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Do Pediatric Hematology/Oncology (PHO) Fellows Receive Communication Training?

Wilson File, MD¹, Carma L. Bylund, PhD², Jennifer Kesselheim, MD³, David Leonard, PhD¹, and Patrick Leavey, MD^{1,*}

¹Division of Pediatric Hematology-Oncology, Children's Medical Center Dallas, The University of Texas Southwestern, Dallas, Texas

²Department of Behavioral Science, Memorial Sloan Kettering Cancer Center, New York, New York

³Dana Farber/Boston Children's Cancer and Blood Disorder Center, Boston, Massachusetts

Abstract

Purpose—The Accreditation Council for Graduate Medical Education (ACGME) has established communication as a core competency for physicians in training. However, data suggest that most pediatric residents perceive inadequate training in the delivery of bad news and the majority of former trainees in pediatric oncology received no formal training in the delivery of bad news during fellowship. The study examines communication training in ACGME accredited US pediatric hematology-oncology (PHO) fellowship programs.

Methods—An online survey was distributed to 315 PHO fellows in training via the American Society of Pediatric Hematology/Oncology (ASPHO) fellow email registry. Each fellow received an initial request to participate and 2 reminders, while participation was encouraged through a random incentive drawing.

Results—One hundred and ten fellows (35%) responded. Eighty percent of respondents perceived communication training to be important to fellow education, however only 32% reported receiving communication training (other than direct observation). The most common reported teaching method of fellowship communication training was formal lecture (42%). Twenty-three percent of respondents reported neither communication training nor frequent feedback on their communication skills from faculty observation. This same group was the least satisfied with their programs' approach to teaching communication ($P < 0.001$).

Conclusions—There is limited communication training in PHO fellowships despite ACGME requirements and fellows' interest in this training. Didactic learning remains the most frequently described training method, yet educational theory identifies the limitation of didactic lectures alone. Communication training employing novel teaching methods and emphasizing communication challenges identified by fellows should be developed and evaluated.

*Correspondence to: Patrick Leavey, The University of Texas Southwestern Medical Center, Division of Pediatric Hematology-Oncology, 5323 Harry Hines Boulevard, Dallas, TX 75390-9063. patrick.leavey@utsouthwestern.edu.

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Keywords

communication; communication training; fellow training

BACKGROUND

Communication is the foundation of the patient/physician relationship and is linked to an improvement in: patient-physician satisfaction, adjustment to illness and medical decision making [1–3]. The Accreditation Council for Graduate Medical Education (ACGME) has identified communication as a core competency for all physicians in training [4]. Consequently, all training programs are required to evaluate the communication skills of their trainees.

Oncotalk® and the Comskil Training Program at Memorial Sloan Kettering Cancer Center, both NIH funded communication programs for medical oncology, have successfully demonstrated significant communication skill acquisition through training that emphasizes experiential learning [5,6]. These results have also been demonstrated by a randomized study in which Fallowfield et al. [7,8] described sustained incorporation of communication skills into clinical practice after formal communication training. Despite these advances in our understanding of how to teach communication in the setting of cancer care, communication training of the pediatric oncologist has not been adequately reviewed. Survey data that exists demonstrated that 70% of pediatric residents perceive inadequate training in the delivery of bad news [9] and a study of pediatric oncology and intensive care fellows revealed that 80% had received no training in the delivery of bad news during their fellowship [10].

In preparation to develop a communication curriculum for pediatric oncology trainees, we sought to examine communication training in ACGME-accredited PHO fellowship programs. We conducted a national survey of PHO fellows inquiring about teaching methods, satisfaction with teaching, difficulties experienced in communication encounters, and the frequency of faculty feedback after such encounters. We hypothesized that PHO fellows would report interest in communication training and would identify specific communication challenges amenable to targeted educational intervention.

METHODS**Participants and Study Design**

We designed a cross-sectional survey of PHO fellows and accessed contact email addresses through the ASPHO fellow registry, in September 2012. The eligibility requirements were: current fellow in training in an ACGME-accredited US training program and a member of ASPHO. All surveys were designed and distributed through REDCap®—a secure, web-based application designed exclusively to support data capture for research studies. All eligible fellows were contacted by email and invited to complete the online survey. Each fellow received an initial request to participate and two reminders each 1 week apart.

Participation was encouraged through a random incentive drawing. We obtained Institutional Review Board exceptions status as a quality improvement/ educational project.

