

“Get the DNR”: residents’ perceptions of goals of care conversations before and after an e-learning module

« Obtenir la décision du patient sur la réanimation » : la perception des résidents quant à la discussion sur les objectifs de soins avant et après une formation en ligne

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Abstract

Background: Residents frequently lead goals of care (GoC) conversations with patients and families to explore patient values and preferences and to establish patient-centered care plans. However, previous work has shown that the hidden curriculum may promote physician-driven agendas and poor communication in these discussions. We previously developed an online learning (e-learning) module that teaches a patient-centered approach to GoC conversations. We sought to explore residents’ experiences and how the module might counteract the impact of the hidden curriculum on residents’ perceptions and approaches to GoC conversations.

Methods: Eleven first-year internal medicine residents from the University of Toronto underwent semi-structured interviews before and after completing the module. Themes were identified using principles of constructivist grounded theory.

Results: Prior to module completion, residents described institutional and hierarchical pressures to “get the DNR” (Do-Not-Resuscitate), leading to physician-centered GoC conversations focused on code status, documentation, and efficiency. Tensions between formal and hidden curricula led to emotional dissonance and distress. However, after module completion, residents described new patient-centered conceptualizations and approaches to GoC conversations, feeling empowered to challenge physician-driven agendas. This shift was driven by greater alignment of the new approach with their internalized ethical values, greater tolerance of uncertainty and complexity in GoC decisions, and improved clinical encounters in practice.

Conclusion: An e-learning module focused on teaching an evidence-based, patient-centered approach to GoC conversations appeared to promote a shift in residents’ perspectives and approaches that may indirectly mitigate the influence of the hidden curriculum, with the potential to improve quality of communication and care.

Résumé

Contexte : Les résidents sont souvent amenés à discuter des objectifs de soins (ODS) avec les patients et leurs familles afin d’explorer les valeurs et les préférences des patients et d’élaborer des plans de traitement centrés sur le patient. Cependant, certaines études montrent que le curriculum caché peut favoriser la mauvaise communication et l’orientation de la discussion selon les priorités du médecin. Nous avons déjà conçu un module d’apprentissage en ligne visant à enseigner une approche centrée sur le patient lors des discussions sur les ODS. Ici, nous explorons l’expérience des résidents et la façon dont ce module pourrait contrecarrer l’impact du curriculum caché sur leurs perceptions et leurs approches dans le cadre de ces discussions.

Méthodes : Onze résidents de première année en médecine interne de l’Université de Toronto ont participé à des entretiens semi-structurés avant et après avoir suivi le module. Les thèmes ont été définis en appliquant les principes de la théorie ancrée constructiviste.

Résultats : Avant de suivre le module, les résidents ont évoqué les pressions institutionnelles et hiérarchiques qu’ils subissent pour obtenir une décision de la part du patient quant à la non-réanimation, les obligeant à diriger la discussion sur les ODS et à l’axer sur la définition du statut de code, la documentation et l’efficacité. Les contradictions entre le programme officiel et le curriculum caché entraînaient chez eux une dissonance et une détresse émotionnelles. En revanche, après avoir terminé la formation, les résidents ont décrit de nouvelles conceptualisations et approches de la discussion sur les ODS, plutôt centrées sur le patient, grâce auxquelles ils se sentent habilités à contester le dictat du médecin quant aux sujets à aborder dans la discussion. Ce changement s’explique par un meilleur alignement de la nouvelle approche sur les valeurs éthiques qu’ils ont intériorisées, une plus grande tolérance à l’incertitude et à la complexité des décisions concernant les ODS et une amélioration des rencontres cliniques dans la pratique.

Conclusion : Un module d’apprentissage en ligne axé sur l’enseignement d’une approche fondée sur les données probantes et centrée sur le patient pour les discussions sur les ODS semble favoriser un changement de perspective et d’approche chez les résidents, qui aurait pour effet d’atténuer indirectement l’influence du curriculum caché et d’améliorer la qualité de la communication et des soins.

