Supportive Care in Cancer (2024) 32:71
https://doi.org/10.1007/s00520-023-08285-2

CORRESPONDENCE

Doing the hard work of learning: oncologists' enduring impressions of a year-long communication skills training program

Daniel E. Epner[1] · Suresh K. Reddy[1] · David Hui[1] · Bryan Fellman[2] · Eduardo Bruera[1]

Received: 14 August 2023 / Accepted: 19 December 2023 / Published online: 30 December 2023

Abstract

Purpose Few studies have examined the long-term impact of communication skills training for oncologists. We developed a year-long communication skills curriculum for medical oncology fellows with the primary goals of fostering life-long learning of patient-centered communication skills and internalization of associated attitudes and beliefs. We engaged learners through reflection, narrative methods, and action methods, thereby creating a non-threatening, team-based environment. The purpose of the current study was to determine whether learners perceived that they had acquired enduring skills, attitudes, and knowledge years after they participated.

Methods Former fellows completed an online cross-sectional survey from June to July 2019 that included demographic information, 21 items on a numerical scale, and 3 narrative prompts. Survey items pertained to 4 domains, including skills, attitudes, confidence with specific scenarios, and overall impressions. The numerical scale ranged from "strongly agree" = 1 to "strongly disagree" = 5.

Results A total of 114 fellows, including 27 teaching assistants, participated in the communication skills training over 8 years. The average time between the end of the training program and completion of the survey was 5.2 years. The response rate was 68/114 (64%). Forty-one (60%, 95% CI: 49.3–73.8) fellows agreed or strongly agreed that the curriculum profoundly impacted their practice of medicine. Forty-three (64%, 95% CI: 51.5–75.5) fellows strongly agreed or agreed that they often found themselves informally sharing lessons they learned during the series. Overall average domain scores were 1.89 (SD = 0.84) for skills, 2.16 (0.79) for attitudes, 2.05 (0.81) for confidence with specific challenges, and 2.38 (0.94) for lasting impressions. Results were significantly more favorable for teaching assistants than for others.

Conclusion Engaging, interactive, safe, and learner-centered communication skills training has an enduring and favorable impact on oncologists' self-perceived skills, confidence with specific challenges, and attitudes.

Keywords Communication skills training · Andragogy · Empathy

Introduction

Difficult conversations about prognosis, end of life, and goals of care arise commonly in medical oncology practice. These conversations are often highly emotional and are built on a solid foundation of patient-centered communication skills, such as exploring patients' perspectives, using silence in the right measure, avoiding jargon, offering small "quanta" of information rather than lecturing, recognizing strong negative emotions, responding to emotions with empathy, and maintaining mindfulness [1–3]. Despite the importance of outstanding communication skills, medical education emphasizes biomedical knowledge at the expense of relational skills. As a result, many doctors lack nuanced skills necessary to engage in challenging conversations effectively [4–6]. Patients often lack critical information they need to make well-informed health care decisions at the end of life [7]. Many people think of good communication, or bedside manner, as a mysterious art form [8]. However, several studies, including some randomized controlled trials, show that the foundational skills of patient- and family-centered care, including empathic responding, can be taught and learned [9–18]. Several studies show that patient–physician

✉ Daniel E. Epner
depner@mdanderson.org

[1] Department of Palliative, Rehabilitation, and Integrative Medicine, The University of Texas MD Anderson Cancer Center, 1400 Pressler, Unit 1414, Houston, TX 77030, USA

[2] Department of Biostatistics, The University of Texas MD Anderson Cancer Center, 1515 Holcombe Blvd. / Unit 1411, Houston, TX 77030, USA

communication training increases physicians' ability to elicit patients' preferences and reduces overuse of life-sustaining treatments at the end of life [4].

Most previously described communication skills training programs for oncologists involve full-day or multiple-day retreats. Most of these programs involve predominantly nurses and other non-physician providers. Retreats are time-consuming and difficult to integrate into busy clinical schedules. To address this challenge, we developed a monthly, 1-h communication skills training seminar series, called "Difficult Conversations," exclusively for physicians in their first year of medical oncology subspecialty training [19]. Seminars were integrated into normal workdays. The curriculum involved a variety of interactive and engaging educational methods, including sociodramatic techniques, role-play, reflective writing, and Balint-type case discussion groups. Medical oncologists in their second and third years of training served as teaching assistants and peer mentors. We subsequently consolidated the 12-h curriculum into quarterly 3-h workshops during which we integrated narrative medicine techniques [20].

