



# An integrated ethical decision-making model for nurses

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## Abstract

The study reviewed 20 currently-available structured ethical decision-making models and developed an integrated model consisting of six steps with useful questions and tools that help better performance each step: (1) the identification of an ethical problem; (2) the collection of additional information to identify the problem and develop solutions; (3) the development of alternatives for analysis and comparison; (4) the selection of the best alternatives and justification; (5) the development of diverse, practical ways to implement ethical decisions and actions; and (6) the evaluation of effects and development of strategies to prevent a similar occurrence. From a pilot-test of the model, nursing students reported positive experiences, including being satisfied with having access to a comprehensive review process of the ethical aspects of decision making and becoming more confident in their decisions. There is a need for the model to be further tested and refined in both the educational and practical environments.

## Keywords

decision making, ethics, ethical issues, nursing ethics, problem solving

## Introduction

Patients' safety and well-being are dependent, to a large extent, on professionals' ethical decisions.<sup>1</sup> Regardless of his or her excellence in clinical knowledge and skills, a healthcare professional who has low or non-existent ethical standards should be considered unfit to practice. For responsible healthcare, professionals have to be competent in ethical decision making.<sup>2</sup> An ethical problem is 'as [an ethical] matter or issue that is difficult to deal with, solve, or overcome and which stands in need of a solution' (p.94).<sup>3</sup> Ethical problems in a clinical setting are those we rarely confront in our daily lives, and ethical norms learned from our parents or schools are not sufficient to resolve clinical ethical issues. There are concerns about professionals' ethical competency. Health professionals often adopt an inconsistent decision-making process or reach inconsistent ethical conclusions in attempts to resolve identical ethical problems.<sup>1,4,5</sup> Moreover, they tend to come to decisions of an ethical nature before reviewing all possible alternatives or going through a systematic and comprehensive decision process.<sup>2</sup> It is challenging for clinicians to make ethical decisions.

Health professionals attempt to achieve the best possible and morally-justifiable resolution while prioritizing a patient's interest.<sup>6</sup> Accordingly, the quality of ethical decision making should be evaluated in terms not only of its conclusion but also the process of decision making. For example, whether all individuals

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affected by the decision have an opportunity to share their informed decisions or preferences.<sup>7</sup> An explicit and systematic method for ethical decision making is highly likely to improve the quality of such decisions for several reasons.<sup>2,8-11</sup> First, ‘a model functions as an intellectual device that simplifies and clarifies the sources of moral perplexity and enables one to arrive at a self-directed choice’ (p.1701).<sup>2</sup> Second, it eliminates a possibility of deviated assessment of an ethical problem, for example, not considering all relevant parties and their diverse preferences,<sup>12</sup> or reaching conclusions based on his/her intuition rather than on intellectual rigor.<sup>13,14</sup> Third, ‘communication and documentation of an explanation for a course of action’<sup>8</sup> and collaboration among stakeholders become easier throughout an ethical decision-making process when a systematic decision-making model is shared.<sup>7</sup> A systematic decision-making model helps identify where a gap in understanding an issue or a difference in value systems (disagreements) exist among stakeholders (interdisciplinary team) through transparent communication.<sup>1,15,16</sup> Finally, the use of a systematic model of ethical decision making will allow for the accumulation of information concerning ethical decisions, thus revealing norms.<sup>7</sup> Although nurses make ethical decisions every day, we know little about how similar are our ethical decisions to those of other nurses. If we collect information on our ethical decisions, codes of ethics can be developed being based on our normative ethics,<sup>7</sup> which can be more acceptable and evidence based.

Structured models for ethical decision making have been introduced by different authors. To name a few, Johnstone’s moral decision-making model<sup>3</sup> includes stages to assess the situation, to identify moral problem(s), to set moral goals and plan moral action, to implement moral plans of action, and to evaluate moral outcomes. According to Davis, Fowler, and Aroskar,<sup>17</sup> if a conflict of moral duties or values exists, we need to go through the following stages: 1) review of the overall situation to identify what is going on; 2) identification of the significant facts about the patient; 3) identification of the parties or stakeholders involved in the situation or affected by the decision(s) that is made; 4) identification of morally relevant legal data; 5) identification of specific conflicts of ethical principles or values; 6) identification of possible choices, their intent, and probable consequences for the welfare of the patient(s) as the primary concern; 7) identification of practical constraints and facilitators; 8) make recommendations for action; 9) take action if you are the decision maker and implementor of the decision(s) made; and 10) review and evaluate the situation after action is taken. In addition, Thompson et al.’s<sup>11</sup> DECIDE model suggests to: 1) Define problems – what is an ethical issue?; 2) Ethical review – what principles are relevant to case?; 3) Consider options; 4) Investigate – ethical outcomes, costs and benefits; 5) Decide on action; and 6) Evaluate results. However, it is hard to say what are their strengths or weaknesses and which one is more greatly-accepted by clinicians. Therefore, the current study critically reviewed structured ethical decision-making models found via a systematic search of literature and suggested an integrated and comprehensive ethical decision-making model by synthesizing strengths of the different ethical decision-making models and by pilot-testing it. The suggested ethical decision-making model is meant to be prescriptive so that nurses may directly apply it in practice.

## Methods

Peer-reviewed journal articles were searched using Medline and CINAHL databases. The following keywords and the subject headings were entered into the PubMed and CINHAL interface on 30 June 2010: (ethical OR moral) AND ((decision AND making) OR (decision AND model)). Four hundred and twenty-six articles from Medline and 202 additional articles from CINAHL were retrieved. Their titles and abstracts were reviewed for potential relevance, and then the selected 78 articles were reviewed for their full-text. Studies were selected if (1) their authors originally developed an original ethical decision-making process or model, (2) the ethical decision-making process or model clearly presented steps for decision, and (3) they were written in English. Studies were excluded mostly

because (1) the authors introduced or applied an ethical decision-making process or model developed by other people, (2) they described only a theoretical background of ethical decision making without a decision-making process, or (3) their ethical decision-making process or model were developed for non-healthcare practitioners or for non-clinical settings, such as business, information technology, education, or research. A report of an ethical decision-making process for family physicians of Canada<sup>18</sup> was included after reviewing references of the selected articles. Twenty structured ethical decision-making processes were reviewed systematically.