Goals of care (GoC) conversations are patient-centered discussions among clinicians, caregivers, and patients. They explore patients' experiences, values, concerns, and treatment preferences, integrating them into decisions to guide medical care.¹⁻³ In the acute inpatient setting, GoC conversations may include discussions around resuscitation preferences.⁴ These conversations are important aspects of care associated with improved quality of life for patients and caregivers, and reduced aggressive care for patients who are seriously ill.⁵ However, GoC conversations can be complex and challenging, and there is frequently poor communication around GoC and even discordance between documented GoC and those expressed by patients and families.⁶⁻⁹ Poorly managed discussions can strain the patient-physician relationship, cause psychological distress for patients, and lead to care incongruent with patients' goals.^{7,10,11}

In academic medical centers, junior residents are expected to carry out GoC conversations with hospitalized patients, yet report inadequate training and feelings of uncertainty and emotional distress.^{12,13} A number of educational interventions have been developed to improve residents' ability to facilitate these discussions.¹⁴⁻¹⁹ Yet, previous research has noted that advancements in the formal curriculum are unlikely to be successful without attention to the "hidden curriculum" - the implicit set of expectations, values, and attitudes that contribute to the culture of medicine.²⁰⁻²⁴ In the context of GoC conversations, the hidden curriculum has been shown to promote hospital-centered care over humanism and patient-centered communication, and to undermine trainees' idealized values.^{12,25} However, little is known about how to address this situation. Understanding how to mitigate the effects of the hidden curriculum on GoC conversations is essential to improving the quality of communication and care.

To address the hidden curriculum, we previously developed an electronic module that teaches a standardized patient-centered approach to GoC conversations. The purpose of our study was to explore how this module might counteract the impact of the hidden curriculum on the perceptions, approaches, and experiences of residents with GoC conversations in the acute inpatient setting. To do so, we explored and compared junior residents' perceptions of these conversations before and after completing the module.

Methods

Study design

We used a constructivist grounded theory (CGT) approach to develop a conceptual understanding of how internal medicine (IM) residents' perceptions of and approaches to GoC conversations were impacted by the learning module.²⁶⁻²⁸ To do so, we used pre-and post-module interviews to deeply explore their perceptions of these conversations both before and after module completion.

CGT recognizes that researchers' experiences and perspectives influence how meaning is constructed through the participants' stories.^{27,28} Accordingly, our research team comprised individuals with varying degrees of clinical, educational and research expertise, each providing different perspectives, which fostered reflexive dialogue and data interpretation. Our team consisted of a resident in IM training (L.B.D.), a research coordinator in palliative care with experience in qualitative methodologies (S.S.), an established educator and palliative care clinician (L.S.), an experienced clinician-scientist with expertise in qualitative methodologies (S.G.), and an experienced clinician with significant research experience (C.S.). Furthermore, the majority of investigators (L.B.D., L.S., S.G., C.S.) work on the inpatient IM ward, the clinical teaching unit (CTU), and conduct and supervise GoC conversations, enabling them to help situate comments and provide depth of interpretation. The use of a near peer interviewer (L.B.D.) also served to minimize the power differential to help facilitate authentic responses. Following individual analysis of the data, group discussions helped to explore each author's conceptualization of the data, contributing to our construction of meaning from the data. We maintained a reflexive approach throughout all stages of data analysis, actively acknowledging our positions as both trainees (L.B.D.) and faculty (L.S., S.G., C.S.) and their potential effects on interpretation. Ethical approval was obtained from the University of Toronto Research Ethics Board.

Study setting

This study was conducted in an IM training program at the University of Toronto. On the CTU, residents provide care in teams and are responsible for independently conducting GoC conversations with inpatients and documenting GoC decisions in patients' charts. These conversations may be conducted by IM residents in the Emergency Department at the time of the patient admission or on the inpatient ward at any point during a patient's stay in hospital.

Residents review admitted patients in the morning with their supervising physician. Most hospitals require documentation of a patient's code status (i.e., preferences for cardiopulmonary resuscitation) at the time of admission.

