



Gynecologic oncology providers endorse practice-changing impact of communication skills training

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HIGHLIGHTS

- A two day Communication Skills Training workshop was designed and conducted with 20 Gynecologic Oncology providers.
- Workshop resulted in sustained improvement in ability to handle challenging communication scenarios.
- Dedicated training in advanced communication skills should be included in training of all gynecologic oncology providers.

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ABSTRACT

Objective. Effective communication improves patient outcomes and is crucial to good patient care. Communication skills training (CST) has been shown to improve communication skills in non-gynecologic oncology specialties. We sought to develop and test CST for gynecologic oncology (GO) providers.

Methods. We developed and conducted a two-day CST workshop with an interprofessional group of 20 GO providers over two years. Participants were surveyed pre-workshop, immediately post-workshop and one month post-workshop regarding self-assessed preparedness to handle challenging communication tasks, workshop evaluation and impact on practice. McNemar's tests were used for pre-post comparisons.

Results. Of 12 challenging communication tasks assessed, all participants reported improvement in at least one, with a median of 10. The proportion of participants feeling more than "somewhat prepared" improved significantly for all communication tasks assessed ($p < 0.05$); improvement was sustained one month later. One month post-workshop, 86% reported thinking about what they had been taught at least weekly and 93% reported encountering situations where they used their CST skills at least weekly. Rates of reported practice-changing impact were >75% for each communication skill. All participants rated the CST educational quality very good or excellent and strongly agreed it should be required of all GO clinicians.

Conclusions. Participants felt the workshop provided high-quality, practice-changing education. As a result of the workshop, participants reported statistically significant, sustained improvement in preparedness to handle challenging communication tasks. CST for GO providers is feasible, with high rates of perceived effectiveness and impact on clinical practice. CST workshops should be integrated into GO training.

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1. Introduction

Good communication is crucial to good patient care. Demonstrated benefits of good communication practices include improved patient quality of life, better caregiver psychological adjustment, higher patient

and family satisfaction, more provider and family consensus regarding goals of care and better quality of end-of-life care [1–9]. In gynecologic oncology specifically, timely outpatient goals of care conversations are associated with shorter length of stay in subsequent hospitalizations and higher rates of palliative care consultation [10,11] and skilled physician communication is associated with higher patient satisfaction in the disclosure of a gynecologic cancer diagnosis [8]. The value of good communication practices is recognized by gynecologic oncology patients, providers and national organizations [12–15]. Despite that, best

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communication practices are not regularly used and not often explicitly taught in gynecologic oncology. Only 14% of a group of ovarian cancer patients reported that their physician had discussed goals, values and perceptions preceding treatment decisions [12]. In a survey of gynecologic oncology fellows, less than half had received teaching on end-of-life communication topics such as discussing stopping chemotherapy or telling a patient that she's dying [16].

Communication skills are teachable. Communication skills training has been shown to improve skill acquisition in providers of multiple specialties including nephrology, critical care, neonatology, geriatrics and palliative care [17–24]. In oncology specifically, the effectiveness of communication skills training has been demonstrated in both medical oncology and pediatric oncology [25–27]. After a four day communication skills workshop (“OncoTalk”), medical oncology fellows acquired an average of 5.4 and 4.4 new skills in the areas of discussing serious news and transitions in care, respectively. In that same study, blinded coders could correctly differentiate pre- from post-workshop conversations in 91% of recordings [26]. A Cochrane review concluded that communication skills training for oncology providers is effective at improving use of open-ended questions, information gathering, supportive skills and expression of empathy [28].

Communication skills training has not, to our knowledge, previously been studied in providers of gynecologic oncology or any other surgical oncologic specialty. Our objective was to create, conduct and evaluate a pilot communication skills training workshop in critical conversations for gynecologic oncology providers at a single academic institution. Specifically, we sought to design a two-day communication skills training workshop based on the VitalTalk® model, pilot that curriculum over two years and evaluate the impact on participants self-perceived competence immediately and one month after the workshop. Our hypotheses were that participants' self-perceived competence in communication skills and self-perceived preparedness to handle difficult conversations would improve after the communication skills training workshop and that the improvement would be sustained one month later.

2. Methods

This study was approved as exempt by the University of Pittsburgh Institutional Review Board as research on educational practices.

2.1. Workshop structure & logistics

We modeled our two-day workshop on the National Cancer Institute-supported VitalTalk program, which resulted in sustained improvement in communication skills among medical oncology fellows [25,26,29]. We utilized four types of formal learning activities: (1) brief 20-minute didactics (topics in Table 1), (2) skills demonstration by faculty, (3) small group sessions with 5 participants, two faculty facilitators, and simulated patients which incorporated deliberate skills practice with close supervision and immediate feedback, and (4) learner-directed role-playing exercises within small groups using challenging cases from their own practice.

