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REPORTS OF ORIGINAL INVESTIGATIONS

New approach to assessing and addressing moral distress in intensive care unit personnel: a case study

Nouvelle approche pour évaluer et traiter la détresse morale chez le personnel des unités de soins intensifs : une étude de cas

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Abstract

Purpose *To test a new approach to address moral distress in intensive care unit (ICU) personnel.*

Methods *Using principles of participatory action research, we developed an eight-step moral conflict assessment (MCA) that guides participants in describing the behaviour that they have to implement, the effects this has on them, their current coping strategies, their values in conflict, any other concerns related to the situation, what helps and hinders the situation, new coping strategies, and the effect of the preceding steps on participants. This assessment was tested with eight ICU providers in an 11-bed community ICU.*

Results *During three one-hour sessions, participants described their moral distress that was caused by the use of ongoing life-support for a patient who the team believed did not prefer this course of care, but whose family was requesting it. Participants experienced frustration and discouragement and coping strategies included speaking to colleagues and exercising. They felt that they were unable to take meaningful action to resolve this conflict. Values that were in conflict in the situation included beneficence and patient autonomy. Based on ranking of helping and hindering factors, the team proposed new strategies including improving consistency of care plans and educating patients' family members and ICU personnel about advance care planning and end-of-life care. After completing this assessment, participants reported less stress and a greater ability to take meaningful action, including some of the proposed new strategies.*

Conclusions *We found this new approach to address moral distress in ICU personnel to be feasible and a useful tool for facilitating plans for reducing moral distress.*

Résumé

Objectif *Nous avons souhaité mettre à l'essai une nouvelle approche pour traiter la détresse morale du personnel des unités de soins intensifs (USI).*

Méthode *En nous fondant sur les principes de la recherche-action participative, nous avons développé une évaluation des conflits moraux (ECM) en huit étapes qui guide les participants dans la description du comportement qu'ils doivent mettre en œuvre, des effets que cela a sur eux, de leurs stratégies d'adaptation actuelles, de leurs valeurs en conflit, de toute autre préoccupation liée à la situation, de ce qui aide et entrave la situation, de nouvelles stratégies d'adaptation, et de l'effet des étapes précédentes sur les participants. Cette évaluation a été testée auprès de huit praticiens de soins intensifs dans une unité de soins intensifs communautaire de 11 lits.*

Résultats *Au cours de trois séances d'une heure, les participants ont décrit leur détresse morale causée par l'utilisation d'un système de réanimation continu pour un patient qui, selon l'équipe, ne préférait pas ce traitement, mais qui était demandé par la famille. Les participants ont*

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éprouvé de la frustration et du découragement et les stratégies d'adaptation comprenaient le fait d'en parler à des collègues et de faire de l'exercice. Ils se sont sentis incapables de poser des gestes significatifs pour résoudre ce conflit. Les valeurs qui étaient en conflit dans la situation comprenaient la bienfaisance et l'autonomie du patient. Sur la base du classement des facteurs d'aide et d'entrave, l'équipe a proposé de nouvelles stratégies, notamment l'amélioration de l'uniformité des plans de soins et l'éducation des membres de la famille des patients et du personnel des soins intensifs sur la planification de soins avancés et les soins de fin de vie. Après avoir terminé cette évaluation, les participants ont déclaré éprouver moins de stress et une plus grande capacité à poser des gestes significatifs, y compris certaines des nouvelles stratégies proposées.

Conclusion *Nous avons constaté que cette nouvelle approche visant à traiter la détresse morale chez le personnel des soins intensifs était faisable et qu'elle constituait un outil utile pour faciliter les plans de réduction de la détresse morale.*

Keywords action research · goals of care · intensive care · moral distress

Moral distress is the suffering that people experience when they feel constrained, because of external or internal factors, to do things that go against their moral values. Since the original description of moral distress in 1984,[1] empirical research has revealed that this moral conflict or threat to moral integrity occurs most commonly in healthcare providers in the setting of end-of-life controversies and pressure to reduce costs.[2–4] Moral distress causes high levels of frustration, anxiety, anger, and other psychological reactions.[5] Consequences include diminished workplace satisfaction, absenteeism, burnout, and attrition.[6–8] This problem has reached alarming prevalence in intensive care units (ICUs), particularly among nurses,[9,10] but there is little evidence on preventing or coping with moral distress.[11]

In 2016, an international multidisciplinary team (including authors of this manuscript and coinvestigators) decided to test the moral conflict assessment (MCA) process, an evaluation and intervention designed by one member of the team (J. M. C). This process assesses and addresses moral distress at both individual and organizational levels using participatory action research (PAR). This research approach uses explicit techniques to engage both researchers and participants in a reflective process that synthesizes experiential knowledge into action for improvement[12] (for further information on the theoretical basis of MCA, see Electronic Supplementary Material, eAppendix). This case study describes an application of the MCA process in a group of critical care professionals at one hospital.

