Communication Course for Pediatric Providers Improves Self-efficacy

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Background: Communication is essential to building a trusting, clinician-patient relationship. Multiple studies have demonstrated the effects of experiential communication training on patient experience and provider well-being and resiliency. To date, no studies have described an organization-wide communication training program for pediatric clinicians. The objective of this study was to evaluate the impact of a pediatric-focused communication course on provider satisfaction, self-efficacy, and burnout.
Methods: Texas Children's Hospital, in collaboration with the Academy on Communication in Healthcare, designed and implemented a pediatric focused communication course entitled Breakthrough Communication. Pre, immediate-post, and 3-month postcourse completion online surveys were sent to participants 1 day before, 1 day after, and 3 months after course completion. Participant demographic information, self-assessment of communication skills, the Maslach Burnout Inventory Human Services Survey, and postcourse satisfaction data were collected.
Results: Participants reported high course satisfaction and improved self-efficacy in all measured skill sets both following and 3 months after course completion. Trends indicating a reduction in provider burnout improved in 2 of the 3 Maslach Burnout Inventory domains; however, statistical significance was not achieved.
Conclusions: A pediatric-focused communication course was well received by multi-specialty clinicians within a large, academic health care organization. This course enhanced clinician self-efficacy with newly learned pediatric encounter specific communication skills. *(Plast Reconstr Surg Glob Open 2018;6:e1964; doi: 10.1097/ GOX.0000000000001964; Published online 16 October 2018.)*

INTRODUCTION

Patient-centered care is foundational to delivering high-quality health care. In 2001, the Institute of Medicine highlighted communication as an important element of health care quality and patient safety.[1] The transition from physician to patient-focused encounters requires incorporation of shared decision-making, understanding, and appreciation of patient social and mental well-being.[2,3] An important and necessary tool for health care providers in the delivery of patient-centered care is relationship-centered communication.[4–6] Strong and effective communication has been shown to improve health care outcomes, including patient safety, treatment adherence rates, patient satisfaction, and enhanced teamwork.[7–12]

Communication is the foundation of the therapeutic relationship. In pediatrics, the classic encounter is unique; a triadic relationship exists between the health care provider, patient, and caregiver. Communicating with the pediatric patient and his or her family presents unique challenges and requires special communication skills. Important differences between pediatric and adult medical care, varying stages of patient development, and diverse family dynamics require recognition and adjustment of communication style to meet the needs of the patient and his or her family. In its policy statement "The New Morbidity

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Revisited: A Renewed Commitment to the Psychosocial Aspects of Pediatric Care," the Academy of Pediatrics highlights the "need to better learn how to elicit information, including using a narrative interview approach, allowing the child, adolescent, and parents to tell their stories."[13]

Multiple studies have shown that communication skills can be taught and improved with effective training, deliberate practice, and specific feedback.[14–16] To improve clinical outcomes and patient satisfaction, numerous organizations have created and/or implemented communication skills training programs for clinicians.[17–20] To date, an organization-wide, pediatric-focused communication course for faculty and advanced practice providers has not been described. The objective of our study was to evaluate the impact of a pediatric-focused, relationship-centered communication course on provider satisfaction, self-efficacy and comfort with learned communication skills, and burnout.

METHODS

Setting

This study was conducted at a large, quaternary care children's hospital. The study site was a large, not-for-profit, multi-disciplinary pediatric, and women's health organization in Houston, Texas. Affiliated with Baylor College of Medicine, Texas Children's employs approximately 1,100 physicians and 500 advanced practice providers.

Participants

All staff providers within the Texas Children's organization, including attending physicians and advanced practice providers from Texas Children's Hospital, Pavilion for Women, Texas Children's Pediatrics, and The Centers for Women and Children, were invited to participate in a 5.5-hour communication course between October 1, 2016, and May 30, 2017. Those who completed the pre-, post-, and/or 3-month postcourse surveys were eligible for study participation. The Baylor College of Medicine Institutional Review Board approved this study with a waiver of written consent.

Intervention

In 2015, Texas Children's and the Academy on Communication in Healthcare collaborated on and developed a 5.5-hour pediatric-focused, communication skills course, entitled *Breakthrough Communication*. Based on the Academy on Communication in Healthcare model that applies validated communication skills to 3 segments of the clinical encounter (beginning the encounter, relationship-centered interviewing, and ending the interview), each skill set was individualized and developed to meet the unique communication needs and challenges faced during a pediatric encounter (**see figure, Supplemental Digital Content 1**, which displays the breakthrough communication handout, *http://links.lww.com/PRSGO/A880*). Outlines key skills emphasized by the course. By prioritizing the active inclusion of the pediatric patient within clinical discussions, highlighting caregiver needs and expectations, and recognizing complex family dynamics as triggers for shifts

in communication technique, participants were taught pediatric-relevant communication skills designed to enhance and improve the "triadic" (patient/caregiver/physician) transference of information. Further course details can be found in **Supplemental Digital Content 1**.