Survey data showed that learners' perceptions of the curriculum at the middle and end of each academic year were overwhelmingly favorable [19, 20]. However, those data did not address potential long-term outcomes of the training. The purpose of the current study was to determine whether fellows perceived that "Difficult Conversations" helped them create lasting impressions and acquire enduring skills, attitudes, and knowledge years after they participated.

Methods

The curriculum

A total of 114 oncology fellows participated in the series from 2010 to 2019, with 12–16 fellows per year. Our curriculum evolved continuously in response to feedback from learners and reflection by leaders and facilitators. One of us (DEE) chose the initial cohort of five teaching assistants based on their strong communication skills and high level of engagement during an Objective Structured Clinical Exam (OSCE) administered the year before the curriculum began. In subsequent years, the two faculty members who led the course and teaching assistants identified 2–4 rising second-year fellows to serve as peer teaching assistants based on their engagement in the curriculum and strong communication skills demonstrated during workshops. Through all its iterations and refinements, "Difficult Conversations" maintained its focus on maximizing long-term retention of knowledge and skills rather than on short-term demonstration of basic skills.

At the beginning of every academic year, we administered a written test to assess baseline knowledge and, in that same session, led an interactive discussion to collectively build a solid conceptual framework. We never lectured in the conventional sense. The foundation of this framework was constructed of 2 overarching skill sets, which we referred to as "Exploration" and "Empathy," each of which can be broken down into many more specific skills. For instance, "Exploration," which can be thought of as eliciting the patient's story or encouraging expression, involves asking open-ended questions, sitting a socially appropriate distance from the patient and others in the room, using attentive body language, employing silence in the right measure, using paralanguage, briefly summarizing at intervals without interrupting the flow of the patient's narrative, and other skills. Each of these skills can be broken down into smaller parts. For instance, using silence in the right measure involves first deciding whether the silence should be broken, and if so, when, how, and by whom. From the first moment of each yearly installment of "Difficult Conversations," we used reflection, group discussion, and active engagement rather than lecturing by faculty leaders. We created an environment in which learners were encouraged to figuratively roll up their sleeves and work in team-based, non-threatening ways.

Another way in which we promoted learning retention early in the academic year beginning in 2012 was by supervising fellows in videotaped sessions with standardized patients as they discussed transitioning off disease-directed therapy onto hospice, which is one of the most challenging communication tasks for any oncologist. One of us (DEE) viewed each simulated patient encounter from behind a one-way mirror, reviewed relevant portions of the resulting video with each fellow, encouraged the fellow to reflect about what went well and what could have gone better, and then offered one or two specific suggestions for improvement. We used simulation as a learning tool rather than as an evaluative tool.

After completing the initial written assessment and role-play exercise with the standardized patient, we either met monthly for 1-h seminars or quarterly for 3-h workshops. By spacing sessions by 1–3 months, we gave learners the opportunity to practice skills between workshops, which is known to consolidate learning. We employed writing reflections, cinema, poetry, short stories, and other narrative medicine techniques; spontaneous re-enactments of challenging clinical scenarios (sociodrama) [21–23]; and small group skill practice, as described previously. These types of reflective exercises are a form of practice [24]. In other words, we created an environment in which fellows could engage in the hard work of learning how to connect with their patients under the most stressful circumstances.

Participants and procedure to obtain informed consent

This study was approved by the University of Texas MD Anderson Cancer Center (MDACC) institutional review board. We sent an email invitation in late June 2019 with a Qualtrics link to an online survey to fellows who were in their first year of medical oncology hematology training at MDACC from July 2010 until June 2018, all of whom participated in "Difficult Conversations." We were able to identify current email addresses for 101 of the 114 former first-year fellows plus the first cohort of five teaching assistants (TAs) for a total of 106 invitations. These TAs entered their second or third year of training in July 2010 and therefore did not participate as first-year fellows. Qualtrics was vetted by MD Anderson Compliance, Legal, and Information Security departments and meets all American Health Insurance Portability and Accountability Act of 1996 (HIPAA) and Family Educational Rights and Privacy Act (FERPA) guidelines. Only individuals with authorized access to Qualtrics were able to login, and only the data manager had access to survey responses, which were saved on password-protected institution computers behind the institution firewall and downloaded to a departmental hard drive for storage and analysis.