Materials

In response to a needs assessment of learners on the CTU, several members of our team created an online learning (e-learning) module to teach trainees a standardized, patient-centered approach to leading GoC conversations with inpatients (available at www.goalsofcaremodule.com). It was developed based on best practices for delivering GoC conversations, with input from physicians in critical care, IM, and palliative care.^{2,3,29-33} The module can be completed in under 1.5 hours and emphasizes patient-centered communication through a 5-step approach: (1) prepare yourself, (2) listen to illness understanding, (3) ask about values, (4) inform the patient, and (5) make a plan. Appendix A provides screenshots of the module. The module is interactive and uses several evidence-based educational strategies, including the use of fictional patient cases, frequent reflective questions and exercises, and video role modeling of each stage of the approach to patient-centered GoC communication.³⁴ There is explicit teaching and labeling of effective communication strategies, such as the use of open-ended questions to solicit patient values.

Participants and data collection

By email, we recruited first-year residents from a cohort of 71 residents. Data collection and analysis occurred iteratively, consistent with CGT.^{27,28} Between September and December 2017, one researcher (L.B.D.) conducted two in-person 30- to 45-minute interviews with each participant, one before and one after watching the module. As the interviewer was a resident herself at the time of the study, she was poised to understand and elucidate the subtleties of GoC conversations throughout the interviews. The use of a near peer also served to minimize the power differential. Informed consent was obtained prior to each interview. The first interview occurred prior to module completion and the second interview occurred within one month of module completion; this enabled pre-post comparisons in residents' perceptions and experiences. We interviewed all participants twice. We used semi-structured interview guides created and refined by the study team (Appendix B and C). The pre-module interview used open-ended questions, inviting participants to describe their definitions, approaches and experiences

with GoC conversations, and any challenges and emotions that they encountered. Probing questions explored challenges in greater depth. The post-module interview consisted of similar questions about residents' perspectives and approaches, along with questions exploring their reactions to the module and any changes in their understanding and approaches. In both interviews, if residents discussed aspects of the hidden curriculum, this was explored in greater depth. In accordance with CGT methodology, both interview guides were refined throughout the iterative analysis process to explore themes and concepts identified in earlier interviews.^{27,28} All interviews were audio-recorded, transcribed verbatim, and de-identified prior to data analysis.

Data analysis

We analyzed transcripts using principles of CGT using an iterative, constant comparative approach.²⁶⁻²⁸ Data analysis occurred alongside and informed data collection. We coded and analyzed the pre-module interviews first, then the post-module interviews, and then combined the data to allow for comparisons and further analysis and interpretation. Sensitizing concepts included the hidden curriculum and, in the post-module interviews, specific parts of the module that were influential.

For each set of interviews, two researchers (L.B.D. and S.S.) used a line-by-line approach to develop initial codes. We then met to compare codes and emerging concepts after the first three interviews in each set. We used a constant comparative approach to iterative coding in which we examined transcripts multiple times as additional interviews were conducted to provide ongoing comparisons across the dataset. We met several times to refine the coding structure, collapse codes into categories, explore relationships among categories and then themes, challenge our understanding based on new data, and refine our theoretical framework.^{27,28} The rest of the research team (S.G., L.S., C.S.) read uncoded transcripts and participated in discussions to verify the coding and to later refine the framework.²⁸ Data collection ceased once we determined by group consensus that theoretical saturation had been reached, or that we had sufficient depth and understanding of the data to develop a framework to describe residents' perceptions and experiences with GoC conversations and how the module impacted their insights and perspectives.²⁸

We used NVivo statistical software, version 11.2.0 (QSR International, Doncaster, Victoria, Australia) for data management.

Results

Eleven first-year residents were included. All participants demonstrated a shift in their perspectives after completing the module. Our framework reflects their conceptions before and after module completion. In the pre-module interviews, we identified two themes: 1) the pressure to “get the DNR” shaped physician-centered approaches, and 2) emotional and moral distress resulted from pressures of the hidden curriculum. In the post-module interviews we found two additional themes: 1) reconciliation of conflicting pressures, and 2) improved clinical encounters reinforced patient-centered approaches. Numerical participant identifiers are given after representative quotes.

Pre-module: pressure to “get the DNR” shaped physician-centered approaches

In the pre-module interviews, while residents recognized that the intent of these conversations should ideally be to “[get] a better sense of the [patient’s] overall philosophy of care” (P5), they described multiple institutional and social pressures leading to physician-centered GoC conversations focused on code status (i.e., patient directives for cardiopulmonary resuscitation), documentation, and efficiency. Residents’ experiences with institutional and hierarchical pressures, which shaped their perceptions and experiences prior to completing the module, are described below.