Methods

The MCA process consists of eight steps (Fig. 1) in which tables and graphs, all interactive, allow participants to identify how they assess the situation, using either their own words or options selected from dropdown lists. The MCA can be completed using a paper version of the template or an online version.[13] In step 1, participants plan how they are going to proceed—individually or as part of a group, and with or without a facilitator. In Steps 2, 3, and 4, they describe the actions they are constrained to implement and that go against their moral values, how the situation affects them, and how they cope with it, respectively. Step 5 identifies the extent to which the actions people are constrained to implement are in conflict or are coherent with their core values (e.g., justice), their self-interests (e.g., job security, promotion), or their sense of identity, self-worth, and personal growth (e.g., being oneself, receiving recognition, etc.). Step 6 focuses on identifying existing factors that help or hinder participants' ability to address the situation and to establish priorities for action. Elucidating these factors and then reviewing all previous steps informs a coping strategy and feasible action plan to remedy the situation (Step 7). After completing all

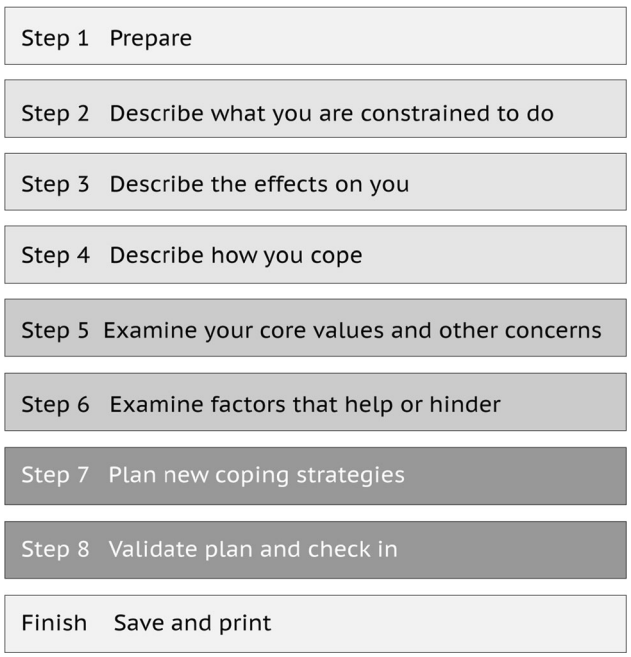

Fig. 1 Sequence of steps for the moral conflict assessment

of these steps, participants are asked how they feel about the situation that was the focus of their moral conflict and if the MCA process had any impact on them (Step 8).

We tested the MCA in an 11-bed medical-surgical ICU at a medium-sized community hospital. The opportunity was presented by the principal investigator first to the leaders of the ICU and then to the ICU staff during a meeting that was led by the nurse leader. The research team presented the concept of moral distress and the overall MCA process to the ICU staff. Leaders encouraged staff to participate in this process during paid work time, or on their own time if they preferred. Just before starting the MCA process, written informed consent was obtained from each participant, including the facilitator and research staff because of the nature of the PAR process.

This study was approved by The University of British Columbia's Behavioural Research Ethics Board (Vancouver, BC, Canada; file number, H16-01858).

Results

Preparation, participants, and setting

Staff who volunteered to participate in the MCA process chose to meet as a mixed group of professionals in the nursing station of their ICU for a collaborative but confidential discussion that would be facilitated by the hospital ethicist, who was already known to the ICU staff (step 1). The participants agreed unanimously to discuss a recent situation in the ICU that was causing them considerable moral distress. The ethicist already knew about this situation and was trained in the use of the MCA tool.

