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Communication Skills Training in Pediatric Oncology: Moving Beyond Role Modeling

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Abstract

Communication is central to pediatric oncology care. Pediatric oncologists disclose life-threatening diagnoses, explain complicated treatment options, and endeavor to give honest prognoses, to maintain hope, to describe treatment complications, and to support families in difficult circumstances ranging from loss of function and fertility to treatment-related or disease-related death. However, parents, patients, and providers report substantial communication deficits. Poor communication outcomes may stem, in part, from insufficient communication skills training, overreliance on role modeling, and failure to utilize best practices. This review summarizes evidence for existing methods to enhance communication skills and calls for revitalizing communication skills training within pediatric oncology.

Keywords

Communication skills; communication skills training; medical education; fellowship training; pediatric oncology; childhood cancer; graduate medical education

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Introduction

“A scientifically competent medicine alone cannot help a patient grapple with the loss of health.”[1]

The story of pediatric oncology is one of sustained, multi-institutional collaboration and of an enduring commitment to using clinical research to guide practice,[2,3] leading to remarkable increases in survival from childhood cancer.[4] Yet despite improved outcomes, children with cancer and their families experience high suffering throughout the illness course: from disruptions to normal life by frequent medical visits and hospitalizations,[5] treatment- and disease-related symptoms,[6] financial tolls of illness and treatment,[7] and the uncertainty of living with cancer.[8–10] A critical factor in mitigating distress, whether physiologic or psychological, is the physician-family relationship, and the foundation of this relationship is communication.[11–13]

High quality communication between patients and physicians (providers) can produce important patient care outcomes: enhanced illness understanding, more accurate symptom disclosure, better adherence to planned treatments, decreased anxiety and psychological distress, reduced feelings of abandonment, improved satisfaction with care, and an improved overall “cancer experience.”[14–17] However, despite growing understanding that healthcare communication can be optimized to improve patient- and family-level outcomes, approaches to teaching communication in pediatric oncology are largely local, informal and idiosyncratic.[18] Interventions to improve communication aim to alter physician attitudes (such as promoting patient-centeredness),[19] to improve physician skills,[20,21] to empower patients,[22] or to alter the clinical culture.[23] This review will focus on approaches to improve physician communication skills in a pediatric oncology context.

Methods

In this narrative review, we synthesize evidence from observational studies, intervention studies, and expert commentary regarding the following topics: (1) healthcare communication skills and their measurement, (2) deficits in communication practices and outcomes in pediatric oncology throughout the illness trajectory of childhood cancer, (3) current approaches to communication skills training in pediatric oncology, and (4) existing methods to foster communication skill growth. We searched Medline, ERIC, Cochrane, and PsychInfo databases for relevant English language articles. Reference lists of relevant articles were hand searched for articles not returned by initial searches. Following synthesis of this evidence, we critically examine potential applications of existing communication training best practices to the pediatric oncology context and consider potential barriers to adopting such practices.

Healthcare communication skills and their measurement

Valued physician communication behaviors are known, and include use of open-ended questions, eliciting patient and family perspectives, checking for understanding, avoidance of so-called blocking behaviors (e.g. interruption, false reassurance, “facts only” communication), and acknowledgement of and response to patient emotion.[21,24–26]

Communication skills may be classified by type of communication (e.g. information gathering skills, relationship building), by timing within an encounter (e.g. negotiating an agenda for the visit), or by place in the illness trajectory (e.g. discussing clinical trial participation).[15,21,27–29] Communication skills require foundational knowledge and attitudes. For example, to develop the skill of acknowledging and responding to emotions, providers must first identify affective cues and value these cues. As such, deficiencies in knowledge, attitude, or skill related to patient-provider communication may manifest as skill deficiency. [30,31]