Institutional pressure: Hospital medico-legal requirements to document a code status at the time of patient admission encouraged conversations focused on code status. Needing to “check a box [on a form]” (P3), residents described presenting resuscitation choices like a “menu of options” (P9):

[I ask if] their heart were [sic] to stop beating or lungs were to stop working... if they would want...chest compressions, defibrillation and intubation; would they want to go to the ICU for pressors or BiPAP [Bilevel Positive Airway Pressure]. (P5)

While residents felt conflicted that patients could be “rushed” (P11) into making potentially uninformed care decisions, they felt “forced” (P2) to comply with institutional requirements and prioritized paternalistic agendas:

[I’m] coming into the conversation wanting an answer... [even if] there’s many people who hadn’t

thought about that kind of goal...I came in and I wanted an answer. (P10)

Hierarchical pressures: Resident descriptions of GoC conversations were further shaped by perceived hierarchical “expectations” (P11) not only to focus on code status, but explicitly to “get the DNR” (Do-Not-Resuscitate) (P4) even if it might be contradictory to patients’ beliefs or values:

[You’re] feeling like you need to get a DNR...[it’s] at the back of your head because you might feel pressure...this is what your staff is really wanting the patient to say. (P5)

Pressure to “get the DNR” (P7) was often conveyed explicitly by supervisors, as residents felt “pressured to have these discussions in relatively short periods of time when in reality [it] might take weeks” (P6). Sometimes, “pressure” (P1) was implied from negative role modelling, including depersonalized comments and modelled poor communication with families. At other times it was conveyed through repeated questioning or requests from a supervisor with an implied hidden agenda.

We [say we] do encourage patients to have an informed choice. In reality, a lot of times we have an agenda...when someone asks you to have a GoC conversation, it’s really a loaded question of, make sure that their GoC are appropriate. Or how we feel that it would be appropriate. (P11)

Pre-module: emotional and moral distress resulted from pressures of the hidden curriculum

Moral distress was evident as trainees described, feeling “tugged at opposite ends” (P8) trying to manage perceived pressures to “get the DNR” (P4) with the ethical responsibility to respect patients’ autonomy and thus to do what is “right for the patient” (P4):

It creates a pressure that...you need to come out [of the discussion] knowing that all crystal clear. But then that’s unfair to the person in front of you who may not have really thought about that. (P5)

On one hand, they grappled with “guilt” (P8), feeling they might have pushed families into making decisions that they did not “fully comprehend” (P2). On the other hand, if they failed to get the desired code status, they felt as though they had disappointed their supervisor or colleagues:

It was my responsibility, [but] I wasn’t capable of-achieving [the DNR] ... [I would be] answering to the

resident on call that night... that it was my fault that they would have to deal with this awful, awful code. (P8)

Post-module: reconciliation of conflicting pressures

After completing the module, residents described that they had developed new conceptualizations of and approaches to GoC conversations, in which they emphasized the importance of patient-centered over “paternalistic” (P11) priorities. Many reframed their definition of success in these conversations to be no longer contingent upon achieving the desired code status. This helped to reconcile conflicting tensions between formal and hidden curricula. Reflecting on prior “misconceptions” (P2) and attitudes, Participant 5 stated:

The biggest overall change is... that the discussion isn't this set list of [resuscitation options] you need to figure out if the patient wants or doesn't want so you can report it to [your staff] ... this module [is] a reminder that...it's about where the patient is at ...what their values are and what is important to them. (P5)

As a result, residents felt increasingly “confident” (P1) and empowered to overcome pressures from the hidden curriculum including institutional and social pressures that conflicted with the patient-centered approach. This change in mindset was driven by the following two subthemes: greater alignment with their ethical standards, and increased tolerance of uncertainty and complexity involved in GoC decisions.

Greater alignment with internalized ethical standards:

Residents described that the module’s role modeling of and emphasis on patient autonomy and shared decision aligned with their sense of professionalism and ethics compared to prior approaches they had adopted. This helped to shape new perceptions and expectations for GoC conversations that transcended pressures of the hidden curriculum:

I don't think [pressures are] a barrier any longer...now I'm aware that an inability to [get the DNR] is not a failure on my part.... Instead, now I'm having a patient-specific, patient-centered conversation. Whether or not that results in a DNR, I know that what I'm doing is what's right for the patient. (P4)

This shift in perspective helped to alleviate moral distress previously experienced from the internalization and repetition of attitudes and behaviours that conflicted with their idealized values. For example, reflecting on recent

conversations after module completion, P8 elaborated that despite minor drawbacks, her new focus on patient-centered GoC communication aligned with her professional values and identity.