At mutually convenient times, the facilitator, a note-taker, and a member of the research team met the participants in the ICU nursing station. Three 1–1.5-hr sessions were held over a nine-month period. Participants (5–24 years experience) were six bedside nurses and two allied health professionals. The first session covered steps 2 to 5, the second session covered step 6, and the third session covered steps 7 and 8. Nearly all of the same participants were present for all three sessions so that continuity of the discussion was preserved. However, after the first session, one participant felt it was best to provide their responses separately in a private follow-up session, given the differences in their role in this case and the impact it had on their level of stress. Notes were taken to document observations during the MCA and all of the responses to each step in this process, and were later reviewed jointly by the facilitator and the researcher.

Working through the moral conflict assessment process

Participants gathered in the nursing station of the ICU during a day when they were all working in the ICU. They were engaged, open, and respectful of each other. When asked to state what they were constrained to do that went against their conscience (step 2), the group chose to focus on a situation where they had been providing aggressive life-support and intermittent cardiopulmonary resuscitation to an unconscious and near-death patient for two months, mostly at the request of the patient's family. The patient, single and in his mid-60s, had a history of diabetes and hypothyroidism and was admitted to hospital because of subdural hematoma, bradycardia, and hypoxemia. Intravenous dopamine had been given to increase the heart rate and the team discussed the option of inserting a pacemaker. The patient initially refused the pacemaker, although his capacity to make medical decisions was uncertain. While on the cardiac ward, the patient had a cardiopulmonary arrest; he was resuscitated and transferred to the ICU where he remained in a coma for two months. The patient had two siblings who acted as substitute decision makers. They requested a "full code" level of intervention, stating that everything should be done to prolong their brother's life. From their perspective, the patient had declined a pacemaker out of fear of having surgery, but would have wanted "full code" resuscitation in event of cardiac or respiratory arrest. Computed tomography scans showed an infarct in the brain with extensive hypoxic-ischemic injury. Although the patient did not meet criteria for brain death, the medical team's concern was that intensive treatment was contrary to the patient's refusal to have a pacemaker, would negatively impact the patient's quality of life, and could cause the patient more harm than benefit. Most team members felt that a palliative approach was in his best interest.

In step 3, participants examined how the situation affected them personally, using a table of possible effects designed to facilitate the discussion (Table). In addition to the collective stress that was building up in the unit, participants were experiencing a wide range of feelings, including discouragement, fatigue, frustration, helplessness, and apathy (Table). Some felt sorrow and shame for providing aggressive interventions to a patient who they felt would not have wanted these interventions and who may be harmed by them. Some also experienced intense sleep disturbances and felt withdrawn from work. Participants disclosed these effects without hesitation and agreed with many of the responses of their colleagues.

Participants proceeded to discuss what they were currently doing to cope with the situation at hand

Table Possible effects of moral conflict on participants and associated level of stress, determined by consensus

Effect	Level*	Effect	Level*	Effect	Level*	Effect	Level*
Angry	….	Digestive problems	….	Headaches	….	Self-deprecating	….
Annoyed	….	Discouraged	4	Helpless	4	Skin problems	…
Anxious	….	Dizziness	….	Hostile	….	Sleep problems	4
Ashamed	….	Eating problem	….	Irritable	….	Suicidal	….
Breathing problems	….	Embarrassed	….	Migraines	….	Withdrawn	4
Cold, flu	….	Fatigued	4	Moody	….		
Concentration problems	….	Frequently ill	….	Nervous	….	Post-traumatic stress	….
		Frustrated	4	Panicky	….	Other	….
Confused	….	Guilty	….	Sad	….		
Desperate	….						

* No entry next to an effect means that participants did not experience that effect; numerical values indicate that the effect was experienced—the value is a semiquantitative measure of the magnitude of related stress:

Level 1: Discomfort is the uneasiness you may experience when you are pressured to act against your moral values and sense of right and wrong.

Level 2: Discomfort turns to **stress** when it affects your behaviour and personal wellbeing.

Level 3: Stress leads to **suffering** when it involves high levels of anxiety, fear, anger, sorrow, guilt, or shame.

Level 4: Distress is acute suffering involving extreme anxiety, fear, anger, sorrow, guilt, or shame

(step 4). Some were exercising and listening to music, and some were taking medication to help them with sleep disturbances. Others talked about the situation with their colleagues, friends, family members, and hospital administrators, or consulted ethics services and risk management for support. Figure 2 was developed with the participants to capture a consensus-based assessment of their current response. In aggregate, participants felt they were able to think through the problem and make sense of the situation (rating of 8 out 10 on the vertical axis). However, they felt that they were not able to take meaningful action to address the problem (rating of 3 out 10 on the horizontal axis), and were only moderately able to take positive measures to look after their personal wellbeing (colour-coded rating of 2 out of 3). The facial expression in the diagram is a reminder of the intensity of the effect the situation had on them (rated 4 out of 4 from step 3).