Survey Design

For the purpose of this survey *communication training* was defined as anything other than faculty observation of fellow led encounter with feedback to the fellow after the encounter. The survey sought information regarding *difficult communication encounters* in pediatric oncology. These encounters included: delivering a new diagnosis of cancer, delivering a diagnosis of relapsed, or refractory cancer, soliciting informed consent for participation in a phase III randomized control trials, soliciting informed consent for participation in a phase I clinical trial, transitioning goals of care to palliation, soliciting family preferences around resuscitation, and leading clinical care conferences.

After extensive review of the literature regarding pediatric graduate medical education and medical communication training, we developed an online survey using question-logic providing follow-up questions based on previous question response (Supplemental Table I). There were a maximum of 36 questions available to responders, with 5 to 7 point Likert-scale responses for the majority of survey questions. Likert-scales were developed for six types of response: frequency, satisfaction, difficulty, anxiety, agreement, and importance. Seven categories of information were explored: (1) exposure to communication training, (2) methods of training, (3) perceived importance of communication training, (4) difficult communication encounters and (5) factors that contribute to difficulty, and (6) frequency of faculty feedback and (7) debriefing practices after difficult communication encounters. The primary author (WF) conducted pilot testing at his institution (Children's Medical Center Dallas). Pilot participants reviewed the survey and gave feedback on item clarity and ease of responding, which facilitated revision of the survey. Following this, the instrument was reviewed by a survey methodologist at the Clinical Research Center of Boston Children's Hospital whose feedback led to further refinements to the survey formatting and to the directions and introductory language provided to participants. At this point revisions were also made to the response options to optimize accuracy and minimize confusion within the data.

Statistical Analysis

Responses to all survey and demographic questions were tabulated. Rank-sum tests were used to assess associations between elements of a respondent's communication training and ordinal measures such as program size, satisfaction, difficulty, and anxiety. All analyses were carried out using SAS/STAT® statistical software, version 9.3 (SAS Institute Inc., Cary, NC).

RESULTS

Fellow Characteristics

The survey was completed by 110 of 315 (35%) eligible participants. Sixty-four percent of respondents were female (Table I) and 69% were in their 2nd and 3rd year of training.

Eighty-three percent of respondents reported English as their primary language. The average completion rate for each survey item was 97%..

Communication Training

Thirty-two percent of respondents reported communication training in fellowship while 53% and 68% had experienced communication training had experienced formal training in the delivery of bad medical news in residency and medical school. The two most common methods of training in fellowship were: formal lectures (42%) and structured teaching with case scenarios (33%). Fellowship programs including communication training tended to be about the same size (median = 4, range = 1–7 fellows/year) as programs without communication training (median = 3, range = 1–8 fellows/year, $P = 0.54$).

Eighty percent of all respondents perceived communication training to be important to fellow education. Respondents reported that communication to families in regards to relapse, transition to palliative care, and do-not-resuscitate orders were the most difficult. This perceived difficulty was compounded by: family anger, the need to balance hope with honesty, and difficulty finding the appropriate words.

Of the 32% respondents who participated in formal communication training during fellowship, 69% reported they were very/moderately satisfied with their programs' approach to communication training, significantly greater than in comparison to those who did not participate in communication training ($P < 0.01$). When asked to rate the difficulty of various pediatric oncology encounters, those with communication training reported less difficulty in nearly every encounter type (Table II). Twenty-seven percent of those without communication training, self-reported as extremely/very anxious prior to leading difficult communication encounters. This was significantly different from the 14% in those receiving training ($P = 0.03$).

Faculty Observation and Feedback

Thirty-two percent of fellows reported seldom or never receiving adequate faculty feedback on their communication with families. Twenty-four fellows (21.8%) reported neither communication training nor adequate faculty feedback (Table III). This group was the most dissatisfied with their programs approach to communication training ($P < 0.01$) and the most likely to agree that one can never prepare for difficult conversations in pediatric oncology ($P = 0.04$).

The majority of respondents (92%) felt that fellows should be able to lead difficult communication encounters without faculty observation at some point during their fellowship. Forty-four percent of respondents reported that entrustment to such independence could be acquired after a minimum number of faculty observations of fellow led conversations (mean = 4, median = 4, range = 1–10). Fifty-three percent of responders suggested other benchmarks for entrustment in communication, which included: a minimum number of observed faculty led conversations or completion of first or second year of fellowship. Of those that reported the need for faculty observation throughout fellowship (8%) the primary reason cited was the opportunity for continued feedback (100%).

Debriefing Practices

Sixty-two percent of respondents reported that difficult conversations in pediatric oncology are often emotionally charged in a way that is difficult to handle. Seventy-six percent reported that debriefing was important after such conversations primarily to discuss the treatment team's perspective on the family understanding of and/or coping with the information shared. Fifty-eight percent of respondents noted that debriefing was important for provider self-care. Despite acknowledging its importance, 56% reported debriefing 50% of the time.