An integrated ethical decision-making model was developed and modified through a pilot test of its usability. In two nursing ethics courses, 67 second-year baccalaureate nursing students were asked to solve four cases of clinical ethical problems through a group discussion involving three or four people and to submit a report of their decisions. This was a regular classroom activity of a nursing ethics course taught by the author. To test the developed model, 22 student groups discussed an initial two cases before learning the model, and, after a brief orientation, a further two cases applying the model. After the discussion class, the students were invited to participate in this study as a group by submitting their reflective essay of how the use of the structured model influenced their decision-making process or outcomes. Twenty student groups voluntarily participated without revealing their names, and thus individual participants were not identifiable so as to protect the students. Accordingly, whether or not they participated in this study, their grades or student-teacher relationships were unaffected.

## Findings

### *Reviews of ethical decision-making or problem-solving models*

Twenty different ethical decision-making models were classified into two groups and ordered by their publication year: ‘Nine ethical decision-making processes’ (Table 1) and ‘Eleven ethical problem-solving processes’ (Table 2). An ethical problem-solving process includes an ethical decision-making process, which refers mainly to a cognitive process, but goes further by adding implementing the decision and evaluating its results. However, the authors of the reviewed articles did not clearly distinguish this difference, and interchangeably used the two terms: ‘ethical problem solving’ and ‘ethical decision making’. Only two studies<sup>1,18</sup> out of the 11 (Table 2) explicitly acknowledged the difference by mentioning it in their article titles. These two terms were differentiated in this study, as necessary; otherwise the term ‘ethical decision making’ is used to refer to both, and they are analyzed and discussed together. The reviewed 20 studies were published from 1976 to 2010: one in the 1970s, seven in the 1980s, four in the 1990s, and eight in the 2000s. They show that interest in ethical decision-making process has been ongoing and that new models are being constantly developed even today. A chronological pattern of change was not found in ethical decision-making or problem-solving models. Among the reviewed 20 models, seven were developed for RNs or nurse practitioners, five for health professionals in general, four for physicians, two for psychologists, one for social workers, and one for a neonatal intensive care unit.

*Theoretical backgrounds and contextual factors.* Most authors suggested ethical pluralism applying diverse ethical theories and perspectives in decision making as one ethical theory or perspective was unlikely to be a panacea for every ethical problem. Ethical pluralism seems to be natural in modern societies that are experiencing an increasing diversity of values.<sup>3</sup> By adopting various theoretical alternatives, nurses are more likely to have a comprehensive moral vision.<sup>16</sup> Deontology (principle-based approach) and consequentialist theory (teleology, ends-based approach) were predominantly adopted by the authors of the models, whereas some models were based on a single ethical theory: consequentialism.<sup>7,15,19</sup>

**Table 1.** Nine studies of ethical decision-making processes

	Curtin and Flaherty (1982) <sup>29</sup>	Pellegrino (1987) <sup>6</sup>	Bunting and Webb (1988) <sup>23</sup>	Grundstein-Amado (1991) <sup>21</sup>	Haddad (1992) <sup>24</sup>
RNs	Physicians (Perinatologists & neonatologists)	Nurse practitioners	Health professionals	Health professionals, long-term care givers	Health professionals, long-term care givers
Theology & deontology (rights and duties of involved persons)	Consequentialism & deontology Substantive structure: 1) philosophy of the physician-patient relationship, 2) interpretation of ethical principles, 3) ethical theories, 4) ultimate sources of our morality	Consequentialism & non-consequentialist ethical theory (deontology), codes of ethics, the patient's bill of rights	Ethical reasoning structure of a professional (individual value), contextual component (the decision maker's relationship with the client, the health care system)	Utilitarianism & deontology Psychological factors influencing decision: bounded rationality, projection, mixed motives or competing demands	Utilitarianism & deontology Psychological factors influencing decision: bounded rationality, projection, mixed motives or competing demands
6 stages	5 stages of procedural structure	10 stages	8 stages of decision theory component	5 stages	5 stages
1. Establish a data base	1. Establish the Facts 2. Determine what is in the patient's best interests	1. What are the health issues? 2. What are the ethical issues?	1. Problem perception Identification of the ethical problem Identification of the medical problem	1. Respond to the sense or feeling that something is wrong	1. Respond to the sense or feeling that something is wrong
		3. What further information do you require about either of the above in order to make a judgment?	2. Information processing Gathering medical-technical information Seeking other sources of information	2. Gather information	2. Gather information
		4. Who are the persons who will be affected by the decision?	3. Identification of the patient preferences	3. Identification of the patient preferences	3. Identification of the patient preferences
		5. What are the values of the involved parties?			

(continued)

**Table I (continued)**

Curtin and Flaherty (1982) <sup>29</sup>	Pellegrino (1987) <sup>6</sup>	Bunting and Webb (1988) <sup>23</sup>	Grundstein-Amado (1991) <sup>21</sup>	Haddad (1992) <sup>24</sup>
2. Identify and clarify the ethical components	3. Define the ethical issues and principles	6. What are the conflicts between values or ethical principles? 7. Must a decision be made and, if so, whose decision is it?	4. Identification of the ethical issues	3. Identify the ethical problem
3. Determine the rights, duties, authority and capabilities of the decision makers	4. Determine possible causes of action	8. What are the alternatives available?	5. Listing the alternatives 6. Listing the consequences	4. Seek a resolution/ determine option
4. Determine possible causes of action	5. Reconcile facts and values; hold multiple values in tension	9. What are the ethical justifications for each alternative? 10. What are the probable outcomes of each alternative?	7. The choice 8. Justification	5. Work with others to determine a course of action
6. Reach resolution	4. State your decision in concrete terms 5. Justify the decision			
DeWolf Bosek (1995) <sup>15</sup>	Mattison (2000) <sup>13</sup>	Kaldjian et al. (2005) <sup>9</sup>	Baumann-Holzle et al. (2005) <sup>14</sup>	
RNs Consequentialism Decision analysis model	Social workers Teleology & deontology Value system or preference of the decision maker, context of the environment, individual decision making styles	Physicians Ethical pluralism including consequentialism & deontology	Neonatal intensive care unit Collaborative decision (Consequentialism approach) Individual value system & the core values of the unit	7 stages 6 stages 7 stages 1. State the problem plainly

(continued)