Importantly, communication skills can be measured. A recent meta-analysis of randomized controlled trials of communication skills training for oncology providers found moderate-quality evidence for a benefit of training on use of open questions and high-quality evidence for improvements in showing empathy.[15] However, lack of consensus regarding optimal measurement tools to gauge skill attainment has led to a proliferation of approaches[24,32,33,34] and complicates appraisal of existing studies.[29]

Deficits in communication practices and outcomes in pediatric oncology

Initial diagnosis and treatment decision-making

High-stakes, nuanced communication in pediatric oncology typically begins when the oncologist, child, and parents meet in the setting of a new diagnosis of childhood cancer.[12] Studies of informed consent reveal important misunderstandings, such as enrollment on a clinical trial because a parent perceives that the medical team will take greater interest in the child if the child participates,[35] and difficulties describing randomization among parents whose children are receiving treatment on randomized clinical trials.[36,37] Additionally, parents report that information received about the cause of a child's cancer is of lower quality than that received about the cancer overall.[38] Challenging communication tasks are rendered more complex by the triadic (or quadratic) nature of the physician-patient-parent relationship, the myriad responsibilities parents feel, issues of proxy decision-making, and the patient's own physical, cognitive, and emotional development during the course of illness and treatment.[39] Thus, the diagnostic period is a particularly intense time for communication between families and oncologists, with evident communication deficits.

Period of active treatment

During the period following diagnosis, theoretical work and clinical experience support the notion that transformations occur in the child (now also a patient) and family. Transformations in how the child looks, what the child knows, and how and what the parent understands to be part of the parenting role[40,41] all contribute to a “new normal” that sprouts in the aftermath of the cancer diagnosis.[42] Likewise, family and home life frequently undergo significant restructuring, such as prolonged separation due to hospitalization or frequent long days in the outpatient oncology clinic.[40] To ensure patient and family-centered communication, these transformations should be acknowledged and changing needs explored in routine conversations between oncologists, children, and their parents. During this period, communication missteps persist. For example, parent reports of desired decision making roles and pediatric oncologists' estimates of parent wishes show

poor alignment: pediatric oncologists tend to presume parents desire less active decision-making roles than parents report.[43]

Therapy completion and transition to survivorship

When treatment for cancer is complete, the child and family face separation from relationships and settings that have become familiar. Likewise, anxiety may heighten as active therapy ceases and interactions with the oncologist and oncology center transition to surveillance for cancer recurrence.[9] With regard to communication at the conclusion of planned treatment, parents report insufficient receipt of information, and a preference to receive information from the treating oncologist, while adolescents wish to know more about their long-term outcomes, such as fertility.[44]

End-of-life care and advance care planning

Communication challenges also arise around end of life and advance care planning. Early work revealed that 47% of pediatric oncologists do not initiate discussions of advance directives when caring for dying children.[45] More recently, 22% of surveyed pediatric oncologists and pediatric intensivists reported “not knowing the right thing to say” as a barrier to advance care planning discussions often or always.[46] Kamihara and colleagues recently described the multi-layered, co-existing hopes that parents of children with advanced cancer may hold, and how hopes (for cure; for a long life and for one’s child to become a parent) and expectations (for progressive illness; for death) often coexist.[47] Yet despite parents’ forthrightness in discussing their hopes and expectations with researchers, few providers engaged in conversation about parents’ hopes.[47] This may contribute to goal discordance between physicians and parents that has been demonstrated in the setting of advanced cancer—for example, parents of children with advanced cancer are more likely than treating oncologists to indicate that the primary goal of treatment is cure.[48] Thus, both parent and oncologist reports provide evidence of high communication complexity throughout the pediatric cancer illness trajectory and suggest important improvement opportunities.