In step 5, the facilitator invited the participants to discuss the degree to which their moral values, their self-interests, and their sense of identity, self-worth, and personal growth either conflicted with or justified current treatment of the patient. Although this step was the most abstract of all of the steps, the participants were able to easily establish how these three sets of issues intersected and their relative importance in the situation at hand. Moral values that were in strong conflict with the current intensive treatment of the patient were beneficence, nonmaleficence, justice, effectiveness of intervention, respect for others' freedom, and respect for patient autonomy. Essentially, participants felt that they were not respecting the patient's wishes by continuing aggressive life-support without a clear and considerate plan for end-of-life care. Although this treatment went against their values, they recognized at the same time that it was in their interest to perform their duty, as required, if only to protect their jobs. Identity issues that justified their actions included the fact that they were practising their ICU skills, which contributed to their ongoing professional development.

In the second session, participants reviewed their responses from the previous session, and then identified and discussed existing factors that helped or hindered their ability to solve the problem and act according to their values, especially those of beneficence and respect for the patient's wishes (step 6). Weighting and level of control of each factor were established by consensus of the group.

Two major sets of hindering factors were priorities for action (rated 5 out of 5 by consensus in both cases (Fig. 3). First, there was no coordinated interdisciplinary approach to treating this patient. Second, administrative barriers made it impossible for the ICU physician and nursing team to assume full responsibility for this patient and ensure that his care was not fragmented. This occurred because the patient had been initially admitted to another ward and was later transferred to the ICU to receive a higher level of care. Even though the patient was intermittently critically ill, there was no transfer of authority and the patient was still being attended by the primary (non-ICU) admitting physician. Other hindering factors included scarcity of resources to provide care to this patient and to other critically ill patients. Some team members also raised the possibility of litigation in the event that they altered the existing care plan against the family's wishes. There were

Fig. 2 Coping strategies based on consensus of the participants, before and after doing the MCA. The y-axis is a semiquantitative scale of perceived ability to analyze the problem and the x-axis is a semiquantitative scale of perceived ability to take meaningful action. The position of the face diagrams on the figure is at the intersection between the perceived level of analyzing the problem (8/10 both before and after doing the MCA in this case) and perceived level of ability to take meaningful action (3/10 before and 9/10 after doing the MCA in this case). The "facial expression" indicates the aggregate level of stress as determined in step 3: 4/4 for the face on the left before starting the MCA and 1–2/4 for the face on the right after completing the MCA. The colour of the left face diagram indicates the semiquantitative score of ability for self care before starting the MCA (2/3). This measure was explored only qualitatively after completing the MCA (see text). In the online version, dragging the large dots on the slider bars controls the position and colour of the face in the figure—a separate figure is generated for before and after the MCA

several helping factors (Fig. 3). First, members of the ICU team had access to the patient's primary admitting physician and could have one-on-one communications with him. Second, the same nurse or consistent care team could deliver a specific care plan suited to the patient. Third, the patient's family physician was occasionally involved in meetings with the patient and his family, which helped to gain contextual information about the patient's medical history and previously stated wishes about care.

After reviewing and reflecting on all of the previous steps, the team came up with five sets of recommendations to reduce hindering factors and build on helping factors to resolve the situation and alleviate the team's feelings of moral distress (step 7). They were endorsed easily by all participants, because they were considered realistic and did not require any new funding or staff positions. The first set involved efforts to communicate better with the primary admitting physician, and to decide who is in charge of the intermediate care of ICU patients who come from other wards. This assignment of responsibilities regarding these patients would have to be clarified with the ICU and hospital administration. This is essential if structure is to follow required function and support effective problem solving.