**Table I (continued)**

DeWolf Borsek (1995) <sup>15</sup>	Mattison (2000) <sup>13</sup>	Kaldjian et al. (2005) <sup>9</sup>	Baumann-Holzle et al. (2005) <sup>14</sup>
1. Identify desired outcomes	1. Background information /case details	2. Gather and organize data: medical facts, medical goals, patient's goals and preferences, context	1. Description of the child's medical information, care and social situation
2. Assign utilities	2. Separating practice considerations and ethical compounds	2. Different aspects of evaluation the infant's chances of survival the infant's chances of dying if mechanical ventilation and other critical assistance are continued/withdrawn the infant's actual suffering the infant's possibility to live independently in the future without developing severe handicaps	2. Different aspects of evaluation the infant's chances of survival the infant's chances of dying if mechanical ventilation and other critical assistance are continued/withdrawn the infant's actual suffering the infant's possibility to live independently in the future without developing severe handicaps
3. Identify possible actions	3. Identifying value tensions	3. Ask: Is the problem ethical?	3. Developing at least three different scenarios
4. Assign probabilities	4. Identifying principles in the code of ethics which bear on the case	4. Ask: Is more information or dialogue needed?	4. Decision (consensus)
5. Calculate expected values	5. Identify possible courses of action (benefit/cost, projected outcomes)	5. Determine the best course of action and support it with reference to one or more sources of ethical value: ethical principles, rights, consequences, comparable cases, professional guidelines, conscientious practice	5. Planning the discussion with the parents
6. Identify the best action	6. Assessing which priority/obligation to meet foremost and justifying the choice of action	6. Discussion with the parents	6. Discussion with the parents
7. Evaluate the action choice (justification)	7. Resolution	7. Confirm the adequacy of the conclusion	7. Evaluation of the decision making process

**Table 2.** Eleven studies of ethical problem solving processes

Murphy and Murphy (1976) <sup>19</sup>	Arcoskar (1986) <sup>25</sup>	Tymchuk (1986) <sup>7</sup>	Cassells and Redman (1989) <sup>26</sup>
<p>Clinicians in general (The University of Colorado Medical Center)</p> <p>Consequentialism</p> <p>9 stages</p> <ol style="list-style-type: none"><li>1. Identify the health problem.</li><li>2. Identify the ethical problem.</li><li>3. State who's involved in making the decision</li><li>4. Identify your role (quite possibly, your role may not require a decision at all.)</li><li>5. Consider as many possible alternatives as you can</li><li>6. Consider the long and short-range consequences of each alternative decision</li><li>7. Reach your decision</li><li>8. Consider how this decision fits in with your general philosophy of patient care</li></ol>	<p>RNs</p> <p>Consequentialism &amp; deontology</p> <p>7 stages</p> <ol style="list-style-type: none"><li>1. Distinguishing a predominantly ethical situation from one, for example, that is primarily a communication issue</li><li>2. Gathering an adequate information base</li><li>3. Identifying the value conflicts</li></ol>	<p>Psychologists</p> <p>Consequentialism</p> <p>7 stages</p> <ol style="list-style-type: none"><li>1. Determination of who should participate in the decision</li></ol>	<p>RNs &amp; nursing students</p> <p>Code of ethics, ethical principles</p> <p>11 stages</p> <ol style="list-style-type: none"><li>1. Identify the moral aspects of nursing care</li><li>2. Gather relevant facts related to a moral issue</li><li>3. Clarify and apply personal values</li><li>4. Understand ethical theories and principles</li><li>5. Utilize competent interdisciplinary resources</li><li>6. Propose alternative actions</li><li>7. Apply nursing code(s) of ethics to help guide actions</li><li>8. Choose and act on a resolute action</li><li>9. Participate actively in resolving the issue</li><li>10. Apply state/federal laws governing nursing practice</li><li>11. Evaluate the resolute action taken</li></ol>

(continued)

**Table 2 (continued)**

	DeWolf (1989) <sup>30</sup>	Thompson and Thompson (1990) <sup>12</sup>	Hadjistavropoulos and Malloy (2000) <sup>22</sup>
RNs	<p>Antecedent factors: proximity in time, an emotional involvement, a factual deficit, personal involvement, confusion of values</p> <p>Supporting/negating factors to support a preferred option in stage 3; assumptions, consequences, legal factors, emotions, proximity in distance and time, previous experiences, values, facts, and role responsibilities</p>	<p>Maybe clinicians in general (not mentioned)</p> <p>Utilitarianism, deontology</p> <p>Contents and details are provided in each stage</p>	<p>Psychologists</p> <p>Theology, deontology, existentialism, synthesis of different ethical theories</p> <p>Individual influences: level of cognitive moral development, ethical orientation, demographic profile</p> <p>Issue specific influences (moral intensity); temporal immediacy, magnitude of consequence, proximity, concentration of effect, probability of effect, and social consensus</p> <p>Significant other influences (family, friends, coworkers, peers, and/or a wide variety of extraneous stakeholders)</p> <p>Situational influences: culture/climate and physical structures of organizations</p> <p>External influences: society, politics, economics, and technology</p>

1. Perceive the situation as having ethical concerns
1. Review the situation and identify a) health problems, b) decision(s) needed, and c) key individuals involved

6 stages

10 stages

7 stages

1. Identification of ethically relevant issues and practices

(continued)

**Table 2 (continued)**

DeWolf (1989) <sup>30</sup>	Thompson and Thompson (1990) <sup>12</sup>	Hadjistavropoulos and Malloy (2000) <sup>22</sup>
<p>2. Gather information that is available in order to a) clarify the situation, b) understand the legal implications, c) identify the bureaucratic or loyalty issues</p> <p>3. Identify the ethical issues or concerns in the situation and a) explore the historical roots, b) explore current philosophical/religious positions on each, and c) identify current societal views on each</p> <p>4. Examine personal and professional values r/t each issue</p> <p>5. Identify the moral position of key individuals</p> <p>6. Identify value conflicts, if any</p> <p>7. Determine who should make the final decision</p> <p>8. Identify the range of possible actions and a) describe the anticipated outcome for each action, b) identify the elements of moral justification for each action, c) note if the hierarchy of principles or utilitarianism is to be used</p> <p>9. Decide on a course of action and carry it out</p> <p>2. Choose a preferred option</p> <p>3. Use various factor to support their preferred option</p> <p>4. Communicate their option choice</p> <p>5. Implement an option</p>	<p>2. Development of alternative courses of action</p> <p>3. Analysis of the likely short-term, ongoing and long-term risks and benefits of each course of action on the individual(s)/group(s) involved or likely to be affected</p> <p>4. Choice of course of action after conscientious application of existing principles, values, and standards</p> <p>5. Action with a commitment to assume responsibility for the consequences of the action</p> <p>6. Evaluation of the results of the course of action</p> <p>7. Assumption of responsibility for consequences of action, including correction of negative consequences, if any, or re-engaging the decision-making process if the ethical issue is not resolved</p>	<p>10. Evaluate the results of the decision/ action and note a) whether the expected outcomes occurred, b) if a new decision is needed, c) if the decision process is complete, d) what elements of this process can be used in similar situations</p> <p>6. Evaluation of the results of the course of action</p>