Communication skill-building is lacking in residency and subspecialty training

Observed communication deficits in pediatric oncology may stem in part from insufficient focus on communication skill-building during both general pediatric and subspecialty training. The American Academy of Pediatrics describes health care communication as a “critical, but generally neglected, component of pediatric and pediatric subspecialty practice and training.”[14] Unfortunately, most available data consist of physicians’ self-reported confidence and skill. A recent survey conducted among pediatric residents indicated “minimal” self-reported training and competency in communication about newly diagnosed life-threatening illness.[49] Nationally, only 64% of chief resident respondents agreed that they were at least “adequately” trained to communicate bad news to a parent, and only 31% felt they were at least adequately trained to communicate bad news to a child.[50] Given known inaccuracies of self-reported skills, these may be overestimates of readiness.

Increased focus on observation-based behavioral assessment in graduate medical education may lead to better understanding of trainee skills at the time of pediatric oncology fellowship entry. The Pediatric Milestone Project seeks to provide richer data regarding pediatric physician trainee behavior during graduate medical education, which would allow comparison of self-reported readiness to communicate and actual communication behavior as rated by faculty assessors. Unfortunately, these data are not yet mature.[51,52] Notably, nine of the currently reported twenty-one milestones pertain to valued communication behaviors or foundational knowledge and attitudes (see Supplemental Table 1). While the stated hope is that most graduating pediatric resident physicians will achieve competence (level 3) or proficiency (level 4) for each communication sub-competency, research suggests that many practicing physicians have not achieved these levels of communication skill.[53,54]

Current practices to foster communication skill growth in pediatric oncology: variability and overreliance on role-modeling

Relatively little is known about the quality of communication training among pediatric oncologists, but existing data suggest overreliance on role modeling and informal apprenticeship. A national survey of pediatric hematology/oncology and critical care physicians found that most trainees learn to communicate through informal apprenticeships; fellows observe faculty, who serve as role models, and faculty observe fellows.[55] At their best, these can be coaching relationships, in which faculty coaches offer formative feedback based on an observed performance or series of performances.[56] Yet the evidence suggests coaching is by no means guaranteed: 15% of pediatric oncology fellow respondents indicated they were not observed by faculty.[55] In another national survey, over 20% of pediatric hematology/oncology fellows reported receiving no formal training and minimal faculty feedback on communication skills.[18] These findings suggest that communication training in pediatric oncology relies on role modeling, and that training approaches are highly variable.

Theoretical foundations for communication skills training and existing methods to promote communication skill growth

Important elements of communication skill-building interventions include cognitive maps, opportunities for active engagement, and reflection.[21,30] These elements combine in at least three distinct approaches described in the literature: dedicated programs/curricula, coaching, and conversation guides. Key considerations for each approach are summarized in Table 1. Multiple educational frameworks (e.g. Bloom's taxonomy, Miller's and Kirkpatrick's pyramids) and theoretical frameworks for interpersonal communication[28,29] inform the development and evaluation of communication skill-building interventions, a full discussion of which is beyond the scope of this review. One particularly helpful framework is the experiential learning cycle. Teaching strategies and expected physician outcomes can be mapped to the experiential learning cycle, which consists of concrete experiences, reflection, abstract conceptualization, and active experimentation (see Figure 1).[57,58] Concrete experience and abstract conceptualization form the two poles of the continuum of "grasping" or perception.[57] Reflection and active experimentation form the two poles of

the continuum of transformation – ways of processing an experience.[57] Learning is enhanced when strategies that map to each phase of the cycle are employed.[58] Furthermore, adult learning theory suggests that connecting with previous life experiences and engaging a learner’s “growing edge”—the boundary between what is mastered and what is not—are important to ensure meaningful learning.[59,60] To teach to this growing edge requires an understanding of where it is by both teacher and learner. Teaching communication skills through role modeling followed by repeated practice may emphasize the “grasping” aspect of learning over the transformative aspect (see Figure 1), and may lead to teaching that reflects a teacher’s particular strengths, rather than a learner’s particular needs.

