient's family members of the patient's current situation and the possible situation.
		#9	To let patients and families know the plan and exactly what is involved when someone dies, even all the fine intricate details, like removing tubes and lines.
		#8/10	To explain patient's physical condition, and the ICU environment as well as medical equipment, monitors, wiring, and how it works.
		#6	Nurses need to talk about CPR with families every day when the dying patient needs CPR.
	Letting families be calm.	#6/7	Families are encouraged to not cry.
		#2/5/7	Letting the relatives calm and then the dying patients calm down as well.
12) ICU nurse should assist the family and the doctor in making the right decisions and defending the patient.	ICU nurse should assist the family and the doctor in making the right decisions and defending the patient.	#10/12/13	Nurses need participate in decision-making and to raise their concerns and defend the patient.
		#4	If nurses feel certain that continued treatment is futile, they can coax physicians.
		#4/6/13	Nurses share their observations with relatives to make sure that relatives can more actively participate in any discussions about further, continuing, escalating or reducing treatment.
		#13	Discussing the content before the family meeting starts but also to discuss the way to withhold the

		treatment and the responsibilities of every professional involved with EOLC.
	#5/10/11/12/13	Nurses will be advocator for the patient.
	#12	Nurses have ability to get their own way and push for decisions.
	#5/10	Nurses reveal enough and appropriately information about the patient's prognosis for family members to make an informed decision.