(continued)

**Table 2 (continued)**

Ogershok (2002) <sup>23</sup>	Devlin and Magill (2006) <sup>27</sup>	Kirsch (2009) <sup>1</sup>	Bereza (2010) <sup>18</sup>
RNs	<p>Anesthesiologists Utilitarianism, deontology, liberal individualism, communitarianism, ethics of care, etc.</p> <p><b>6 stages</b></p> <ol style="list-style-type: none"> <li>Identifies the problem The recognition of the problem's relevant aspects</li> <li>The designation of the root problem The evaluation of the cause and effect relations in the problem</li> <li>Gather and analyze relevant information</li> <li>Clarify personal values and moral position</li> <li>Based on stage 2 &amp; 3 determine options</li> <li>Three stages to resolve the dilemma 2.1. The clarification or evaluation of the feasible options</li> </ol> <p><b>5. Make a responsible collaborative decision and take action</b></p> <p><b>2.2. The determination of the best solution to the problem</b></p> <p><b>2.3. The implementation of the decision</b></p> <p><b>6. Evaluate the effect of the action taken</b></p>	<p>All healthcare providers Realm-Individual Process-Situation (RIPS) model Rule-based approach, ends-based approach, &amp; care-based approach</p> <p><b>4 stages</b></p> <ol style="list-style-type: none"> <li>Recognize and define the ethical issues Realm: individual, organizational/institutional, social</li> <li>Individual process: moral sensitivity, moral judgment, moral motivation, moral courage, moral failure</li> <li>Situation: issue or problem, dilemma, distress, temptation, silence</li> <li>Reflect</li> </ol> <p><b>What else do we need to know about the situation, the patient, and the family</b></p> <p><b>2. Gather the information in context:</b></p> <p><b>What are the consequences of action? of the question(s)</b></p> <p><b>3. Analyze the information in context:</b></p> <p><b>What are the consequences of inaction?</b></p> <p><b>The adapted Kidder test for right versus wrong?</b> Is it illegal?, the stench test, the front page test, the mom test, and the professional values test</p> <p><b>3. Decide the right thing to do</b></p> <p><b>4. Implement, evaluate, reassess</b></p> <p><b>5. Implement recommendations</b></p> <p><b>6. Evaluate application of recommendations and provide follow-up</b></p>	<p>Family physicians of Canada Teleology, deontology, caring ethic, communitarianism, virtue ethic, casuistry</p> <p><b>6 stages</b></p> <ol style="list-style-type: none"> <li>Identify and articulate the ethical question(s) or dilemma(s) to be addressed</li> <li>Gather all necessary and relevant information: biological, psychological, and social</li> <li>Consider each option in terms of the relevant values, principles and consequences:</li> <li>Articulate your choice by framing it as an ethical argument</li> <li>Check for consistency: is the conclusion consistent with fundamentally accepted values and practice?</li> <li>Prioritize recommendations and articulate supporting argumentation</li> </ol>

Caring ethics (care-based approach) and virtue ethics<sup>1,18</sup> were rather uncommon in the reviewed models. Virtues are the elements of desirable moral character, and caring is an essential virtue, especially for nurses.<sup>16,20</sup> Both virtue ethics and caring ethics support good ethical decision making of nurses. However, they are regarded as being limited in the guidance of ethically correct actions in troubling situations, and therefore they ‘cannot serve as the basis of a comprehensive ethical theory’ (p.43).<sup>16</sup> In addition, although caring ethics is readily accepted in the nursing profession, it is not commonly found in other health professions.<sup>16</sup> It is this which may limit nurses’ collaboration with other professionals in solving ethical problems. Moreover, in a systematic decision-making model using an analytical approach, virtue ethics and caring ethics may be less preferable than deontological or teleological principles (the rational calculation of utilities).<sup>20</sup> In addition to ethical theory, the authors suggested diverse guides for ethical decision making, including ethical principles (respect for patient autonomy, nonmaleficence, beneficence, and justice), ethical rules (fidelity, veracity, and confidentiality), code of ethics, comparable cases in the past (casuistry), and health professionals’ conscience.

At the same time, some authors stressed contextual factors like individual or organizational characteristics that may influence ethical decision making.<sup>6,13,21,22</sup> Health professionals’ individual characteristics that must be taken into account include personal value systems, perspectives of the health professional-patient relationship (paternalistic mode vs participatory mode vs advocate, for example), role responsibility, decision-making styles, level of cognitive moral development, ethical orientation, and demographic profile. Organizational characteristics influencing ethical decision making include organizational culture, policy, a line of authority, and communication system. An ethical problem cannot be solved simply by following a formula, and should be approached in consideration of its particular circumstances. The contextual factors that directly or indirectly influence the quality of ethical decision making should be carefully examined.

**Stages of the process of ethical decision making or problem solving.** The authors of the reviewed models clearly presented necessary steps for decision making or problem solving, but explanations about how to better perform each step or which aspects to be considered in the field of healthcare appeared insufficient. The number of stages of ethical decision-making or problem-solving processes varied from four to 11. The authors suggested very analogous decision-making or problem-solving processes with a general consensus. As shown in Table 1, an ethical decision-making process was grouped into five: 1) a pre-information collection stage including a statement or perception of an ethical problem; 2) information collection; 3) a post-information collection stage including mostly identification of an ethical problem; 4) identification and analysis of alternative actions; and 5) selection of an alternative and justification of the decision. An ethical problem-solving process had two more steps than an ethical decision-making process: implementation of a chosen action, and evaluation of its results. In Tables 1 and 2, comparable similar stages are placed on the same horizontal line for easy comparison. If two stages are combined into one, it is placed in the line of the earlier stage, as seen in the last stage of ‘implement, evaluate, reassess’ of the ethical problem-solving process by Kirsch (Table 2).

