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Ethics in Simulation for Intensive Care

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In this paper we investigate the relationship between simulation and ethical care in the intensive care unit (ICU), primarily analysing the uses of simulation-based training in helping learners to improve their ethical decision-making processes and better react to and reflect upon moral dilemmas.

Ethics and simulation-based training can be connected from different perspectives:

1. The whole idea of using simulation is to enhance patient safety. Using simulation to train both technical skills and non-technical skills like communication and decision making is an ethically sound method, as the patient is not endangered in the process of training. While it will not be possible to eliminate the contact between students and patients, this contact can be reduced in the most challenging periods—for example, during first tries—by using simulation (Ziv A et al. 2006).

2. When using simulation-based training, ethical principles must b e kept in mind. The patient—even though during these scenarios the patient is a manikin—must be treated with decency and informed about procedures and the like, as if it were a human being. As an example, discussions about the patient case should not be carried out above and around the head of the patient, but a little aside from the patient/manikin. In an ICU setting in particular, where many patients are sedated or otherwise not able to follow the conversation, it can be tempting to forget this.

3. Simulation can and should be used in an ethically responsible way. The instructors have a very powerful position and should use it responsibly, making sure not to negatively expose the participants or to tri ck them. The participants in simulation- based training must feel safe and well treated even though they put themselves and their abilities on display; the instructors and facilitators must never forget this, but respect the integrity of participants. A clear agreement on the confidentiality of the aspects discussed and the behaviour of the particip ants seen during simulation training should be expected, and this agreement should be strictly stuck to.

4. Simulation can be used to help learners reflect upon and improve on making ethical decisions during diagnosing and treating patients (Gigerenzer and Gray 2011; Kahneman 2011; Groopman J 2007). Moral dilemmas and ethics in the decision-making processes in simulation-based courses are often incorporated in full scale simulation. It is this last perspective that we discuss in more detail in this paper. In ICUs, moral dilemmas and difficult decisions are frequent. Training on the decision-making process and how to explain and inform about often sensitive information to relatives is difficult during every day clinical life, except by direct observation or trial and error. Using simulation-based training is getting more and more widespread. This article will go deeper into the thoughts behind this and give several examples.

Bioethical Principles

When considering the use of simulation for training of ethical issues, we need to discuss the standpoints. Four principles have gained some acceptance in healthcare (Lawrence DJ 2012):

1.The Principle of Respect for Autonomy.

Through simulation, participants can be sensitised to these issues and, by working through challenging situations in this regard, they can be better prepared and reflect upon their action s. An example is a trauma situation where the victim is a Jehova's Witness and will not give consent to a necessary blood transfusion.

2. The Principle of Non-Maleficence.

This can be addressed in situations where the necessary treatment would have negative unwanted effects and where participants might need to balance different treatment options with their known or expected positive and negative effects, or even consider palliative care and allowing the patient to die as he or she wishes instead of maximising the medical possibilities to prolong life.

3. The Principle of Beneficence.

This can be discus se d in those situations where the patient presents a certain problem, which might actually be an indicator for larger underlying problems. Consider for example a child patient who shows injury patterns that indicate non accidental injuries.

4. The Principle of Justice.

This can be worked with in simulation in those situations where the amount of resources is not sufficient for the patients to be treated. A lack of ICU beds is an example of this, which may impose a decision of whether or not to treat patients with very low chances of recovery.

Examples of Scenarios from the ICU

• Breaking Bad News

These situations are often trained by role-playing, but can also be incorporated successfully into simulation scenarios in various ways:

• Acute Situations.

A relative (portrayed by one of the simulation crew) phones during the simulation scenario to ask about their loved one. This is done at a critical instant where the patient just deteriorated severely or just had a cardiac arrest. The participant of the course—often a critical care nurse—will have to conduct the conversation with tact and decide how much to tell the relative over the phone, i.e. whether to ask him/her to come to the ICU or whether to tell him/her straight away about the death or imminent threat to the patient.

• More Slowly Evolving Situations.

In a one day course the same patient is followed in multiple scenarios in succession. The patient deteriorates during the day (time lapses between the scenarios are simulated to cover a patient case during a week or more, i.e. the “simulation time” of a day covers a “simulated time” of a week) and news about the deterioration has to be brought to the relatives as part of the scenario. The final scenario is about withholding or withdrawing further treatment and initiating palliative care. These scenarios work particularly well when multi-professional trainings are carried out. The nurses and physicians can collaboratively plan and execute the talks with the relatives, as they would in a real Danish ICU.

• Changing the Objective of the Treatment

The setting for the first part of the simulation is the emergency room, where the participants encounter a seriously traumatised victim of a car accident. The patient is unconscious and a severe head injury must be suspected. The patient also has a liver laceration and is bleeding into the abdomen. In the scenario the participants quickly realise they have to secure the airway by intubation and begin rapid fluid resuscitation. During the scenario, the patient’s pupils change from equal and reacting to light to unequal and unresponsive to light; if a urinary catheter is inserted, profuse urinary output is seen; the pulse is decreasing and the blood pressure increasing – all signs of brain incarceration. The participants must detect this and change their mindset from rapid resuscitation of a trauma victim to regarding the patient as a potential organ donor and change the treatment accordingly. Also, a plan for sharing the information and discussing with the relatives must be created. The subsequent debriefing of the scenario facilitates the learner’s realisation and reflection regarding this transition.

During a simulation, the participant is called to see another patient who needs intensive care. The participant has been told who the patients in the ICU are and is asked to prioritise: who should be transferred to a ward or a step-down unit (if any patient can be and beds are available) or transferred to another ICU, who should stay, and whether the “new” patient should be admitted or even transferred to another ICU in another hospital.

Role of Simulation

Simulation has lots of potential in the situations described above and others. Learning can be tailored to the situations and to the levels of expertise of the participants and the challenges can be varied systematically. Pregraduate students could be presented with rather straightforward challenges, while consultants might encounter much more difficult and complex cases.

The key learning messages are usually distilled during the post-simulation debriefing, where the facilitator helps participants to reflect upon advantages and disadvantages of different approaches. During such debriefings, it is possible to investigate the situation from the perspective of different ethical principles, including emotional aspects, different norms, values and beliefs. In the scenarios that follow, participants can then try the approaches discussed and again investigate their characteristics and impact.

The facilitators need to be trained for creating the open and constructive atmosphere necessary for such discussions. Scenarios that deal with both medical technical issues and ethical issues are quite demanding for the instructors and facilitators. Not only do they need to be experts in intensive care treatment but a substantial experience and knowledge of ethical decision-making is also required. To be able to write and conduct

scenarios and debriefings of this character requires reflection and self-awareness on their behalf.

Inter-Professional Dealing With Ethics

By bringing people from different backgrounds together we can reflect on similarities and differences in their norms, values and beliefs. This could include people of different professions as well as different nationalities. This method fosters discussions and respect for each other's viewpoints and challenges and helps create a better working climate and more ethically sound decisions in practice.

Conclusion

Simulation offers to create, recognise and use learning opportunities regarding ethical decisions in intensive health care. It poses substantial requirements to make use of these opportunities, but offers powerful learning possibilities in return.

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