We informed prospective participants that their responses would be anonymous, that their names and addresses would not be connected to their responses, and that their participation or lack thereof would not affect their clinical practice. Participants were able to opt out of the study and indicate that they did not wish to receive future email reminders. A data manager sent weekly reminder emails for 4 weeks after the original invitation in late June 2019 to those who did not opt out and who had not yet completed the survey.

The survey

The survey consisted of 24 items that were developed by specialists in the department with expertise in education, ACGME core competencies, learner evaluation, and research methods. There are no validated surveys to examine the long-term impact of communication skills programs, so this survey was developed ad hoc. The survey required approximately 10 min to complete and included the following 2 domains:

1. Demographics of each respondent, including gender, age, current practice setting, primary focus of clinical practice, and percentage of time in clinical practice.
2. Survey items (listed in Table 4) that gauged each participant's long-term perception of "Difficult Conversations" on a 5-point Likert scale that ranged from 1= Strongly agree to 5= strongly disagree, with agree, neither agree nor disagree, and disagree as intermediate values. Questions pertained to four domains: self-perceived communication skills (Questions 2, 4, 5, 11, 21), attitudes toward psychosocial education and communication skills training (Questions 6, 15), confidence with specific clinical challenges (Questions 8, 9, 17, 18, 19, 20), and overall impressions of the curriculum (3, 7, 10, 12, 13, 14, 16). Items 22–24 were narrative questions.

Statistical considerations

The primary objective of this study was to determine the percentage (with 95% confidence intervals) of former fellows who answered either "strongly agree" or "agree" to the following two survey items:

- *Difficult Conversations had a profound impact on the way I practice medicine* (Question 12).
- *I often find myself reflecting on lessons I learned in "Difficult Conversations" when I interact with my patients now, especially during challenging or sensitive conversations* (Question 14).

Our secondary objective was to determine the long-term impact of the curriculum on learners as judged by their responses to the remaining 19 numerical survey items and three narrative questions. We summarized demographics including years since training and all the answers to the survey using descriptive statistics. We calculated the mean of the answers of the following domains for each individual: skills (Questions 2, 4, 5, 11, 21), attitudes (Questions 6, 15), confidence with specific clinical challenges (Questions 8, 9, 17, 18, 19, 20), and overall/lasting impressions of the curriculum (3, 7, 10, 12, 13, 14, 16) and estimated the mean of the subscales along with 95% confidence interval. We examined the association of the domain subscales and whether a fellow served as a teaching assistant using a *t*-test or rank-sum test depending on the underlying distribution of the data. All statistical analyses were performed using Stata/MP v16.0 (College Station, TX, USA). We did not use formal qualitative analysis of narrative responses to survey items 22–24, since most responses clearly pertained to one of a few recurring themes (Table 3). Responses that did not fall into one of those categories were included as "Other favorable feedback" or "Curriculum was not useful or other criticism".

Results

We sent a total of 106 email requests for participation to former fellows for whom we had current email addresses: 101 former first-year fellows and 5 second- and third-year fellows who served as teaching assistants during the first cohort, of whom 68 (64%) responded. The average time

between the end of the training program and completing the survey was 5.2 years. Demographic characteristics of the study population are found in Table 1.

Forty-one (60%, 95% CI: 49.3–73.8) fellows strongly agreed or agreed with item 12, "Difficult Conversations had a profound impact on the way I practice medicine." Forty-three (64%, 95% CI: 51.5–75.5) fellows strongly agreed or agreed with question 14, "I often find myself informally sharing lessons I learned during the series." Fifty-seven (84%) fellows agreed or strongly agreed that "Psychosocial education and communication skills training for medical oncology fellows is underemphasized and should receive more attention." Fifty-one of the 55 fellows (93%, 95% CI: 69.1–89.8) who entered training in 2012 or later found the video session with the standardized patient at the beginning of the year to be useful and relevant.

Table 2 shows summary statistics for each subscale domain and compares scores for teaching assistants to scores for all others. Scores were statistically more favorable (lower) for teaching assistants. Table 3 includes predominant themes that emerged from narrative responses to questions 22–24. Of the 39 narrative responses, all but 2 were either favorable or constructive. The two fellows who wrote critical comments perceived that they were already accomplished communicators prior to fellowship and that the curriculum was therefore superfluous. Table 4 shows scores for each of the 21 survey items.