[The chances of] getting that box filled on the form the first time I meet them is a bit lower... but I feel more ethical as a practitioner. I don't feel as though I'm...dismissing [them] and just getting the result that I want even if it doesn't feel as though they totally understand. (P8)

Tolerance of uncertainty and complexity: After reflecting on the module content and applying the new strategies in the clinical setting, residents described increased comfort with patient uncertainty around GoC decisions. They described that the lessons from the module helped to alleviate the impact of perceived pressures to ensure patients had definitive GoC decisions made and documented at the time of admission. Reflecting on a recent patient experience, P6 commented that she no longer felt the need to focus primarily on code status documentation and efficiency in these conversations:

I'm more mindful of the fact that these conversations can go in any way...it's not just about code status, so I'm ready to accept that and accept the fact that we may not come to a conclusion [yet]. (P6)

Many residents expressed that the patient vignettes in the module helped to “normalize” (P4) the complexity of decision-making around GoC. Residents reflected on their prior beliefs and now better recognized the challenging nature of decisions around GoC, and that they could evolve over time throughout a patient’s hospitalization. This new realization helped to counteract pressures to prioritize expediency over patient needs.

The module helped me step back and rethink my approach... Not rushing towards the goal... it's more palatable to me...let time work on your side to help you through those discussions as opposed to trying rushing them. (P11)

Residents described still documenting a code status designation, but now focused on broader discussions around patient values and wishes, recognizing that documented code status and treatment preferences could change with time and be modified accordingly.

Post-Module: Improved clinical encounters reinforced patient-centered approaches

When enacting their new approaches in the workplace, residents perceived that there was greater receptivity, “therapeutic alignment” (P7), relationship-building and “trust” (P2) with patients, in contrast to prior conversations that were frequently strained. Many residents described conversations with reduced tension, improved rapport, and better communication that, at times, led to unexpected praise from families. These reactions were especially transformative for those who were initially skeptical of the new approach and helped to affirm their commitment to new patient-centered attitudes and communication strategies.

I actually noticed the difference in terms of the family and the patient’s satisfaction with our conversations... [in one case] there were issues with regards to trust [in these conversations] ... [but] focusing in on their understanding and values... they actually [said they] felt better at the end of it. (P6)

I noticed... [now there was] no perception of conflict... patients really appreciate when you ask them to tell you more about what [they] want rather than [just] telling them what you think is appropriate. (P2)

Some residents still expressed some apprehension about encountering future resistance from supervisors but, on the whole, felt that improved interactions with patients justified the new approach. Furthermore, they felt better equipped to manage interactions with supervisors, describing now having the “mental framework” (P2) and “language” (P10) to better manage explicit or implied pressures:

[Recently] I have just explained that the situation was not conducive, or the patient needed more information before they could make a decision...[Now] I can’t necessarily imagine a situation where a senior resident, or staff member would pressure me further when I explain that I did what was appropriate for the patient at the time. (P4)

Discussion

We evaluated a module teaching a standardized, patient-centered approach to GoC conversations. We found that first-year IM residents described altered perceptions, emotions, and experiences in conducting GoC conversations after completion. Similar to prior studies, we found that residents’ experiences were heavily influenced

by institutional policy and academic hierarchies, leading to the prioritization of physician-driven agendas and a task-oriented mindset at the expense of meaningful conversations around GoC.^{12,25} Yet, the module appeared to indirectly counteract the impact of the hidden curriculum by providing residents with a framework to support a shift in their conceptualizations and approaches, which helped to empower them to begin to challenge perceived pressures of the hidden curriculum.