**Stages of identification of an ethical problem and gathering information.** A rather big difference in the reviewed processes was found in the first three stages until identifying the ethical problem. Six models<sup>9,12,21,23-25</sup> out of 20 had all of the first three stages, which were from problem statement or any other actions before information collection to information collection, and to an accurate identification of an ethical problem. Six models<sup>1,18,19,26-28</sup> had the first two stages, problem statement and information collection, and omitted the third stage of confirmation of an ethical problem. In these models, information seemed to be collected for developing alternatives rather than clarifying an ethical problem. Three models<sup>6,13,29</sup> started the process right away with information collection, which was followed by identification of an ethical problem. Another three models<sup>7,14,15</sup> started with the second stage of information collection and directly moved to

the fourth stage of identification and analysis of alternative actions without mentioning a stage of statement (stage 1) or identification of an ethical problem (stage 3). However, it seems to be invalid to find solutions without knowing the exact problem. A stage for stating or identifying a specific ethical problem was critical in order to learn what the problem was and whether the problem was an ethical issue or a non-ethical issue, such as a communication problem, a patient-nurse relationship, or individual attitudes.

Gathering information is necessary for clarifying the problem and in some cases the ethical problem at first needs to be restated or can even be concluded as non-ethical while searching primary causes or reasons of the issue at stake. Information to be collected is not always stated in the models; it can be either facts or values/preferences of involved individuals, either medical or non-medical aspects. The models often required the identification of those individuals who should be involved in decision making and whose values should be considered. Accordingly, information can be collected not only from a patient himself/herself but also other stakeholders including family members, health professionals, institutions, payers, or communities.

The other two models<sup>22,30</sup> started with either a first stage of problem statement or the third stage of identification of ethical problem and then directly moved to the fourth stage of identification and analysis of alternative actions. In the models that contained all of the first three stages,<sup>9,12,21,23-25</sup> the first and the third stage were different: an ethical problem was found and plainly stated at the first stage and clarified in the third as a result of gathering further information. Not all authors believed that additional information was needed to clearly identify an ethical problem. However, in most occasions a stage of information gathering seems to be critical for clarifying the issue or for developing alternatives even if it was not mentioned in an ethical decision-making or problem-solving model. The amount of information that needs to be additionally collected to identify an ethical issue may vary, depending on how much information is already known to the involved actors at the start point. It is tentatively concluded that an ethical decision-making process is not necessarily linear or proceeds in a single direction: at any step of an ethical decision-making process, decision makers can go back to the step of information collection.

**Stages of selecting an alternative and evaluation.** Sixteen models out of 20 included the fourth stage of identification and analysis of all possible alternatives. Kirsh,<sup>1</sup> though, approached ethical problem solving with a do-or-undo perspective, limiting consideration of diverse alternatives. In four models,<sup>1,6,29,30</sup> the fourth stage of developing and analyzing possible alternatives was omitted and moved to a fifth stage of choosing one ethically right action. These authors seemed to believe that we can determine one solution if we clearly understand the situation including a patient's preference or relevant ethical principles. Even if this is true, a choice would be better justified when the alternatives are compared considering the same condition. Justification of the selected decision in the fifth stage is critical for an ethical decision-making process because a decision that cannot be justified or is reached without knowing the reason is not considered ethical. Only eight models<sup>6,9,13,15,18,19,21,30</sup> clearly stated their justification of the selected alternative.

Most of the nine ethical decision-making models ended by choosing one solution or justifying it; however, Haddad's model<sup>24</sup> added the last stage to decide ways to implement the choice, and the model of Baumann-Holze et al.<sup>14</sup> added a final stage in order to evaluate the decision-making process. All except one of the 11 ethical problem-solving models ended with an evaluation stage.<sup>27</sup> The content of evaluation was not clearly stated in most models, but some mentioned that both decision-making process and the results/effects of the action need to be evaluated at the end.<sup>12,22,25,28,30</sup> Unlike these models, Tymchuk<sup>7</sup> suggested that the ethical decision-making process be evaluated right after deciding the best solution and before implementing it, which is similarly found in Baumann-Holze et al.<sup>14</sup> In this way, the quality of ethical decision making or problem solving is likely to be better satisfied.

Some ethical decision-making or problem-solving models mentioned directly or indirectly a feedback loop; for example, by re-engaging the decision-making process or following up the case.<sup>1,12,18,19,22</sup> Consensus in ethical decision can be obtained through a collaborative decision-making process by communicating

moral positions or preferences of key individuals and by brainstorming possible alternatives together. Four models<sup>14,26,28,30</sup> mentioned shared decision making or collaboration for ethical problem solving.

### ***Integrated ethical decision-making model***

The strengths and weaknesses of the reviewed ethical decision-making models were critically evaluated and taken into account in the integrated model of six steps, as presented in Appendix 1. This study tried not only to logically integrate the reviewed processes but also to suggest considerations at each step. To be accurate, this model is a problem-solving model, though here in the current study, it is called by the more conventional title, a decision-making model. Appendix 1 summarizes this ethical decision-making model with its application to a clinical case.

***Step 1. State an ethical problem.*** Any ethical decision-making process starts with perceiving the problem. One of the common mistakes among nurses is that they make statements concerning ethical issues using action-oriented terms or those connected with a do-undo approach. Ethical problems should be stated in terms of ethical values, and thus a decision process is more likely to be focused on ethical aspects rather than on practical feasibility. It is critical to consider ethical principles and values separately from non-ethical and practical aspects like environmental or personal constraints: if not, an ethical decision can be affected by non-ethical and practical reasoning. Certain problems that initially appear to be ethical in nature may reveal themselves to be communication difficulties, clinician-patient relationship issues, or legal problems. As an example, when a nurse is requested to assist voluntary euthanasia of a patient suffering from irremediable and intolerable pain, she/he refuses the request because she/he would be charged for murder even if she believes voluntary euthanasia is ethically justified in this case.<sup>3</sup> In this hypothetical case, the nurse's decision is based on legality rather than on ethics.