Table 1 Characteristics of Hematology Oncology Fellows who completed a survey pertaining to "Difficult Conversations" communication skills curriculum, 2010–2017

Age range: 28–54 (Median = 35)		
Gender		
Male	48 (72%)	
Female	20 (28%)	
Current practice setting	Number	%
MD Anderson Cancer Center	39	57.4
Another academic center	17	25
Non-academic	5	7.4
Hybrid academic/non-academic	7	10.3
Pharmaceutical company	0	0
Nonclinical/pure lab research	0	0
Total	68	100
Primary focus of current clinical practice	Number	%
Solid tumor	49	72
Hematological malignancy	12	18
Stem cell transplantation	4	6
Investigational cancer therapeutics	1	1
No response	2	3
Total	68	100
Percent effort devoted to clinical practice	Range: 10–100	Median 51
Served as a teaching assistant during second and/or third year of fellowship		
Yes	10	15
No	56	82
No response	2	3
Total	68	100
Response rate per year		
Year entered training	Responses/total fellows that year	%
2010	9/12	75
2011	4/14	29
2012	9/15	60
2013	8/14	57
2014	9/14	64
2015	11/16	69
2016	5/14	36
2017	13/15	87
Average time between completion of training program and survey	5.2 years	

Discussion

The current study suggests that most oncologists who participated in "Difficult Conversations" perceived that the curriculum helped them acquire important skills, improved their confidence with specific challenges, and profoundly impacted their medical practice. Over 60% of respondents agreed or strongly agreed that the curriculum stimulated

Table 2 Summary of domains

Domain	Overall	Not TA	TA	*p*-value (TA vs. not TA)
Skills				
N	66	56	10	
Mean (SD)	1.89 (0.84)	2.02 (0.84)	1.16 (0.26)	0.001
Attitudes				
N	67	57	10	
Mean (SD)	2.16 (0.79)	2.28 (0.76)	1.60 (0.70)	0.011
Confidence with specific challenges				
N	66	56	10	
Mean SD)	2.05 (0.81)	2.14 (0.79)	1.50 (0.50)	0.013
Overall lasting impressions				
N	66	56	10	
Mean (SD)	2.38 (0.94)	2.51 (0.91)	1.57 (0.48)	0.002

"Not TA" includes those who did not serve as teaching assistants. One of the 68 participants did not answer one or more survey items in the Attitudes domain, and 2 participants did not answer one or more of the items in the other three domains. The lower the score, the more favorable the response, with 1 representing "strongly agree" and 5 "strongly disagree." *SD*, standard deviation

Table 3 Summary of narrative responses

Question 22: "Please describe the most enduring lesson or skill that you took away from your participation" (total responses = 39/68)	
Recurring themes	
• Exploration, active listening, "tell me more", power of silence	14
• Recognizing emotion, "I wish" and other empathic responses	9
• Value of simulation sessions with standardized patient	4
• Other favorable feedback	10
• Curriculum was not useful or other criticism	2
Question 23: "Please describe one or more specific examples of times when you applied skills, knowledge, or attitudes taught in "Difficult Conversations" to a sensitive or difficult encounter with a patient or family member" (total responses = 31/68)	
Recurring themes	
• End of life, transition off disease-directed therapy, goals of care	8
• Fear of recurrence, chemotherapy, or incurability	6
• Prognosis	5
• Angry patient or family	3
• Other favorable feedback	7
• Curriculum was not useful or other criticism	2
Question 24: "Please describe how the series can be improved in the future" (total responses = 32/68)	
Recurring themes	
• Continue or expand the curriculum	9
• More practice in the simulation center with standardized patients	8
• Less practice using re-enactments ("role play") with peers	4
• More practice using re-enactments ("role play") with peers	3
• More open discussion	3
• Other favorable feedback	3
• Curriculum was not useful or other criticism	2

them to share lessons learned from it with others. The most favorable overall domain score was for "skills" (1.89, SD = 0.84), suggesting that learners also acquired specific skills that are important in their daily clinical practice, such as asking open-ended questions and responding to emotion with empathy. Teaching assistants had a significantly more favorable impression of the curriculum for all four domains, which probably reflects selection bias, since teaching assistants displayed the most skill and enthusiasm when they participated in the series during their first year.