We created three cases specifically for this workshop. Cases and broad learning objectives by day for each case are outlined in Table 1. Before the workshop, we hired four actors with prior simulated patient training to play the three patients and one family member for these cases. The actors received a written character profile and training/calibration by the facilitators for their role in the educational encounter, with a focus on portraying the characters' emotional status and responding authentically to skillful or unskillful communication. The workshop was conducted with four faculty members (a mix of gynecologic oncologists and palliative care specialists).

Anticipating that participants would be anxious about role-playing with actors in front of their peers, faculty facilitators carefully set ground rules to establish a safe and supportive environment. We chose to train

Table 1
Didactic topics & clinical vignettes.

Didactic topics	
1.	Discussing serious news
2.	Navigating conflict with families
3.	Discussing code status
4.	Discussing goals of care
Clinical vignettes	
Case A: 60yo with ovarian cancer, just diagnosed first recurrence, platinum resistant	
• Day 1:	convey news of recurrence
• Day 2:	10 months later – progression on 3rd line therapy, malignant obstruction, discuss goals of care with patient & husband
34yo with stage IVB cervical cancer and a 15yo son	
• Day 1:	convey news of metastatic disease on imaging
• Day 2:	progressing on chemo, discuss goals of care and identify a healthcare proxy
79yo with uterine papillary serous carcinoma, history of heart failure	
• Day 1:	discuss diagnosis & prognosis in setting of lymph node metastases on CT
• Day 2:	convey news of recurrence, discuss goals of care making recommendation about next steps

fellows and faculty separately for this reason. During the skills practice sessions with actors, faculty would review the clinical situation, invite a participant to volunteer for role-playing, elicit participants' learning goals, observe the participant's interaction with the actor(s) and facilitate feedback by the group using a standard facilitation approach that has been described in other settings [17–21,30]. Facilitators relied on an adult learning theory, including learner-focused skills practice, precise praise, and constructive feedback centered on learner goals. Learners were also taught to observe how use of different communication behaviors affected the simulated-patients' responses. On the final afternoon, there was a one-hour session focused on strategies for continuing skill development after the conclusion of the workshop. In addition, at the end of the workshop each participant wrote a message to him/herself highlighting specific learning goals and the course instructors mailed them to the participants as a reminder the following month.

The workshop was held on two consecutive weekdays at a conference center 15 min from the hospital. We chose not to conduct the workshop at the hospital in order to allow participants to feel some physical space between them and their daily clinical responsibilities to encourage them to focus completely on the workshop. Clinical schedules were modified to allow for attendance of fellows in 2016 and faculty in 2017.

2.2. Workshop evaluation

Providers completed written pre- and immediate post-workshop questionnaires adapted from instruments used for VitalTalk evaluation. Prior to beginning survey items, participants were informed that their results would be anonymous and would not be used to assess their performance as individuals; we also specified that their participation in the study survey was voluntary. Survey items included demographics and satisfaction with the workshop, as well as self-assessed preparedness to handle challenging communication tasks, reported on a 5 point Likert scale (1 not well prepared – 3 somewhat prepared – 5 very well prepared). In the immediate post-workshop exit survey, participants were again asked to rate their pre-workshop preparedness to handle difficult communication tasks, as well as their post-workshop preparedness. We specifically planned to collect self-assessment of pre-workshop preparedness at two separate time points (prior to and immediately after the workshop) because we hypothesized that study participants would have a more favorable impression of their pre-workshop skills prior to as compared to after the workshop due to the phenomenon of “not knowing what they didn't know.” We anticipated that one of the ways the workshop would impact providers would be by helping them to recognize the limitations of their pre-workshop communication skills. We felt that participants' immediate post-workshop assessment of their pre-workshop skills (after they had learned more

Table 2
Demographics of participants (n = 20).

	n (%)
Median age	40 yrs (range 32–56)
Provider type	
Fellow	6 (30%)
Advanced practice provider	8 (40%)
Attending	6 (30%)
Gender	
Male	16 (80%)
Female	4 (20%)
Years of clinical experience	
In training	6 (30%)
1–5	5 (25%)
6–10	3 (15%)
>10	4 (20%)

about what skills are required to effectively communicate in challenging scenarios) would be more accurate, and so planned to use the immediate post-workshop exit survey assessment of their pre-workshop skills as baseline data for comparison. One month after the workshop, participants received a follow-up survey by email that evaluated self-assessed preparedness to handle challenging communication skills, as well as frequency of use of skills learned in the workshop. See supplemental material for surveys.