Best practices for communication skill-building: dedicated, multimodal, small group programs

Programmatic and curricular approaches to promote communication skills have been studied in medical oncology, palliative care, and pediatrics. These include named programs such as OncoTalk (now VitalTalk), ComSkil, SPIKES, the Fallowfield/Lipkin program, Palliative Care Education and Practice (PCEP), and the Program to Enhance Relational and Communication Skills (PERCS).[20,23,24,61–66] Often, skill-building activities are organized around hallmark events or shifts in patient care frameworks such as “giving bad news,” “discussing dying,” and “discussing transitions in goals of care.”[30,61] By combining didactic material, active small group skills practice, formative feedback and reflection, formal workshop programs engage the entire experiential learning cycle (see Figure 1), and would be predicted to have superior outcomes than approaches that engage less of this cycle.[57,58]

Program outcomes

Workshop programs have been shown to enhance participants’ knowledge, attitudes, and skills.[20,24,62,63,66] Consistent with the notion that approaches that engage the whole experiential learning cycle enhance learning relative to less balanced approaches, a randomized clinical trial demonstrated superiority of workshop-based communication skills training relative to written feedback only.[24] Not surprisingly, the impact of such programs may be dose-dependent: in the Fallowfield trial, a three-day workshop was superior to a 1.5-day workshop.[62] A non-randomized trial of a communication training program to address the consent process for clinical trial participation found that trained pediatric oncologists were more likely to discuss prognosis and to describe alternatives to clinical trial participation.[36] Interestingly, a randomized clinical trial of communications skills training for medical and nurse practitioner trainees found superior skills among trained clinicians as rated by trained standardized patient assessors, but failed to demonstrate increases in patient-reported communication quality. [67] The finding that real patients did not report improved communication quality may have been due to the choice of measurement tool or the overall study design, but highlights the importance of ongoing research and implementation work to ensure that skill gains translate meaningfully to the clinical environment. For example, successful skill transfer may require subsequent clinical supervision.[32] However, despite potential limitations, formal workshop programs have the strongest efficacy evidence for communication skill-building, and therefore represent current best practice.[20,25,68]

Coaching

Coaching, the practice of providing formative feedback based on an observed performance or series of performances,[56] may alter the trajectory of performance, avoiding performance plateaus that may otherwise occur with habitual practice.[69] In keeping with the idea that skills plateau without reflection or outside “transforming” influence (such as the influence of coaching),[69] physicians’ communication skills do not improve through usual experience.[70] Coaching may be employed as a component of a formal workshop program—the feedback given by a workshop facilitator to a participant following a role play exercise is a form of coaching[71]—or it may be employed in the clinical environment, either based on direct observation[72] or based on later review of a clinical encounter, such as through video-tape review.[56] An appeal of the coaching approach is its close resemblance to the norms of clinical fellowship training, in which most learning is experiential.[73] However, coaching requires the development of multiple skilled faculty coaches,[56,74] and buy-in from both the faculty coach and fellow learners. Ideally, learners develop longitudinal relationships with at most a few faculty coaches, which may not match faculty practice patterns. For coaching to succeed, ultimately learners must incorporate feedback into iteratively revised practice.[75]

Conversation guides

Conversation guides have gained prominence recently, particularly for advance care planning among adults with serious illness.[76] Conversation guides have similarities to checklists—the aim is not necessarily to transform the communicator, but rather to consistently cue a particular set of behaviors, particularly under stressful circumstances. Though written in a narrative format, the “Day One Talk” monograph contains elements of a conversation guide, and represents the only published conversation guide for diagnostic disclosure in pediatric oncology.[12] Given complex and shifting parent and child needs and perspectives throughout the illness trajectory, development of additional conversation guides for pediatric oncology that move beyond the initial diagnostic period is appealing. Development of additional conversation guides will require a synthesis of the literature on family adaptation to the cancer experience[42,77] and an appraisal of key events in childhood cancer that may benefit from a standardized approach, such as end of therapy visits.[9,44,78] While conversation guides may enhance conversation quality by providing guidance regarding conversation structure, content, and language, they may not foster general communication skills, such as recognizing and responding to emotion. As such, the educational context in which a conversation guide is introduced should be tailored to the skill-level of the intended user, with opportunities for skills practice.[31] Therefore, conversation guides are an important mechanism for promoting communication quality, but may require additional scaffolding in the form of coaching or small-group skills practice to improve providers’ communication skills.