Learners' impressions of the curriculum were enduring, judging by the fact that so many completed the survey several years later (Table 1). Nine of 12 (75%) of fellows who entered training in 2010, the curriculum's inaugural year, completed the survey, and response rates exceeded 60% for 5 of the 8 years. There was no association between response rate and years removed from training and no attrition year after year.

The fact that 57 (84%) of fellows agreed or strongly agreed that "psychosocial education and communication skills training for medical oncology fellows is underemphasized and should receive more attention" suggests that they appreciate that building rapport is not a static construct or a binary choice between "skilled communicator" or "unskilled communicator." Instead, clinicians who strive to refine their unique art form engage in a continuous process of reflection over a lifetime. Curricula such as ours are therefore valuable for clinicians of all skill levels who are motivated to improve their relational skills. Team-based, interactive, engaging communication skills training should be available for oncologists at all stages of career development, even those who are most experienced.

In 1962 during the space race, John F. Kennedy famously declared: "We choose to go to the Moon in this decade and do the other things, not because they are easy, but because they are hard." Kennedy and others recognized the necessity of hard work in achieving long-term goals. The value of figuratively rolling up one's sleeves to tackle challenging tasks applies equally well to adult education. When learners are challenged in the right measure, they cement enduring knowledge and skills. Educators in all fields and at all levels, including graduate medical education, tend to focus on short-term outcomes. For instance, most if not all communication skills curricula for clinicians involve instruction over a period of hours to days, followed by immediate assessment of specific skills. However, short-term performance is not a good predictor of attitudes and performance over longer periods, because proficiency demonstrated during or immediately after learning can be easily lost in the following weeks and months without continued practice, reflection, and feedback [25].

Table 4 Attitudes and beliefs of Hematology Oncology Fellows who completed a survey pertaining to "Difficult Conversations" communication skills curriculum, 2010–2017 ($n=68$)

SURVEY ITEM NUMBER, *DOMAIN*, and statement	Strongly agree or agree		Neither agree nor disagree		Disagree or strongly disagree		No response	
	n	%	*n*	%	*n*	%	*n*	%
1. The video session with a standardized patient in August of my first year during which I discussed cancer recurrence and received feedback was useful and relevant. (for fellows who entered training in 2012 or later)	51	75	9	13.2	3	4.4	5	7.4
2. *SKILLS* I believe I am more empathic as a result of having participated in "Difficult Conversations."	48	70.5	12	17.6	7	10.3	1	1.5
3. *LASTING IMPRESSION* I am able to build stronger, more healing relationships with my patients as a result of having participated in "Difficult Conversations."	51	75	12	17.6	4	5.8	1	1.5
4. *SKILLS* I am a better listener as a result of my participation	50	73.5	12	17.6	5	7.3	1	1.5
5. *SKILLS* I ask more OPEN-ENDED questions of patients and families now than I think I would have if I had not participated	52	76.5	11	16.2	4	5.8	1	1.5
6. *ATTITUDES* I believe psychosocial education and communication skills training for medical oncology fellows is underemphasized and should receive more attention	57	83.8	8	11.8	2	2.9	1	1.5
7. *LASTING IMPRESSION* I often find myself reflecting on lessons I learned in "Difficult Conversations" when I interact with my patients now, especially during challenging or sensitive conversations	44	64.8	11	16.2	12	17.6	1	1.5
8. *CONFIDENCE* I think I am more skilled at discussing goals of care and advanced care planning now as a result of having participated	57	79.4	7	10.3	6	8.9	1	1.5
9. *CONFIDENCE* As difficult as it is to discuss transitioning off disease-directed therapy, such as chemotherapy, I believe I am more effective at doing so as a result of lessons I learned in "Difficult Conversations."	50	73.5	14	20.6	3	4.4	1	1.5
10. *LASTING IMPRESSION* I think I am less susceptible to burn out than I would be if I had not participated	21	30.9	26	38.2	19	27.9	2	2.9
11. *SKILLS* I find that the more I practice skills that were taught in "Difficult Conversations", the better I become at those skills	58	85.3	6	8.8	2	3	2	2.9
12. *LASTING IMPRESSION* "Difficult Conversations" had a profound impact on the way I practice medicine	41	60.3	16	23.5	9	13.2	2	2.9
13. *LASTING IMPRESSION* I believe fewer of my patients die in the ICU now than would have been the case had I not participated	30	44.1	22	32.4	15	22.1	1	1.5
14. *LASTING IMPRESSION* I often find myself informally sharing lessons I learned during the series to others, such as trainees or other colleagues	43	63.2	11	16.2	13	19.1	1	1.5
15. *ATTITUDES* I now devote at least part of my time to formal teaching of relational or communication skills to trainees or other colleagues in my current job	30	44	20	29.4	17	25	1	1.5
16. *LASTING IMPRESSION* I have clear memories of specific enactments (role plays) by faculty, other fellows, or myself during "Difficult Conversations."	40	58.8	14	20.6	13	19.1	1	1.5
17. *CONFIDENCE* I apply some of the principles I learned in "Difficult Conversations" to sensitive conversations I have in my personal life with friends, family, and acquaintances	40	58.8	19	27.9	8	11.8	1	1.5
18. *CONFIDENCE* I think I am more effective at leading family meetings now than I would be if I had not participated in "Difficult Conversations."	48	70.6	15	22	4	5.8	1	1.5
19. *CONFIDENCE* I am better able to diffuse tense situations with angry or manipulative patients or family members now as a result of my participation	50	73.5	11	16.2	5	8.8	1	1.5
20. *CONFIDENCE* I feel more confident in my ability to calmly and professionally handle conflict with colleagues now as a result of my participation	43	63.2	18	26.5	5	7.4	2	3
21. *SKILLS* I apply key skills learned during "Difficult Conversations" when patients or families ask me about prognosis	53	78	9	13.2	4	5.8	2	2.9