Acquiescing to perceived institutional and hierarchical pressures led to moral distress, as has been previously described as a consequence of acceptance of harmful aspects of the hidden curriculum.^{12,35} Residents felt powerless to confront system and supervisor expectations, and often reluctantly adopted undesirable approaches. Our findings build on prior studies demonstrating that GoC conversations are sources of significant anxiety and apprehension, indicating that this distress may in part be fueled by the emotional dissonance that results from the contradiction between what is taught (formal curriculum) and what is modeled (hidden curriculum).^{12,25,36,37} As moral distress may culminate in cynicism, reduced empathy, and burnout, our findings underscore the need to mitigate the effects of institutional policies, resource limitations, and strict hierarchies on GoC conversations.^{38–41}

After completing the module, residents indicated that their expectations, priorities, and conceptualizations of success in these conversations shifted, and they felt more empowered to overcome pressures of the hidden curriculum. The module’s focus on exploration of patient values aligned with their professional identities and ethical standards. This provided approval to adopt attitudes and approaches that were in accordance with their standards and beliefs.³⁸ It also provided them with the framework and language to challenge messages to the contrary. This finding emphasizes the importance of interventions that help physicians to cope with conflicting priorities and institutional and social pressures that contribute to the culture of physician and institutional centred practices.^{12,42}

The module seemed to promote patient-centered perceptions and approaches to GoC conversations by reframing residents’ expectations and assumptions through several mechanisms. First, normalizing complexity and uncertainty in GoC decisions helped to challenge the perceived need for oversimplification and expediency in these conversations. This strategy has been previously encouraged as a way to target the hidden curriculum and to help trainees develop the capacity to adapt to challenges

in a complex and unpredictable environment.^{12,22} Within the broader context of medical training, tolerance of uncertainty is considered a key dimension of clinical competence. Greater tolerance of uncertainty has been associated with a greater willingness to engage in shared decision-making, more humanistic attitudes towards patients, and reduced physician disillusionment.^{43–45} This mechanism may therefore help to counter implicit messages in the clinical environment that hamper compassionate attitudes to care. Second, guided reflection helped residents overcome countervailing presuppositions and to support humanistic attitudes. Reflection has been shown to stimulate recognition of issues related to patient dehumanization and power that are otherwise ambiguous or overlooked by trainees.^{41,46–48} As Neve and Collett describe, by starting to critically evaluate and understand the root of these issues, trainees may feel more empowered to act differently.⁴⁹ Finally, patient narratives and role-modeling in the module may have served to promote a more holistic, relationship-centered approach to care, underpinned by empathy and shared-decision making.^{24,41,50} In doing so, the module may have helped to subvert messages transmitted by the hidden curriculum, by altering participants' mindsets and providing a framework that empowered them to challenge it through their clinical behaviours and interactions with supervisors. The finding that a module like this can alter participants' mindsets lends support for these educational strategies in the context of GoC conversations. These strategies may also be useful in future interventions aimed at mitigating the effects of harmful cultural and institutional messages in communication with seriously ill patients.

Future studies are needed to examine the extent to which these educational strategies sustain patient-centered attitudes and perspectives over time. Previous studies have also emphasized the need to engage teachers in acknowledging and addressing the hidden curriculum.^{20,22,25} Future work will need to focus on faculty development in supporting patient-centered GoC conversations and addressing aspects of institutional culture and policy that transmit the hidden curriculum. More frequent feedback and direct observation of trainees will also be necessary and may be supported by the introduction of competency-based models of education. Finally, we did not measure objective changes in attitudes or behaviours which could be the subject of future studies.

There will also be a need to balance patient-centered GoC communication with requirements for timely

documentation of code status. Institutional requirements around code status serve an important purpose to provide clarity around preferences for resuscitative care in case of cardiac or pulmonary arrest.^{24,51} Our trainees described focusing the attention of GoC conversations around broader issues related to patient values and wishes, which then inform code status designations accordingly. Future work could examine possible effects on rates of documentation and degree of concordance between actual and documented wishes.

We note several limitations to this study. Although we explored residents' experiences at one-month post-intervention, the longer-term effects of this intervention on trainee perceptions requires further exploration. Additionally, as our study involved trainees in a single IM training program, our results may not be transferrable beyond this setting. However, our trainees' experiences were similar pre-intervention to those reported in the literature,^{24,25,38} suggesting that this intervention could work in most other places or is at least worth the try. Describing the context of our study allows readers to determine the degree of transferability to their own settings.