DISCUSSION

PHO fellows infrequently receive formal communication training during fellowship. In fact, our findings suggest that communication training in difficult conversations decreases throughout the continuum of medical education. The majority of respondents affirmed that communication training is important in fellowship and identified specific encounters and components of communication for which to develop educational strategies.

Educational theory highlights the limitation of didactic teaching alone and identifies the better model for teaching communication skills, as experiential learning [11–13]. Successful medical oncology communication training programs employ a combination of didactic and experiential learning [5,7,14]. Our data suggests a positive impact of communication training regardless of the methodology, fellows exposed to training reported decreased difficulty in nearly all communication encounters and a decrease in anxiety leading the most difficult encounters than those without training. Reported anxiety has been widely used as a marker for comfort with a certain discussion topic in the communication literature [15–17].

Experiential learning employs strategies like small groups, standardized patients, and role play to reinforce behavioral change by allowing the learner to practice new skills in a safe environment that allows for experimentation and provides immediate, specific and well-informed feedback. This stands in contrast to the conventional Apprentice Model of teaching communication in graduate medical education, described as learner observation of faculty followed by faculty observation of learner and finally learner independence. Communication training that occurs only in this model has several limitations including: inconsistency of feedback, faculty knowledge of communication techniques, and quality of communication instruction. Faculty development in educational technique and feedback delivery are important to the success of both the apprentice and experiential models as exemplified by the data presented with 32% responders reporting *inadequate* faculty feedback. However since the survey did not define “adequate” some caution is warranted in interpretation of this data element. Program directors are encouraged to access on-line faculty development tools either to use or build upon. MedEdPortal® sponsored by the Association of American Medical Colleges is one such resource. Specifically in regards to communication Bartlett et al. [18] have reviewed several vignettes addressing communication competencies within the competency domain of interpersonal skills and communication. Program directors are also encouraged to attend national meetings such as Pediatric Educational Excellence Across the Continuum or fellowship program director meetings sponsored by the Association of Pediatric Program Directors, where educational design and evaluation skills are presented

and can then be introduced to institutional curriculum. The Pediatric Milestone Project [19], now being established through all pediatric graduate medical education provides detail regarding the transition of novice to expert in each of the competencies and importantly should be incorporated into any faculty development activity.

The practice of pediatric oncology is a demanding, high stress occupation [20–22]. In 2008, in a workshop offered at the American Society for Pediatric Hematology/Oncology (ASPHO) annual meeting, burnout was noted to be a significant challenge for PHO subspecialist [23]. In addition, a survey of over 400 practicing pediatric oncologists worldwide revealed that 72% of responders were found to have a moderate to high score on the Maslach Burnout Inventory (MBI) and identified debriefing as a protective mechanism for burnout [20]. Our survey findings reveal that debriefing is infrequently practiced among PHO fellows, despite its recognized benefits. The importance of debriefing should be emphasized and made a priority in the training environment.

We have piloted a communication curriculum, modeled on the principles of experiential learning, which included both didactic teaching and role-play incorporating standardized actor patients. Each learning module focused on a single communication encounter and the incorporation of six core communication skills: establishing conversation framework, checking family understanding, provider questioning skills, empathetic communication skills, information organization skills, and shared decision making. Modules began with brief introductory didactics providing learners with: contextual information regarding provider communication difficulties associated with the conversation, evidence based communication needs of families [24–29] and a framework of organizing each conversation while stressing some of the identified difficulties presented here. Following the didactic portion of each module fellows participated in role-play sessions using realistic clinical scenarios and standardized actor patients. The role-play sessions allowed each fellow the opportunity to lead the conversation while being observed by facilitators and remaining fellows. In preparation for this curriculum, two lead investigators participated in facilitator training through the Comskil Training Program [30]. We developed and piloted evaluation instruments for the first three of Kirkpatrick's *Triangle Evaluation of Training* [31] that has four levels of evaluation: (1) learner's reaction to the intervention, (2) change in knowledge or skills, (3) behavioral change in the learner's clinical environment, and (4) impact on society (patient/clinical outcomes) (Fig. 1). Evaluation of clinical impact (Kirkpatrick's 4th level) remains a challenge for educators and needs to be addressed in a prospective way.