Many of the principles of learning retention are outlined in two books that summarize an extensive body of peer-reviewed research: *Make it Stick: The Science of Successful Learning* [24] and *How Learning Works: Eight Research-Based Principles for Smart Teaching* [26]. The most basic premise of learning retention is that learning anything, including communication skills, is deeper and more durable when it is effortful. In contrast, easy learning

is here today, gone tomorrow. Learning slowly with effort may initially feel awkward and inefficient but paradoxically yields more fruit in the long term. Of course, effective teaching strikes a balance between complexity of the task being taught and learners' baseline skills. Optimally, learners face challenges that are neither too easy and therefore boring nor overly complex and therefore intimidating. In other words, learners gain the most when they are "in the flow" or "in the zone" [27, 28]. Mihaly Csikszentmihalyi first proposed the flow concept over 50 years ago and summarized it in *Flow: The Psychology of Optimal Experience* in 1990. "Difficult Conversations" incorporated all the key principles outlined in these books and associated research.

This study has significant limitations, including small sample size drawn from a single institution without a control group. Recall bias is also likely to have affected fellows' perceptions, considering the variable length of time between curriculum and survey. The curriculum continuously evolved in response to biannual feedback, so it was never exactly the same from 1 year to the next. In addition, all survey questions were biased to receive good responses since we did not include negative framing for any questions. To show internal consistency, it would have been helpful to include some additional questions with a negative frame. Thirty-eight of the 106 potential participants did not respond to email invitations, likely due to the time constraints inherent in early career physicians. Another possibility is that many of those participants did not find the curriculum useful and therefore chose not to respond, thus enriching the survey sample with those who thought favorably of the program.

Another major limitation of this study is that it does not measure whether participation improved clinical outcomes, such as better communication with real patients, better patient satisfaction, or alignment of care with realistic goals. Many other studies share this limitation [11, 29]. For instance, a rigorous evaluation of an institutionally based communication skills program for post-graduate oncology trainees found a disconnect between learning and behavior in the clinical context. Though participants in that program had positive reactions to the course and demonstrated significant increases in self-confidence, those improvements did not translate into better communication with real patients or meaningful change at the patient report level [30]. The authors of that study hypothesized that their program may not have reached the dose needed to improve clinical behavior and outcomes. This hypothesis is consistent with a position paper on communication skills training in oncology based on a consensus meeting among European experts in 2009, in which authors state that "there is no evidence for the optimal length of communication skills training in oncology with regard to effectiveness but there is some evidence for a dose–response relationship. A course of at least 3 days appears necessary to ensure transfer of skills into clinical practice" [15]. More recent evidence for a dose effect comes from a 38-h communication skills training program for interdisciplinary radiotherapy teams over a 4-month period, which resulted in transfer of communication skills to the workplace and improved patients' satisfaction [18]. However, it remains to be seen whether communication skills training of any dose, duration, or intensity results in skill retention or improved clinical outcomes over years or decades.