Conclusion

Following a short instructional video module focused on a standardized, patient-centered approach to GoC conversations, residents described new perceptions and approaches, suggesting that it may have mitigated the pressures of the hidden curriculum. By promoting new patient-centered conceptualizations and attitudes in conversations that are often associated with poor communication and patient harm, this module contributed to improved quality of communication. We advocate for continued development and study of educational strategies that can show promise in helping to mitigate the erosion of patient-centered approaches to communication in the care of hospitalized patients.

Conflicts of Interest: The authors have no conflict of interests to declare.

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Appendix A.

Screenshots of the goals of care e-learning module used in the internal medicine program at the University of Toronto (www.goalsofcaremodule.com)

INTRODUCING THE GOALS OF CARE MODEL...

PREPARE

LISTEN TO ILLNESS UNDERSTANDING

INFORM

ASK ABOUT VALUES

MAKE A PLAN

INTRODUCING OUR THREE PATIENT SCENARIOS:

Scenario 1
Mrs West is a 60 year old woman with metastatic breast cancer. She was admitted last night with a pleural effusion which was drained. You know from the oncologist that she has very few treatment options remaining.

Scenario 2
Mrs. Serafian's mother is an 86 year old woman with moderately advanced alzheimer's disease who has been brought into the ER. She has aspiration pneumonia, the third episode in the last 6 months. You are meeting her in the emergency department to discuss referring him to palliative care.

Scenario 3
Mr Young is a 45 year old man with metastatic lung cancer. He was admitted with new thoracic metastasis causing mild cord compression. Oncology notes say that his disease is progressing despite 2nd line chemotherapy. You are going to discuss referring him to palliative care.

PAUSE FOR THOUGHT

What do you think about her understanding of her mother's illness?

Record your thoughts here...

STEP FOUR - ASK ABOUT VALUES

When the patient seems ready, it is time to ask about his or her values. You can ask:

- What is most important to them
- Are there things they worry about for the future
- How have these changes affected you
- Do you worry what will happen

Appendix B.

Pre-module interview guide

- Tell me what you think it means to have a goals of care conversation with a patient or caregiver.
- Tell me about your general approach to having a goals of care conversation
 - What do you think are the most important aspects about this? *What influences this belief*
 - What does “getting a code status” from a patient or patients’ family mean? *Consider: does this conversation this differ from a code status? explore meaning of code status vs goals of care and what influences this*
 - Have you had any opportunities for observation or training in how to have a goals of care conversation in residency? *Consider asking feedback, observation*
- What challenges have you faced or might you face if any in having a goals of care conversation with patients or caregivers?
 - *Explore: perceptions of factors contributing to these challenges.*
 - *If discuss pressures of the hidden curriculum, explore in greater depth: form whom, when, where, how they experience them, how it affects them*
 - What emotions have you experienced in having goals of care conversations
- What, if anything, worries you about having a goals of care conversation? *If express worries, explore what informs these concerns and why*
- How prepared/confident do you feel have goals of care conversations? *Why*

Appendix C.

Post-module interview guide

- Did you have any immediate reactions to the learning module? *Was it realistic? Have you had any similar patients to those depicted? What stood out? Did you experience any emotions?*
- Were you able to complete aspects of the module prior to a patient encounter? *If yes, explore experience, description, approach, challenges, emotions, reactions*
- Tell me what you think it means to have a goals of care conversation with a patient or caregiver.
- Can you describe your approach to having a goals of care conversation? *Most important aspects and why?*
 - What does “getting a code status” from a patient or patients’ family mean? *Explore whether this differs from GoC conversation or not, and if so how?*
- What challenges might you face in having a goals of care conversation with patients or caregivers?
 - What, if anything, worries you? *Explore what and why. If discuss hidden curriculum, explore these challenges*
- Did the module change your approach to eliciting goals of care? *Explore. Challenge this assumption, how will or won’t they manage the challenges they have mentioned?*
 - *If discuss hidden curricular pressures, explore challenges in facing these*
- How prepared/confident do you feel to have goals of care conversations? *Explore whether or not this has changed from previous and why.*
- When did you complete the module? How long did it take to complete the full module?
- Do you think others should or should not complete the module? *Explore why or why not*