Stakeholders' different perceptions of the problem are likely to bring about different attitudes in an approach to the problem. Evaluating some characteristics of the problem may help clarify one's perception and attitudes throughout the decision-making process, like questions of temporal urgency, the magnitude of consequences, and whether the ethical problem already exists or is likely to occur.<sup>22</sup> For instance, when health professionals confront a problem requiring an immediate decision, they may not be able to wait for a complete consensus among all key individuals, they may need to compromise someone's values to save a patient's life, despite possibly deceiving a patient temporarily. In addition, the degree to which our ethical behavior influences a patient's life, and the level of seriousness of the ethical problem is likely to influence attitudes and the level of expected efforts of involved parties. These questions can help clarify the problem and reveal a gap of understanding among stakeholders. However, further information may be required to clarify the problem, identify reasons behind it, or to suggest alternatives.

***Step 2. Additional information collection and analysis of the problem.*** To decide the range of information, nurses first need to know who are involved in this issue and what information is needed from each actor or party. In Appendix 1, a cross table is a summary of what kind of information is necessary from whom. Stakeholders can be roughly grouped into four: 1) patients; 2) family members as caregivers or surrogates; 3) health professionals; and 4) environments including an institute, associations of health professionals, or a society with culture, law, policy, or values common to that social group. The types of information required to overcome a problem are grouped into four: 1) biological aspects; 2) psychological aspects; 3) social or historical aspects; and 4) goals, preferences, or values related to the issue. As seen in Appendix 1, when the involved actors and types of information are cross-referenced, the necessary information to collect can be more easily identified. Because ethical problems occur when values or goals are inconsistent among stakeholders, this information needs to be learned from all stakeholders regarding the specific ethical problem with which

they are confronted. In addition, aspects such as biological, psychological, and social or historical related to the current situation should be learned from different stakeholders. Certain types of information, like health professionals' biological aspects or an institute's biological or psychological aspects, appeared not relevant to the solution of most ethical problems. In this process, professionals may need to provide the actors with information needed to establish their own perspectives or opinions regarding the problem. If a consensus among stakeholders is luckily obtained in this step while important information is communicated, the actors may be able to stop at that point and the problem is solved. After reviewing all relevant information, professionals need to return to the statement of ethical problems in Step 1 and confirm the first statement or restate it as accurate. If the problem is found to be a non-ethical issue, we need to apply a general problem-solving process, as appropriate.

**Step 3. Develop alternatives and analyze and compare them.** Now all individuals affected by the decision are sharing necessary information and the problem and the reasons for and backgrounds of value conflicts should be clear. Accordingly, all possible alternatives/solutions are now suggested and shared among stakeholders. At this stage, all possibly right or wrong and good or bad actions should be included and reviewed in terms of ethics rather than practical feasibility. Stakeholders have to analyze and compare the alternatives based on diverse ethical theories and principles, codes of ethics, legal aspects, personal conscience or religious beliefs, and an institute's or a society's values or policy. It is more reasonable to apply diverse ethical theories or perspectives altogether to compare multiple alternatives. Unlike certain other fields of human endeavor, such as business, wherein ethical decisions are more often decided by its consequences, nurses cannot make an ethical decision based solely on consequence and always have to take seriously a deontological perspective considering their duties as healthcare providers as well as patients' rights. Common ethical rules are fidelity, veracity, and confidentiality, while classical ethical principles are respect for patient autonomy, nonmaleficence, beneficence, and justice in healthcare.<sup>31</sup> The most common ethical theories include utilitarianism or ends-based; deontology or duty-based; virtue ethics (is this decision consistent with what the nurse as a human being values?); and caring ethics (would this be the type of care you would want for yourself if you were the patient?).

Lewis et al.'s Options, Outcomes, Values and Likelihoods (OOVL) Guide,<sup>32</sup> shown in the clinical case in Appendix 1, is useful to find an alternative according to utilitarian/consequentialist theory. Alternatives are listed at the left column and all possible long-term and short-term outcomes of different alternatives are listed at the top horizontal row. Values of different outcomes are evaluated using a Likert type scale: different parties may have different answers. In addition, for each alternative a nurse assesses the possibility of relevant outcomes for each alternative. When this table is filled out, which alternative should be chosen becomes more visible.

**Step 4. Select the best alternative and justify your decision.** In ethical decision making, the purpose is to find the best solution with which most parties, including the patient, are satisfied. Through the process of analysis and comparison, a nurse has to decide the best choice and justify it. Even though a certain behavior brings about good or right results, it is not ethical behavior if you cannot justify it. Justification is essential and a nurse has to be able to reasonably respond to differing opinions. There are some questions nurses can apply to learn whether they are confident with their decision. For example, they can answer the five questions suggested by Edgar<sup>33</sup> – legal test, front-page test, gut-feeling test, role model test, professional standard test, as presented in Appendix 1 – assuming a situation when the chosen alternative was implemented.

**Step 5. Develop strategies to successfully implement the chosen alternative and take action.** When nurses are confident with what is ethically right or good, they have to plan how it can be actualized. They should not restrain ethically correct decisions and have to find the best strategies to support their ethical decision.

**Table 3.** Example excerpts of students' experiences of applying the integrated ethical decision-making model**Improvement in the decision-making process**

- When not using this model, I tended to make a guess rather than utilize ethical theories or principles.
- I had to think about many different aspects while applying the model, and I believe this training will help me more comprehensively review ethical problems in the future.
- Without the model I would not have gone through such a sound thinking process.
- There was no difference in the final decision whether we applied the model or not. However, our decision-making processing was very different. Without the model, we approached an ethical problem as if it were a true-false question. When we used the model, we were able to discover many diverse situations and alternatives.

**Improvement in developing and selecting options**

- We realized that an option supported by a larger number of ethical principles or rules is desirable. We didn't know that when reviewing options without the model.
- I found that some options preferred in terms of short-term outcomes were less desirable in terms of their long-term outcomes, which I would never have realized without the model.
- I chose an option with more caution and became more confident with my decision.

**Improvement in attitudes in ethical decision making**

- I was able to better understand a client's thoughts or feelings while comprehensively exploring reasons for the problem.
- I was able to clarify my own value systems while reviewing the different goals or preferences of the parties involved.
- I realized how difficult it is for a nurse to reach ethically good or right decisions, because a nurse's decision directly affects the life of a client. I almost had a headache when considering the different views of all those involved.
- We were rather upset when we found that each of us had dissimilar perspectives on the given ethical problem.