After a few years of reflection and assessment during a hiatus imposed by the pandemic, we intend to resume "Difficult Conversations" soon with some refinements based on the results of this study and earlier feedback. We plan to devote more time to videotaped sessions with standardized patients in our simulation center, which allow for individualized, safe, and nonjudgmental feedback. We will also make a commensurate reduction in the time devoted to group sessions and tailor content of those sessions to each person's needs. For instance, some learners want more practice in small groups with spontaneous re-enactments (Table 3), whereas others want less, so we will let learners emphasize the methods they prefer. Technology also evolves continuously, offering new and more effective ways to complement traditional teaching methods. We hope that by continuing to adapt to the ever-evolving needs of our learners and incorporating newer methods, we will inspire many generations of oncologists to refine their individual Art of Medicine and perhaps teach others to do the same.

Acknowledgements Authors thank Verajean DeLa Cruz, Julio A. Allo, Janet L. Williams, Virginia M. Gonzales, and Yvette Ross for administrative support.

Author contribution D.E. designed and led the curriculum on which this study is based, helped design the study, analyzed data, wrote the manuscript, prepared all tables, modified the manuscript and tables, and approved the final version.

S.R. helped design the study, modified the manuscript and tables, and approved the final version.

D.H. helped design the study, analyzed data, modified the manuscript and tables, and approved the final version.

B.F. helped design the study, analyzed data, and approved the final version.

E.B helped design the study, modified the manuscript and tables, and approved the final version.

Funding This research was in part supported by the National Institutes of Health through M.D. Anderson's Cancer Center Support Grant CA016672.

Declarations

Ethics approval This research was carried out in accordance with the ethical standards as described in the 1964 Declaration of Helsinki and its later amendments and was approved by the University of Texas MD Anderson Cancer Center (MDACC) institutional review board.

Competing interests The authors declare no competing interests.