Each course was led by 2 practicing clinicians trained in relationship-centered communication, skills-based facilitation, and effective feedback and delivery. Thirteen instructors were trained; 1 critical care nurse practitioner, 1 surgical physician assistant, and 11 physicians. Physician trainer specialties were diverse, including 2 general pediatricians, 4 pediatric subspecialists, 1 pediatric anesthesiologist, a pediatric surgeon, and a pediatric plastic surgeon. All facilitators completed a 64-hour, Academy of Communication in Healthcare, Train-the-Trainer program. With no more than 12 participants, facilitators guided learners through a series of short didactic presentations followed by small group role-play sessions. The course concluded with an integrative case where participants offered clinical encounters from their clinical setting that were difficult, identified themes in communication challenges, and then selected one of these encounters to role-play recently learned and practiced communication skills.

Measures

Participants were asked to complete electronic, pre- and postcourse surveys on the day of training and 3 months after course completion. The surveys included demographic information, self-assessment of communication skills, the Maslach Burnout Inventory (MBI) Human Services Survey, and postcourse satisfaction.[21] Licensing for use was obtained for the MBI survey before the initiation of the study.

Statistical Analysis

Demographic variables and raw survey responses were summarized as counts with percentages. Differences in responses/scores from one survey period to another (pre-, post-, or 3-month post) were assessed using the Wilcoxon signed rank test. Responses to burnout questions were summed according to the "Emotional Exhaustion," "Depersonalization," "Personal Achievement" domains of the MBI. The summed scores from the MBI categories for the precourse and 3-month posttimeframes were described by the median and interquartile range (IQR; 25th and 75th percentiles). Differences between the summed scores were also compared using the Wilcoxon signed rank test. Statistical significance was assessed using a step-down multiple testing corrections with a family-wise 0.05 level. Analyses were carried out in SAS 9.4 (SAS Institute Inc., Cary, N.C.).

RESULTS

Between October 1, 2016, and May 30, 2017, 416 providers, 6 of which were plastic surgery faculty, participated in the *Breakthrough Communication* course. Of these participants, 347 completed the precourse survey (83.4% response rate), 311 completed the postcourse survey (74.8% response rate), and 131 completed the 3-month post-

course survey (31.5% response rate). Table 1. shows the demographics of surveyed participants, with most being physicians (74.4%), under the age of 44 years (66.6%), and female (77%). Approximately 50% of participants solely practiced in an outpatient setting.

Provider satisfaction data collected after course completion are displayed in Table 2. After taking the course, 85.5% of participants "strongly agreed" or "agreed" that it had been a valuable use of their time. Ninety-three percent of participants "strongly agreed" or "agreed" that the communication skills learned in the course would be relevant to their practice. Four out of 6 plastic surgery faculty completed the postcourse survey, all of whom indicated they "strongly agreed" the course had been a valuable use of their time and was relevant to their practice.

Statistically significant improvements in comfort, defined as freedom from tension or anxiety, were seen in all 3 phases of communication. These findings are summarized in Tables 3, 4. The plastic surgery provider subgroup experienced similar improvements in comfort.

Provider comfort at 3 months postcourse completion remained superior to precourse comfort. Five subcategories showed statistically significant continued improvement with a P value < 0.001. These include acknowledging communication barriers, eliciting concerns, negotiating visit agenda, exploring patient perspective, and assessing understanding (Tables 3, 4).

MBI data were collected before and 3 months after the course. At baseline, the majority of providers self-reported a low level of burnout (Tables 5, 6). At 3-month postcourse,

MBI scores for 2 of the 3 domains of burnout (emotional exhaustion and depersonalization) improved but did not reach statistical significance. Comparative analysis for individual questions did reveal a statistically significant change for the statement "I can easily understand how my patient feels about things" with a P value < 0.001 (Table 5, 6).

DISCUSSION

In this study, we evaluated the impact of a 5.5-hour, pediatric-focused communication course on provider satisfaction, self-efficacy of learned communication skills, and provider burnout within a large, multi-disciplinary, pediatric health care organization.

In alignment with other communication studies describing high provider satisfaction and likelihood to recommend,[20,22–24] participants of Texas Children's Breakthrough Communication reported a high level of satisfaction with the course. The majority of participants felt that the course was a valuable use of their time and the communication skills learned in the course would be relevant to their practice. Anecdotal evidence of provider satisfaction was, also, received via free-texted verbatims and e-mails, and primarily consisted of frequent and successful utilization of learned communication skills within their own specialties and enhanced patient experiences. Feedback from 1 seasoned physician (in practice for over 20 years) stated that after completing the course, he received multiple letters from patients' family members thanking him for his care of their children. Caregivers were specifically impressed with how his explanations enhanced their understanding of their child's disease and treatment. By emphasizing the benefits of relationship-centered communication, demonstrating and facilitating evidence-based communication skills practice, and tying its applicability within multi-specialty, clinical environments, participants felt the course was of educational value and a prioritized and necessary component of their continuing medical education. Provider satisfaction nurtured continued growth and development of the course via word-of-mouth marketing and collegial recommendations and referrals.