**Understanding characteristics of ethical dilemmas**

- I felt uncomfortable that I was not able to find a completely satisfying solution; I had to choose only the best possible option for a certain ethical problem.
- We had to admit that there were situations in which no option is perfect.
- It was very difficult to choose an option: when we chose the first option, some aspects of other options, which were incompatible with the first option, appeared still attractive.

**Difficulties in developing strategies for achieving ethical goals**

- It is complicating to think about possible strategies to fulfill our ethical goals. Although we know what is ethically right, we were not able to find proper approaches or tools available in clinical settings.

**Applicability of the model in future nursing practice**

- After learning this model, I thought that my ethical decisions in the future would be more consistent, reflecting my own beliefs and views.
- At first it took us a long time to reach a conclusion because we were not accustomed to such a comprehensive consideration when applying all kinds of ethical knowledge. However, it was much easier once we learned the process of the model, and, as a clinical nurse, I want to use the model in the future.

At this point, all of the involved health professionals have to actively participate in developing the best way to implement the ethical decision regardless of whether the final decision is the one he or she originally intended.

**Step 6. Evaluation.** Healthcare professionals need to evaluate the effects of any chosen action as well as the decision-making process itself. If the expected outcomes are not achieved despite a good quality of decision-making process, they may need to go back to a previous step and consider other strategies. In addition, if the confronting ethical problem is solved successfully at this time, nurses need to develop strategies to prepare for similar problems that arise in the future at three levels: individual, institutional, and community/societal.

### ***Usability of the integrated ethical decision-making model***

Twenty student groups in nursing ethics courses reported that the model was easy to understand and follow and very useful for them to solve the clinical ethical issues. The benefits of using the model were many, and example excerpts from the students are provided in Table 3. When applying the model, the number and the diversity of supporting criteria for their ethical decision and alternatives were greatly enhanced: for instance, the number of alternatives increased from two to four or five in a majority of the student groups when applying the model for solving ethical problems. Accordingly, students expressed a stronger confidence with their final decision and its justification when they applied the structured model for decision making. The students said that they made ethical decisions based often on their intuition or subjective judgment without the model, but they were able to make a decision with rationales satisfying more ethical principles or professional standards.

In the process of solving ethical problems using the model, the students said that they approached the clinical ethical problems more seriously and felt stronger responsibility for their decision while they reviewed all relevant actors' preferences and possible long-term and short-term outcomes. For example, they said that they were able to better understand a patient's perspectives or feelings. Overall, students felt safer because they believed that the use of the model improved quality of the ethical decision-making process and possibly its outcomes avoiding hasty decisions.

The students reported that they unexpectedly became aware of their own ethical values and the diversity of values among their peers while they worked on the ethical problems as a group. Most difficulties were reported in Step 5 of developing strategies to implement the decision and in Step 6 of developing strategies to prevent similar ethical problems in the future. Probably students' knowledge and experience in clinical practice and its environment were not sufficient for strategy development. However, regardless of using the model, students found it difficult to apply ethical theories or to deal with ethical dilemmas with no correct answer. Nevertheless, they said that they would use this model in the future as a RN because it is easy to apply and because it would help them to be a responsible professional.

## **Conclusions**

An integrated ethical decision-making model was developed based on a systematic review of previous ethical decision-making models and its pilot-test with baccalaureate nursing students in an ethics course. Despite the different number of decision-making steps or stages, the reviewed 20 ethical decision-making models suggested somewhat similar logical decision-making processes. However, most decision-making models often appeared less effective because they did not explain how each stage could be better accomplished or more considered. Most models focused on process and neglected content, so that a practical use of these models may be less than useful. Therefore, this study developed an integrated ethical decision-making model consisting of six steps and including critical considerations to satisfactorily accomplish each of those steps. Nursing students reported very positive experiences in applying the model to ethical cases in their ethics course. This study found that the model presented here can be easily adopted in the teaching of nursing students. It is similarly expected to be adoptable to solve ethical problems in clinical settings among nurses, especially neophytes.

Ethical decision-making competency becomes more and more challenging in clinical practice for a variety of reasons, including the increasing diversity of individual value systems, rapidly changing healthcare environments, and the complexity of healthcare systems. The best ethical decision should be determined by putting efforts from all relevant professionals and a nurse should not overlook his or her responsibility as long as he or she is involved in patient care. A structured ethical decision-making model does not guarantee ethically right or good decisions because ethical decision making is not a mechanical process.<sup>22</sup> Nevertheless, a structured model does highly likely improve a process and

outcomes of clinical ethical decisions. It is recognized that there is a need for the model to be repeatedly applied, tested, and refined in both the educational and practical environments.

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## Conflict of interest statement

The author declares that there is no conflict of interest.

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## Appendix I. Integrated ethical decision-making model and its application with a clinical example

An 85 year-old man with dementia was admitted to a hospital via the emergency room because of aspiration pneumonia. His wife, who cared for him, said that recently he had been having difficulty swallowing even soft food. According to a result of a VFSS (video fluoroscopic swallowing study), he had severe dysphasia; so Levin-tube feeding was recommended to prevent the recurrence of aspiration pneumonia. His physician believed that his dysphasia was unlikely to be cured because its occurrence was due to dementia. The physician explained to the patient's wife that Levin-tube feeding was the most effective way to prevent pneumonia and that any recurrence of pneumonia would be very risky given the age of the patient. However, the patient's wife simply refused to insert the Levin tube into her husband despite understanding the high risk of a recurrence of aspiration pneumonia if he took food by mouth. Finally the patient was discharged without the L-tube, and in order to lower the risk, his wife was taught how to prepare food to increase its viscosity and how to position his neck when swallowing food. Nevertheless, he was admitted again for aspiration pneumonia four months later. He had lost too much weight and had a bed sore on his coccyx because he had not been taking enough food due to the risk of aspiration. Although his pneumonia was again treated well, another VFSS showed that his swallowing function had deteriorated. The wife once again refused to insert the Levin tube, saying that if she did so his quality of life would be poorer and he was old enough to refuse treatment even if it meant that that treatment would extend his longevity. When a physician asked me to persuade the wife to change her mind, I was unclear about what would be the best ethical course of action.