2.3. Data analysis

We analyzed the self-assessed preparedness data based on the proportion of participants rating their competence/preparedness at least 4 out of 5 on the Likert scale (corresponding to better than somewhat prepared). We chose this measure, rather than a central tendency measure of Likert scale score, as we felt it to be more clinically relevant, representing the proportion of the participants who were meeting an appropriate benchmark of target preparedness (more than somewhat prepared) to handle challenging communication tasks. McNemar's tests were used to compare pre and post-workshop responses. We also compared the proportion of participants who improved on at least one skill and the median number (using paired medians tests) of improved skills per participant. A *p*-value of <0.05 was considered significant. Analyses were conducted using IBM SPSS version 24.

3. Results

We conducted our workshop twice with a total of 20 gynecologic oncology providers; demographics of participants are outlined in Table 2. The workshop was conducted first in 2016 with 10 participants (6 fellows and 4 Advanced Practice Providers) and again in 2017 with

10 different participants (6 attending physicians and 4 Advanced Practice Providers). In 2016, the workshop was required of all fellows and all participated. Advanced practice providers (APPs) were given the opportunity to participate in either 2016 or 2017; all of the APPs participated in either 2016 or 2017. In 2017, all faculty were given the opportunity to participate in the workshop; six out of eight participated (75% participation). Of the two who did not participate, one had a competing clinical commitment and the other had previously done a version of a similar training and opted not to participate. There was no overlap in the 2016 & 2017 participant cohorts. The median age of our providers was 40 (range 32–56) and 80% were female. Of non-trainee providers, 36% had 1–5 years of clinical experience, 27% 6–10 years and 36% had over 10 years of clinical experience. All 20 participants completed the pre-workshop survey, 19 completed the immediate post-workshop survey and 15 completed the one-month post-workshop survey.

As described above, we asked providers to self-assess pre-workshop preparedness at two time points – prior to workshop and immediately post-workshop (i.e. participants rated their preparedness in the pre-workshop survey and then in the post-workshop exit survey they retrospectively reassessed their pre-workshop preparedness). Participants' evaluations of their pre-workshop preparedness prior to the workshop and then retroactively after the workshop are presented in Table 3. There was a consistent trend toward lower ratings of pre-workshop preparedness in the exit survey, some of which reached statistical significance. Because we felt participants likely had a more realistic assessment of their pre-workshop skills after having experienced the workshop and recognized their limitations, in our pre versus post analyses that follow, we used the (post-workshop) exit survey assessments of pre-workshop preparedness.

In analysis by participant, comparing pre- and post-workshop ratings of preparedness to handle challenging communication tasks, 100% of participants reported improvement for at least one task, with improvement in median of 10 (out of 12) tasks. For three of the twelve communication tasks (respond to patients who deny the seriousness of their illness, respond to patients/family who want treatments you believe are not indicated and manage conflict that arises in a family meeting), all providers reported improvement. For another three tasks (convey serious news, convey prognosis and elicit concerns about death & dying), 95% of providers (18/19) reported improvement. The tasks with the lowest rate of improvement, 58% (11/19), were discuss religious or spiritual issues, describe comfort-focused care and counsel about what to expect in the dying process.

Pooled data on changes in self-assessment of preparedness to handle challenging communication tasks from pre- to immediate post-workshop are presented in Table 4. There was statistically significant improvement in the proportion of participants rating themselves as more than somewhat prepared for all 12 tasks evaluated. That improvement was sustained at 1 month post-workshop (Table 5).

Table 3

Participants' rating of their perceived preparedness to handle challenging communication scenarios before completing the workshop, as reported prior to versus after communication skills workshop (N = 19).

How prepared were you prior to this workshop to...	Proportion rating 4 or 5 on 5 point Likert scale (5 = very prepared)		
	Rated prior to workshop	Rated post workshop	p-Value
Convey serious news about a patient's illness to the patient or family	50%	26.3%	0.13
Convey prognosis to a patient or family member	40%	31.6%	0.58
Express empathy	84.2%	63.2%	0.14
Discuss code status with a patient or family member	60%	26.3%	0.34
Respond to patients who deny the seriousness of their illness	20%	15.8%	0.73
Respond to patients or family members who want treatments you believe are not indicated	30%	21.1%	0.52
Discuss religious or spiritual issues with a patient or family member	50%	10.5%	0.008
Elicit a patient or family member's concerns about death & dying	30%	15.8%	0.29
Manage conflict that arises during a family meeting	15%	0%	0.08
Describe comfort-focused care	60%	27.8%	0.046
Conduct a family conference	35%	26.3%	0.56
Counsel a patient or family member in what to expect in the dying process	30%	22.2%	0.59

Table 4
Participants' ratings in workshop exit survey of preparedness to handle challenging communication scenarios pre and immediately post-workshop (N = 19).