Second, it was recommended that clear and consistent care plans should be developed and followed during rounds, with more involvement and better coordination among members of the team. To achieve this, ways should

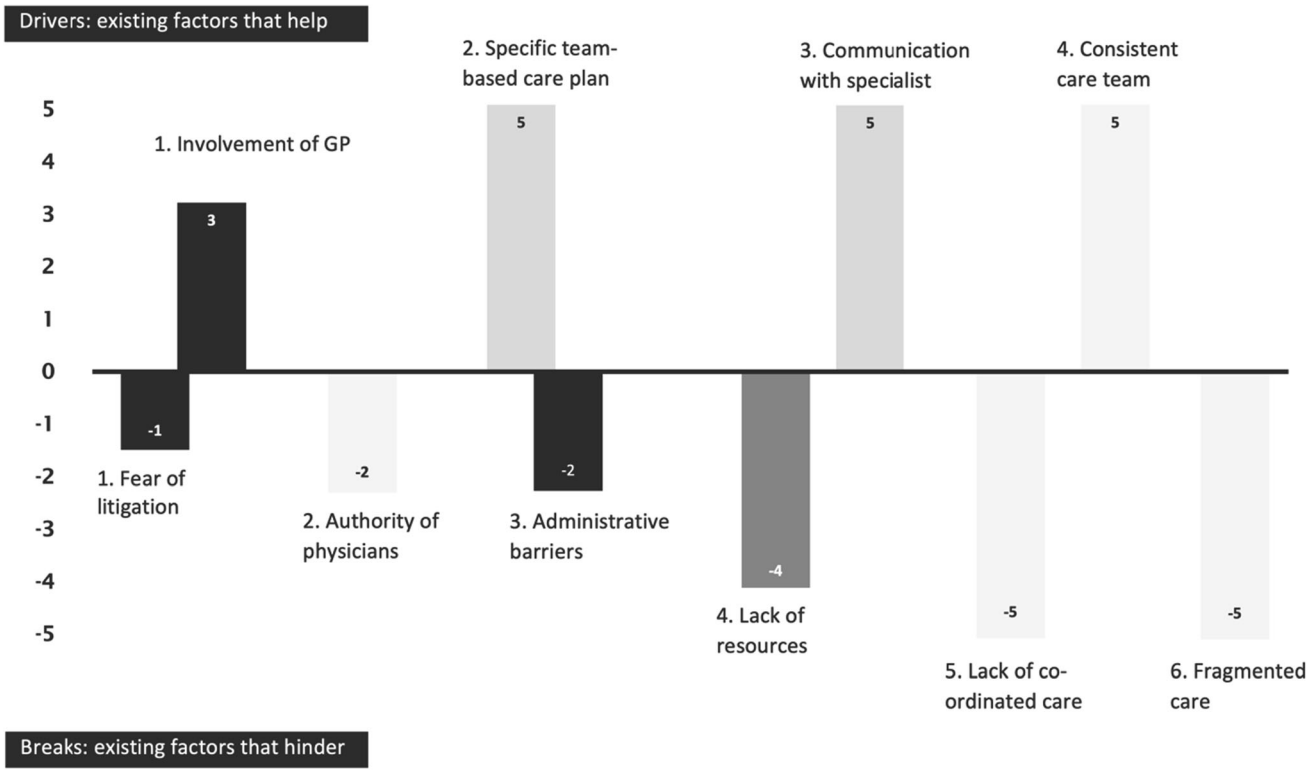

Fig. 3 Existing factors that help or hinder the situation and their characteristics as determined by consensus of the participants. The length of each column indicates the weight exercised by each factor, positive or negative (on a scale of 5 to -5), as perceived by the team. The greyscale shows the level of control that participants thought they had over each factor (light grey: high control; medium grey: medium control; black: no control)

be found to help all ICU team members understand the "big picture" for each patient, receive timely updates, pass on relevant information to family members, ask them clear questions about their needs and the values and preferences of the patient, and use all of this information to reach the best possible decisions.

The third recommendation related to coordinated and consistent care of the family members of seriously ill patients. A group of approximately four people, including nonassigned charge nurses, could act as trusted communicators to understand the family's perspective, their values, and the information they lack. They could introduce family members to the ICU environment, educate them step-by-step about care options, explain what the medical staff know or don't know on a regular basis, and discuss expectations.

The fourth recommendation was to provide general education to both family members of ICU patients and ICU clinicians. Education for families centred around the nature of death and dying and advance care plans, through conversations in family meetings and by providing printed handouts, beginning at the time of admission. Recommendations around education for ICU clinicians centred on providing clarity on the Medical Orders for Scope of Treatment forms (otherwise known as degree or level of intervention form), legal liabilities, and ethics of decisions to withdrawing life-saving or sustaining treatment. Such educational initiatives would help to reduce stress and the fear of litigation, build trust between the family members and the healthcare team, improve overall communications, and develop common understandings.