<p>Step 1. State an ethical problem</p> <ol style="list-style-type: none"><li>1) Problem statement as a conflict of ethical values: Avoid a statement using behavioral terms (action-oriented) or choosing one of two options.</li><li>2) Is this an ethical issue? Or, is this a communication problem, a clinician-patient relationship issue, or a legal problem?</li><li>3) Characteristics of the problem can be assessed to learn your own perception or attitudes.<ol style="list-style-type: none"><li>A. Temporal urgency (e.g., high, middle, low): How urgent is the decision?</li><li>B. Magnitude of consequences (high, middle, low): How greatly does the decision affect the health status and quality of life of the patient?</li><li>C. Does the ethical problem already exist or is it likely to occur?</li></ol></li><li>4) Do you need further information to comprehensively understand the problem or to seek alternatives or options to solve it?</li></ol>	<ol style="list-style-type: none"><li>1) Ethical dilemma between a principle of respect for patient autonomy and a principle of beneficence for lowering a risk of aspiration pneumonia, which could threaten the patient's life</li><li>2) It is an ethical issue.</li><li>3) A. Middle</li><li>3) B. High</li><li>3) C. Already existing problem</li><li>4) Yes. For example: 1) What is his decision-making ability? 2) Is he able to express his desire for treatment and quality of life? 3) If he is not able to understand or decide medical treatment for him, is his wife a surrogate who best knows the patient's preference? 4) Does his wife make decisions based on not her own interest, but the patient's interest and preference?</li></ol>
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(continued)

**Appendix (continued)**

- Step 2. Additional information collection and analysis of the problem**
- Who are actors involved in this issue and what information is needed from each?
  - If necessary, provide the actors with information needed to establish their own perspectives and opinions regarding the problem.
  - Biological information (e.g. diagnosis, treatments, prognosis and expected outcomes), psychosocial information (e.g. values, cultural backgrounds, religions, growth, emotional stress), social/historical aspects, or goals preference, values related to the issue.

Information Actors involved	Biological aspects	Psychological aspects	Social, historical aspects	Goals, preference, values
Patient	O	O	O	O
Family or significant others	O/X	O	O	O
Professionals	X	O/X	O/X	O
Institute, associations, or society	X	X	O/X	O

Note: O = YES, X = NO

- Who is the ultimate decision maker?
- Is the statement of an ethical problem in Step 1 correct? If necessary, correct them and restate the problem

**Step 3. Develop alternatives and analyze and compare them**

- To analyze and compare alternatives, various aspects need to be considered as follows:
  - 1) Ethical rules (fidelity, veracity, and confidentiality)
  - 2) Ethical principles (autonomy, nonmaleficence, beneficence, justice)
  - 3) Ethical theories (utilitarianism, duty-based, virtue ethics, caring ethics) – Options, Outcomes, Values, and Likelihood (OOVL) Guide may be useful for applying utilitarianism
  - 4) Professional ethics – codes of ethics, guidelines for practice
  - 5) Legal aspects
  - 6) Health professionals' personal conscience or religion
  - 7) Institute's or society's values, guidelines, or policy

For example, we learned the following:

- The patient did not express his preference in medical care before having dementia.
- His wife is afraid of feeding her husband via L-tube because she is not sure whether she can do it safely.
- His wife hopes that her husband lives the rest of his life with dignity and believes that having food via L-tube seriously damages his dignity.
- Health professionals are responsible to prevent pneumonia, and L-tube feeding is a good choice because the patient can stay at home and his wife will be able to take care of him.
- Our society highly values both a patient's right to choose a treatment (autonomy) and health professionals' duty to provide any necessary treatment. In recent years, a patient's right of autonomy is becoming more established.

- The patient's wife
- Yes, this is an ethical conflict as stated in Step 1.

Alternative 1. inserting L-tube after getting consent from the wife

Alternative 2. respecting her decision and not-inserting L-tube

Applying utilitarianism, Lewis et al.'s<sup>32</sup> Options, Outcomes, Values, and Likelihood (OOVL) Guide can be used as follows, using a Likert-type scale.

Short-or Long-term Outcomes	Prevention of pneumonia	Provision of proper nutrition	Discomfort of keeping L-tube*
Values	High	Medium	Medium
Alternative 1	High	High	High
Alternative 2	Low	Low	Low

\* negative outcome

(continued)

<b>Appendix (continued)</b>	
<p><b>Step 4. Select the best alternative and justify your decision</b></p> <ul style="list-style-type: none"> <li>– As a result of analysis and comparison, which one has a priority among the alternatives?</li> <li>– Is the chosen alternative consistent with your own value or institution's value?</li> <li>– Think about an opinion that does not conform to your choice and challenge it</li> <li>– Assuming a situation when the chosen alternative was implemented, answer the following questions.</li> </ul> <ol style="list-style-type: none"> <li>1) Legal test. Is the chosen option consistent with law?</li> <li>2) Front-page test. What if this case were published in one of the popular newspapers?</li> <li>3) Gut-feeling test. Is your decision consistent with your gut-feeling as a nurse?</li> <li>4) Role model test. Is a RN you respect likely to make the same decision?</li> <li>5) Professional standard test. Is your decision acceptable to the nursing profession?</li> </ol>	<ul style="list-style-type: none"> <li>– We selected the alternative I: inserting L-tube after getting consent from the wife.</li> </ul> <ol style="list-style-type: none"> <li>I) Yes.</li> <li>2) Yes.</li> <li>3) Yes.</li> <li>4) Yes.</li> <li>5) Yes.</li> </ol>
<p><b>Step 5. Develop strategies to successfully implement the chosen alternative and take action</b></p>	<ul style="list-style-type: none"> <li>– To persuade his wife, you may let other family members participate in decision making. For example, their children may agree with you and may be able to persuade their mother.</li> <li>– Health professionals need to make sure his wife clearly understands his medical condition as well as the benefits and risks of L-tube insertion.</li> <li>– To lessen his wife's burden of L-tube care, you can ask their children to participate in caring for their father, or arrange a home nurse as necessary.</li> </ul>
<p><b>Step 6. Evaluate the outcomes and prevent a similar occurrence</b></p> <ul style="list-style-type: none"> <li>– Evaluate the outcomes of the chosen action and the decision-making process</li> <li>– Strategies for preventing a similar problem in the future</li> </ul> <ol style="list-style-type: none"> <li>I) At an individual level</li> <li>2) At an institutional level</li> <li>3) At the community or societal level</li> </ol>	<ol style="list-style-type: none"> <li>I) Better communication of each other's values between healthcare professionals and a patient/family; providing a patient/family enough information needed to understand the necessary medical treatments</li> </ol>

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