How prepared do you feel to...	Proportion rating 4 or 5 on 5 point Likert scale (5 = very prepared)		
	Pre-workshop	Immediate postworkshop	p-Value
Convey serious news about a patient's illness to the patient or family	26.3%	100%	<0.001
Convey prognosis to a patient or family member	31.6%	100%	<0.001
Express empathy	63.2%	94.7%	0.03
Discuss code status with a patient or family member	26.3%	68.4%	0.008
Respond to patients who deny the seriousness of their illness	15.8%	89.5%	<0.001
Respond to patients or family members who want treatments you believe are not indicated	21.1%	89.5%	<0.001
Discuss religious or spiritual issues with a patient or family member	10.5%	57.9%	0.004
Elicit a patient or family member's concerns about death & dying	15.8%	94.5%	<0.001
Manage conflict that arises during a family meeting	0%	79.0%	<0.001
Describe comfort-focused care	27.8%	66.7%	0.02
Conduct a family conference	26.3%	68.4%	0.008
Counsel a patient or family member in what to expect in the dying process	22.2%	57.9%	0.03

In the one-month post-workshop survey, participants noted regularly thinking about and using the skills they had been taught. More than 75% of participants somewhat or strongly agreed with every item for which practice-changing impact of the workshop was evaluated (Fig. 1). When asked about how frequently they had thought about what they were taught in the workshop, 86% of participants responded at least weekly. When asked about how often they encountered situations in which they used the skills they were taught, 93% responded at least weekly. Representative quotes from an open-ended question regarding what participants would do differently in their practice as a result of this training are presented in Supplementary Table 1. These quotes illustrate concrete examples, in providers' own words, of skills they acquired that are relevant to their practice.

Ninety-five percent of participants rated the educational quality of the workshop as excellent. All participants strongly agreed that they would recommend the workshop to others and that it should be required of all gynecologic oncology clinicians. Representative quotes from open-ended requests for feedback are presented in Supplementary Table 1. These quotes illustrate that, while role play may be initially a daunting and unwelcome prospect, ultimately participants found the opportunity to practice afforded by the role play to be useful. When asked what about the workshop worked and what we should keep doing next time, the majority of respondents specifically mentioned role-play with actors as particularly valuable.

4. Discussion

In this pilot study of a two-day communication skills training (CST) workshop developed specifically for gynecologic oncology providers, we found CST to be feasible and acceptable to a range of gynecologic oncology providers including fellows, advanced practice providers and faculty. We found statistically significant improvement in preparedness

to handle all challenging communication tasks evaluated. We also found high rates of self-reported practice-changing impact of the skills learned in this workshop. Participants reported frequently thinking about and using the skills they had acquired one month after completion of the workshop and all participants recommended that similar training be required of all gynecologic oncology providers.

Effective communication is critical for high-quality, personalized, goal-concordant patient care in gynecologic oncology. It is imperative that gynecologic oncologists possess effective communication skills in order to deliver comprehensive, patient-centered care. These skills are teachable [17–21,25–28]. Because of our unique role in providing care for gynecologic oncology patients throughout the disease course, it is crucial that communication skills training for GO providers be targeted to address the wide range of challenging communication tasks that we encounter.

To our knowledge, ours is the first skills-based communication training program developed and implemented specifically for gynecologic oncology providers. Strengths of this study include its novelty, variety of provider types and relatively large sample size for a provider education intervention. Limitations include single-institution and self-reported data, as well as the fact that we do not have any objective data on quality of maintained skills over time and that we do not have data beyond 1 month post-workshop. Though we were not able to objectively measure the impact of the workshop on participants' skills or practice patterns, an abstract regarding assessing breaking bad news skills in gynecologic oncology fellows found that self-reported scores did accurately predict objective assessments of breaking bad news skills [31]. While it is a strength of the study that we were able to include a variety of types of providers in our training, the relatively small numbers of each group did not allow for subset analysis of the differential effect of training by type of provider; this is a potential area for future study.

Table 5
Preparedness to handle challenging communication scenarios comparing exit survey assessment of pre-workshop rating versus 1 month post-workshop rating (n = 15).