Our study has strengths and limitations. The strengths include the use of a national sampling framework, even distribution across fellowship program size, piloted institutional experience, and the unified focus on communication training in fellowship. The limitations include potential selection bias regarding willingness to complete the survey and the limited number of respondents. The survey did not seek information regarding overall satisfaction with fellowship training. Such a question(s) might have further addressed response bias. We used the ASPHO fellow registry to obtain access to fellows. While this may misrepresent PHO fellows as a group, ASPHO offers free membership to fellows in training and represents 66% of the American Board of Pediatrics registered PHO fellows. The survey was completed by a majority of upper level fellows which may reflect timing of survey

distribution early in the academic year. The skewed distribution by fellow seniority limits the representative nature of the survey; however, upper level opinion may be more revealing in identifying a perceived educational deficit prior to transitioning into a role of more autonomy.

We describe an analysis of communication training in PHO fellowship and perceived difficulties in communication for pediatric oncology fellows. The findings identify an educational gap in most PHO fellowship programs despite fellow perceived importance and ACGME requirements.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Fig. 1.
Modified Kirkpatrick's triangle of assessment to reflect pilot communication curriculum
assessment strategy.

TABLE I

Demographics of 110 Responding Fellows

	N (%)
Gender	
Male	40 (36)
Female	70 (64)
Year of fellowship	
1st year	14 (13)
2nd year	33 (30)
3rd year	43 (39)
4th year	23 (18)
Program size (number of fellows/year)	
1–2	38 (35)
3–4	49 (44)
5+	23 (21)
English as primary language	
Yes	91 (83)
No	19 (17)
International residency training	
Yes	3 (3)
No	107 (97)

TABLE II

Perceived Difficulty of Communication for Pediatric Oncology Fellows Categorized by Communication Training (Y/N)

Perceived difficulty across specific communication encounters	All responders percentage (N = 110)	CT ^a percentage (n = 35)	No CT percentage (N = 75)	P-value
Please rate each of the following oncology clinical encounters based on level of difficult				
A. New diagnosis with good prognosis (80% survival)				0.01
Extremely difficult	0	0	0	
Very difficult	5.5	0	8	
Moderately difficult	26.4	20	29.3	
Slightly difficult	37.3	34.3	38.7	
Not difficult	30.9	45.7	24	
B. New diagnosis with poor prognosis (50% survival)				0.02
Extremely difficult	10	2.9	13.3	
Very difficult	43.6	40	45	
Moderately difficult	29.1	28.6	29.3	
Slightly difficult	17.3	28.6	12	
Not difficult	0	0	0	
C. Consent for RCT				0.24
Extremely difficult	1.8	0	2.7	
Very difficult	10	11.4	9.3	
Moderately difficult	31.8	25.7	34.7	
Slightly difficult	35.5	34.3	36	
Not difficult	20.9	28.6	17.3	
D. Disease progression/relapse				<0.01
Extremely difficult	25.5	11.4	32	
Very difficult	43.6	42.9	44	
Moderately difficult	21.8	25.7	20	
Slightly difficult	9.1	20	4	
Not difficult	0	0	0	
E. Consent/explanation of phase I therapy				0.15
Extremely difficult	7.3	5.7	8	
Very difficult	32.7	22.9	37.3	
Moderately difficult	38.2	42.9	36	
Slightly difficult	17.3	22.9	14.7	
Not difficult	3.6	2.9	4	
F. Transition to palliative care				0.05
Extremely difficult	30.9	20	36	
Very difficult	41.8	45.7	40	

Perceived difficulty across specific communication encounters	All responders percentage (N = 110)	CT ^a percentage (n = 35)	No CT percentage (N = 75)	P-value
Moderately difficult	15.5	11.4	17.3	0.22
Slightly difficult	10	20	5.3	
Not difficult	1.8	2.9	1.3	
G. DNR conversation				0.22
Extremely difficult	33.6	22.9	38.7	
Very difficult	34.5	42.9	30.7	
Moderately difficult	22.7	22.9	22.7	0.22
Slightly difficult	7.3	11.4	5.3	
Not difficult	1.8	0	2.7	
H. Care conference				<0.01
Extremely difficult	3.6	2.9	4	
Very difficult	14.5	2.9	20	
Moderately difficult	47.3	40	50.7	<0.01
Slightly difficult	26.4	42.9	18.7	
Not difficult	8.2	11.4	6.7	

^aCT, communication training.

TABLE III

Comparison Between Communication Training (Anything Other than Direct Observation and Feedback) and Frequency of Adequate Faculty Feedback

Communication training	Feedback		Totals
	50% of time	Rarely or never	
Yes	24	11	35
No	52	24	75
Totals	75	35	110

Data represent number of fellows.