At the end of this discussion, participants expressed their willingness to try some of these new responses without requiring permission from administrators. In the concluding step (step 8), participants discussed possible metrics of success—how they would know that their new responses were effective. These metrics included less sick time, less crying, more team meetings, and a lower value of distress in this assessment. They also revisited the diagram used in step 4 and assessed the extent to which the MCA process had affected their stress and how the plan that they had developed enabled them to think through this problem and take meaningful action. The second (right side) facial expression appearing in the diagram in Fig. 2 indicates the extent to which the team felt that the assessment and planning process had reduced their overall stress (down to level 1–2) and generated recommendations that would

produce meaningful action (9 out of 10) without acting against their own conscience or legitimate professional interests.

Follow-up

A collated report of anonymized findings from this MCA process highlighting the recommendations was presented by the principal investigator to the leadership team and the wider ICU team. Several of the recommendations that emerged from this process were implemented shortly thereafter. For example, the charge nurse was designated as point person for family communication, and family meetings were scheduled weekly in those cases requiring more frequent meetings. Importantly, roles and responsibilities were clarified to the interprofessional team; the attending ICU intensivist was in charge of a patient who was receiving intermediate level care in their ward, provided the patient was critically ill or at risk of becoming critically ill. Otherwise, the outside specialist would be in charge. Also, within a few months of the MCA process, all ICU personnel participated in a hospital-wide course about improving advance care planning and establishing goals of care near the end-of-life.

Discussion

Moral distress is such a widespread phenomenon that it may have become a defining malaise of our age. Problems of conscience and the loss of meaning at work affect people who provide routine frontline services in practically all settings. The growing list includes firefighters, social workers, international aid workers, street-level bureaucrats, police officers, and military personnel. This case study shows how PAR can be extended to moral distress in critical care. PAR has been used primarily to investigate general workplace distress[14,15] and various problems in critical care,[16–18] such as family centred care[17] and quality improvement.[18] The idea of designing and testing collaborative ways of assessing issues of moral conflict in critical care has several advantages. First, the proposed MCA methodology addresses a widespread problem: inadequate interprofessional communication and teamwork that tend to exacerbate moral distress.[19–22] In the current example, four different professions were represented in the discussions using a dialogical approach to making sense of a problem situation and acting on it. Second, participants were invited to distinguish moral distress from ethical dilemmas and situations of emotional distress, a distinction that is made clear from the beginning of the process. Third, the process helped participants distinguish ethical issues from other legitimate concerns ranging from interest-based considerations to issues of self-worth, identity, and personal growth, all of which tend to mesh and compete for attention in real life. In the current example, the contributions of these different issues to the moral conflict were articulated separately. Finally, a basic distinction was made between different coping mechanisms—people looking after themselves, thinking through the situation, and taking meaningful action. All of these distinctions are important because the approach to solving each kind of issue is distinct.

The current study builds on previous work[23–26] by providing a step-by-step guide for participants to characterize their moral distress and develop potential solutions. This approach has several strengths. In addition to being inherently collaborative, the MCA process creates semiquantitative measures that allow for a before-after comparison. Also, review of all preceding steps before proposing new coping strategies allows for a more informed approach to solving the problem. This may lead to planned organizational change as opposed to attributing moral distress and other wellness problems to questions of personal resilience of the affected professionals.[27] There are also several limitations of this approach. First, completion of this process requires a time commitment from the participants. Second, by definition, participants are those who have experienced moral distress; unless there is a "randomization" process in choosing participants, responses may be biased. Third, leaders and other key actors must support the process and commit to acting on the recommendations. Although physicians did not participate in the current process, two physicians did participate in separate MCAs about other causes of moral distress. Finally, while an online version can be completed without any assistance,[13] the process may require the presence of a trained facilitator and note-taker. Despite these limitations, the MCA process offers a highly feasible and practical means for people to generate tangible and actionable solutions to the complex problem of moral distress.

Author contributions *Peter M. Dodek* assisted in the development of the moral conflict assessment, led the grant writing process for this project, assisted in the conduct of the moral conflict assessment, and led the writing of this manuscript. *Kim Jameson* led the conduct of the moral conflict assessment, and assisted in the writing of this manuscript. *Jacques M. Chevalier* led the development of the moral conflict assessment including the website, and assisted in the writing of this manuscript.

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