How prepared do you feel to...	Proportion rating 4 or 5 on 5 point Likert scale (5 = very prepared)		
	Pre-workshop	1 month post-workshop	p-Value
Convey serious news about a patient's illness to the patient or family	26.3%	100%	<0.001
Convey prognosis to a patient or family member	31.6%	100%	<0.001
Express empathy	63.2%	100%	0.01
Discuss code status with a patient or family member	26.3%	86.7%	0.001
Respond to patients who deny the seriousness of their illness	15.8%	80%	<0.001
Respond to patients or family members who want treatments you believe are not indicated	21.1%	100%	<0.001
Discuss religious or spiritual issues with a patient or family member	10.5%	60%	0.003
Elicit a patient or family member's concerns about death & dying	15.8%	86.7%	<0.001
Manage conflict that arises during a family meeting	0%	80%	<0.001
Describe comfort-focused care	27.8%	86.7%	0.001
Conduct a family conference	26.3%	73.3%	0.01
Counsel a patient or family member in what to expect in the dying process	22.2%	66.7%	0.02

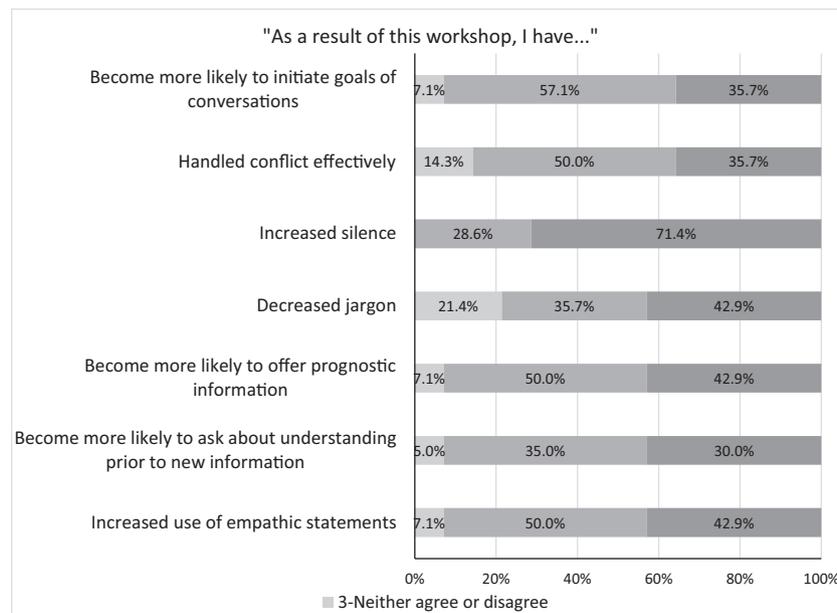


Fig. 1. Practice-changing impact of communication skills workshop from 1 month post-workshop survey (1 strongly disagree to 5 strongly agree; $n = 15$).

Next steps for this work will focus on dissemination. A condensed version of this workshop has been piloted at one other institution and plans are being made to conduct it at two additional institutions. We recognize that local expertise does not exist everywhere to conduct a workshop that requires specially-trained facilitators and actors and that there are economies of scale with respect to resources required to conduct these workshops (for costs including facilities and actor time). The model of teaching CST through workshops with substantial time dedicated to deliberate practice through role play is the CST model with the strongest evidence base [17–21,25–27]. Thus, dissemination of CST workshops as a method of communication skills training in gynecologic oncology is preferable to single institution, didactic-based instruction. We feel the most effective dissemination plan for CST in gynecologic oncology will involve centralized workshops, regionally or nationally. Dissemination prospects would also be improved by growth in the cohort of gynecologic oncology providers trained in CST facilitation.

In conclusion, gynecologic oncology providers who participated in our workshop demonstrated significant improvement in self-rated preparedness to handle challenging communication tasks and one month later reported changes in their practice patterns as a result of the workshop. Participants highly valued the opportunity provided by role play to practice their skills. They uniformly felt this training should be required of all gynecologic oncology providers. Effective communication is commonly administered in sub-therapeutic doses in gynecologic oncology, not because providers are uncaring, but rather because providers often have not received explicit instruction and opportunities to practice the unique skills involved in difficult conversations. High quality communication skills training provides an opportunity to change that, in pursuit of provision of the highest possible quality of care for women with gynecologic cancer.

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Author contributions

Carolyn Lefkowitz MD, MPH, MS – study design, data collection, data analysis, manuscript preparation.

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Conflict of interest statement

Drs. Carey & Bevis report personal fees from the non-profit VitalTalk, outside the submitted work. Dr. Arnold is on the board of the non-profit VitalTalk and serves as the section editor for palliative care for UpToDate. This work was supported by a grant from the Milbank Foundation, Princeton NJ and through the Sara Jean Binakonsky Palliative Care Fund at UPMC Magee-Womens Hospital.

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