Applicability of existing best methods to pediatric oncology and potential impediments to use

It is unclear why formal communication training has been utilized rarely in pediatric oncology. In 2007, the American Society of Pediatric Hematology/Oncology (ASPHO) Training Committee recommended that communication teaching for fellows cover breaking bad news, offering end-of-life care, enrolling patients in investigative studies, and disclosing errors.[79] However, no recommendations were made regarding how to teach communication skills. The lack of published communication workshop curricula written for pediatric oncology contexts and the challenges of simulating parent-child-oncologist dynamics may limit the use of existing programs. Findings from existing programs that are particularly relevant to pediatric oncology include optimal program length and components, as well as effect sizes for changes in physician knowledge, attitudes, and skills.[20,24,62,80] Many frameworks, such as SPIKES (Setting Up, assessing patient's Perception, obtaining patient's Invitation, giving Knowledge and information to the patient, addressing patient's Emotions with empathic responses, and Strategy/Summary),[27] pertain to the disclosure of serious news in any medical context. Likewise, strategies to promote physician empathy cross contexts, and small-group teaching strategies are directly applicable.[81] Fortunately, a recent needs assessment suggests a pediatric oncology-specific curriculum is in development.[18] Yet without widespread acknowledgment of the value of formal communication skills training and infrastructure to support it, the existence of curricula alone may not change communication skills training in pediatric oncology.

Attitudinal barriers

Pediatric oncologists with little exposure to best available communication skills training methods may undervalue this training. Hilden and colleagues found that pediatric oncologists relied on trial and error approaches to the care of dying children and expressed little interest in formal curricula to build skills, despite high rates of self-reported anxiety in the setting of discussing dying with children and families.[45] Pediatric oncologists perceive role modeling to be valuable,[45,55] despite parents' reports of communication deficits. [35,37,38,82] Trainees who experienced multi-modal communication skills training approaches were much more likely to attribute value to these experiences than were those whose training had not featured such approaches.[55] Thus, exposure to more intensive communication training may enhance recognition of its value: participants may realize that their pre-participation skills were less solid than previously believed.[66] Conversely, providers not exposed to such programs may continue to overestimate their skills and the teaching they received, potentially perpetuating the cycle of overreliance on role modeling to teach communication skills. Perhaps reflecting changing attitudes about the sufficiency of role modeling for fostering critical communication skills, eighty percent of surveyed contemporary pediatric oncology fellows indicate that communication training is important[18], and fifty percent indicate more communication skills training would be somewhat or very helpful.[83]

Workforce and resource barriers

Faculty development is key to the success of a communication skills training program.[74] Currently, relatively few pediatric oncologists are trained to facilitate formal communication skills workshops or to work with standardized patients. Approximately 150 pediatric hematology/oncology fellows graduate annually from programs throughout the United States, with a median program size of 6 fellows.[84] Thus, although the trainee workforce is small, its geographic distribution is wide. In medical oncology, centralized communication training for fellows bypassed potential deficiencies in faculty skills by limiting teaching to a small group of communication experts.[20,65] A similar approach could be taken in pediatric oncology, and some efforts are underway: The 2015 ASPHO annual meeting featured a “Bad News Deserves Better Communication” workshop, suggesting growing visibility of the need for enhanced communication skills training across the continuum of pediatric oncology practice.[85] However, costs of travel and workshop fees are impediments to widespread ongoing participation in centralized communication skills workshops, and skill reinforcement in the clinical setting requires skilled local faculty. Recognition of this has led to interest in building local capacity through innovative faculty development programs, such as OncoTalk Teach.[74,86] Thus, initially centralized programs paired with a “train the trainer” approach geared at building local capacity[28,66] may ultimately facilitate feasible, high-quality, low-variability communication skills teaching at individual fellowship programs.