References

1. Epner DE, Baile WF (2011) Wooden's pyramid: building a hierarchy of skills for successful communication. Med Teach 33(1):39–43
2. Back AL, Arnold RM, Tulsky JA, Baile WF, Fryer-Edwards KA (2003) Teaching communication skills to medical oncology fellows. J Clin Oncol 21(12):2433–2436
3. Epstein R, Street RL (2007) Patient-centered communication in cancer care : promoting healing and reducing suffering. Bethsda, MD: U.S. Dept. of Health and Human Services, National Institutes of Health, National Cancer Institute
4. Walling A, Lorenz KA, Dy SM, Naeim A, Sanati H, Asch SM, Wenger NS (2008) Evidence-based recommendations for information and care planning in cancer care. J Clin Oncol 26(23):3896–3902
5. Buss MK, Lessen DS, Sullivan AM, Von Roenn J, Arnold RM, Block SD (2011) Hematology/oncology fellows' training in palliative care: results of a national survey. Cancer 117(18):4304–4311
6. Buss MK, Lessen DS, Sullivan AM, Von Roenn J, Arnold RM, Block SD (2007) A study of oncology fellows' training in end-of-life care. J Support Oncol 5(5):237–242
7. Goodman DC, Fisher ES, Chang CH, Morden NE, Jacobson JO, Murray K, Miesfeldt S (2010) In: Quality of end-of-life cancer care for medicare beneficiaries: regional and hospital-specific analyses. edn. Lebanon (NH)
8. Makoul G, MSJAMA (2003) Communication skills education in medical school and beyond. JAMA 289(1):93
9. Back AL, Arnold RM, Baile WF, Fryer-Edwards KA, Alexander SC, Barley GE, Gooley TA, Tulsky JA (2007) Efficacy of communication skills training for giving bad news and discussing transitions to palliative care. Arch Intern Med 167(5):453–460
10. Bays AM, Engelberg RA, Back AL, Ford DW, Downey L, Shannon SE, Doorenbos AZ, Edlund B, Christianson P, Arnold RW et al (2014) Interprofessional communication skills training for serious illness: evaluation of a small-group, simulated patient intervention. J Palliat Med 17(2):159–166
11. Moore PM, Rivera S, Bravo-Soto GA, Olivares C, Lawrie TA (2018) Communication skills training for healthcare professionals working with people who have cancer. Cochrane Database Syst Rev 7(7):1–98
12. Tulsky JA, Arnold RM, Alexander SC, Olsen MK, Jeffreys AS, Rodriguez KL, Skinner CS, Farrell D, Abernethy AP, Pollak KI (2011) Enhancing communication between oncologists and patients with a computer-based training program: a randomized trial. Ann Intern Med 155(9):593–601
13. Back AL, Arnold RM, Baile WF, Tulsky JA, Barley GE, Pea RD, Fryer-Edwards KA (2009) Faculty development to change the paradigm of communication skills teaching in oncology. J Clin Oncol 27(7):1137–1141
14. Kissane DW, Bylund CL, Banerjee SC, Bialer PA, Levin TT, Maloney EK, D'Agostino TA (2012) Communication skills training for oncology professionals. J Clin Oncol 30(11):1242–1247
15. Stiefel F, Barth J, Bensing J, Fallowfield L, Jost L, Razavi D, Kiss A (2010) participants: Communication skills training in oncology: a position paper based on a consensus meeting among European experts in 2009. Ann Oncol 21(2):204–207
16. Goelz T, Wuensch A, Stubenrauch S, Ihorst G, de Figueiredo M, Bertz H, Wirsching M, Fritzsche K (2011) Specific training program improves oncologists' palliative care communication skills in a randomized controlled trial. J Clin Oncol 29(25):3402–3407
17. Christensen M, Kumar KA, Wang WS, Dharmarajan KV, Chang Z, McStay CK, Barina A, Siropaides C (2023) Serious illness communication training among radiation oncology residents. Pract Radiat Oncol 13(3):e220–e229
18. Merckaert I, Delevallez F, Gibon AS, Lienard A, Libert Y, Delvaux N, Marchal S, Etienne AM, Bragard I, Reynaert C et al (2015) Transfer of communication skills to the workplace: impact of a 38-hour communication skills training program designed for radiotherapy teams. J Clin Oncol 33(8):901–909
19. Epner DE, Baile WF (2014) Difficult conversations: teaching medical oncology trainees communication skills one hour at a time. Acad Med 89(4):578–584
20. Shaw AC, McQuade JL, Reilley MJ, Nixon B, Baile WF, Epner DE (2019) Integrating storytelling into a communication skills teaching program for medical oncology fellows. J Cancer Educ 34(6):1198–1203
21. Baile WF, Blatner A (2014) Teaching communication skills: using action methods to enhance role-play in problem-based learning. Simul Healthc 9(4):220–227
22. Baile WF, De Panfilis L, Tanzi S, Moroni M, Walters R, Biasco G (2012) Using sociodrama and psychodrama to teach communication in end-of-life care. J Palliat Med 15(9):1006–1010
23. Baile WF, Walters R (2013) Applying sociodramatic methods in teaching transition to palliative care. J Pain Symptom Manag 45(3):606–619
24. Brown PC (2014) Make it stick: the science of successful learning. The Belknap Press of Harvard University Press, Cambridge, Massachusetts
25. Butler AC, Raley ND (2015) The future of medical education: assessing the impact of interventions on long-term retention and clinical care. J Grad Med Educ 7(3):483–485
26. Bridges MW, DiPietro M, Lovett M, Norman MK, Ambrose SA (2023) How learning works: eight research-based principles for smart teaching, Second, edition. Jossey-Bass, Hoboken, New Jersey
27. Csikszentmihalyi M, Rathunde K (1993) The measurement of flow in everyday life - toward a theory of emergent motivation. Nebr Sym Motiv 40:57–97
28. Csikszentmihalyi M, Lefevre J (1989) Optimal experience in work and leisure. J Pers Soc Psychol 56(5):815–822
29. Tan XH, Foo MA, Lim SLH, Lim M, Chin AMC, Zhou J, Chiam M, Krishna LKR (2021) Teaching and assessing communication skills in the postgraduate medical setting: a systematic scoping review. BMC Med Educ 21(1):483
30. Bylund CL, Banerjee SC, Bialer PA, Manna R, Levin TT, Parker PA, Schofield E, Li Y, Bartell A, Chou A et al (2018) A rigorous evaluation of an institutionally-based communication skills program for post-graduate oncology trainees. Patient Educ Couns 101(11):1924–1933