Conclusion and future directions

Pediatric oncologists are expected to disclose life-threatening diagnoses, to offer and explain treatment options, including clinical trial participation, to give honest prognoses, to maintain hope, to anticipate and describe treatment complications, and to support families in difficult circumstances ranging from loss of function and fertility to treatment-related or disease-related death.[12,38,87] These complicated communication tasks require well-developed communication skills. Although communication skills are teachable, measurable, and central to achieving important patient and family outcomes, our current approaches to communication skill-building are highly variable and underutilize best practice principles of multimodal education. Impediments to use of existing multimodal programs in pediatric oncology training include a shortage of qualified faculty teachers,[74] costs of workshop attendance or organization, lack of curricula tailored for the pediatric oncology context, and perhaps under-recognition of limitations of current approaches. To overcome these impediments, faculty development will be critically important, as faculty expertise is required for formal programs, coaching, or conversation-guide-based teaching. Additionally, collaborative scholarship is needed to adapt existing programs to the pediatric oncology context and to study the impact of new approaches on the communication skills of those trained. If such efforts succeed, oncologists, children and families stand to benefit.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Abbreviations Key

ASPHO	American Society of Pediatric Hematology/Oncology
PCEP	Palliative Care Education and Practice
PERCS	Program to Enhance Relational and Communication Skills
SPIKES	Setting Up, Perception, Invitation, Knowledge, Emotions, Strategy/Summary

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FIGURE 1.

Communication skill-building strategies and physician outcomes mapped to the experiential learning cycle. White boxes contain teaching strategies. Trapezoid boxes show physician outcomes. Vertical axis depicts the continuum of perception from abstract conceptualization to concrete experience.[57] The horizontal axis depicts the continuum of transformation from reflection to active experimentation.[57] Curved double-headed arrows indicate that the cycle is bidirectional. Repeated cycles are required for continued growth.

TABLE I**Key Considerations for Approaches to Communication Skill-Building**

Approach	Common Features	Potential Advantages	Potential Disadvantages
Formal communication program[23,24, 61,71]	<ul style="list-style-type: none"> - Small group learning - Multi-modal: framework, didactic material, skills practice (e.g. role playing), formative feedback, reflection 	<ul style="list-style-type: none"> - Robust methodology with strongest evidence base - Relative standardization - Mistakes can be made in a safe, simulated environment with opportunity for tailored feedback - Engages multiple learning styles 	<ul style="list-style-type: none"> - Tuition/cost - Requires dedicated protected time for fellows - Requires program faculty development - May require simulated patient development - Hard to scale - Requires “transfer” of learned skills to real clinical environment - If single course, skills may wane
Coaching[56, 72, 75]	<ul style="list-style-type: none"> - Longitudinal relationship between faculty “coach” and learner 	<ul style="list-style-type: none"> - Teaching and feedback maximally tailored to individual learner - Real time, real world practice likely to influence real on-the-job performance - Longitudinal 	<ul style="list-style-type: none"> - Mistakes may be real time, real world—affecting real children and families - Scalability depends on coach availability - Success depends on ongoing cycles of observation, feedback, and revision between faculty coach and learner, which requires sustained buy-in
Conversation guides[12,76]	<ul style="list-style-type: none"> - Provide structured approach to a given conversation/topic (e.g. advance care planning) - Provide recommended language 	<ul style="list-style-type: none"> - Concrete, practical tools for learners - Potentially scalable 	<ul style="list-style-type: none"> - May not replace general communication skill-building - Formulaic approach may be less flexible for learners at multiple levels - No inherent feedback mechanism