The high postcourse satisfaction may also be a reflection of our health care providers' desire for more standardized communication training. Despite the essential need for empathic and interpersonal communication in health care, there is still little programmatic or curricular emphasis on building interpersonal skills in medical school or training.[25] Although the Accreditation Council for Graduate Medical Education and American Board of Medical Specialties jointly endorse interpersonal and communication skills as one of the 6 general core competencies for physicians, most health care providers informally learned their medical communication skills via nonstandardized observations and modeling.[26,27] Most providers demonstrate improvement in their communication performance during medical school and clinical training,[28–30] yet generally do not attain professional expertise in communication.[31–36] Building and sustaining strong health care provider-patient relationships, while also navigating difficult encounters and conversations, requires a set of

Table 1. Demographic Variables (n = 347)

Variable	Category	n (%)
Age range	< 25	1 (0.3)
	25–34	95 (27.4)
	35–44	135 (38.9)
	45–54	65 (18.7)
	55–64	39 (11.2)
	> 65	12 (3.5)
Sex	Female	267 (77.0)
	Male	80 (23.0)
Race	White	191 (55.0)
	Asian	83 (23.9)
	Black	33 (9.5)
	Hispanic/Latino	21 (6.1)
	Other*	19 (5.5)
Practice setting	Outpatient	173 (49.9)
	Inpatient and outpatient	83 (23.9)
	Inpatient—acute care	42 (12.1)
	Inpatient—PICU/PCU	6 (1.7)
	EC	28 (8.1)
	Other	15 (4.3)
Provider type	MD	244 (70.3)
	APP	80 (23.1)
	DO	14 (4.0)
	Other	9 (2.6)
No. years in practice	0–5	122 (35.2)
	6–10	72 (20.8)
	11–15	54 (15.6)
	16–20	38 (11.0)
	> 21	61 (17.6)

Note: 3 individuals did not provide responses; percentages rounded to nearest tenth.
*Other includes American Indian/Alaska Native, Native Hawaiian/Pacific Islander, ≥ 2 races, other. PICU, Pediatric Intensive Care Unit; PCU, Progressive Care Unit; EC, Emergency Center; MD, Medical Doctor; APP, Advanced Practice Provider; and DO, Doctor of Osteopathy.

Table 2. Post Course Provider Satisfaction

Post Survey Questions	Category	n (%)
What is your level of satisfaction from this workshop?		
The TCH Breakthrough Communication workshop was	Strongly disagree	4 (1.3)
a valuable use of my time.	Disagree	9 (2.9)
	Neither agree nor disagree	32 (10.3)
	Agree	140 (45.0)
	Strongly agree	126 (40.5)
The communication skills learned in this workshop will	Strongly disagree	2 (0.6)
be relevant to my practice.	Disagree	4 (1.3)
	Neither agree nor disagree	16 (5.1)
	Agree	132 (42.4)
	Strongly agree	157 (50.5)
Do you plan to implement any of the material that was	Yes	306 (98.4)
presented today into your clinical activities?	No	5 (1.6)
Would you recommend this session to a colleague?	Yes	283 (91.0)
	No	28 (9.0)

Responses for Post Survey Satisfaction Questions (n = 311).
Note: 15 individuals did not provide responses; percentages rounded to nearest tenth.

Table 3. Perceived Comfort Pre Versus Immediately Postcourse Completion

Pre- and Postcourse Survey Questions	No. Responses	Direction*	P
How comfortable are you with beginning the encounter?			
Greeting and establishing rapport with the patient and family	313		< 0.001
Attending to the patient's comfort	313		< 0.001
Acknowledging communication barriers (eg, EMR; pagers/phones)	313	+	< 0.001
Eliciting all the patient/caregiver concerns	313	+	< 0.001
Negotiating the agenda	313	+	< 0.001
How comfortable are you with developing a relationship with your patients/caregivers?			
Engaging in reflective listening	313	+	< 0.001
Exploring the patient/caregiver's perspectives	313	+	< 0.001
Responding with empathy	313		< 0.001
How comfortable are you with ending the encounter?			
Sharing diagnosis and information	313		< 0.001
Assessing understanding	312	+	< 0.001
Summarizing and clarifying the treatment plan	313	+	< 0.001
Providing closure	311		< 0.001

P values based on Signed-Rank Test for perceived differences in Scores (on Post Survey).
*Median > 0. EMR, Electronic Medical Record.

Table 4. Perceived Comfort Pre and 3 Months Postcourse Completion

Pre- and Postcourse Survey Questions	No. Responses	Direction*	P
How comfortable are you with beginning the encounter?			
Greeting and establishing rapport with the patient and family	99		0.0173
Attending to the patient's comfort	99		0.0001
Acknowledging communication barriers (eg, EMR; pagers/phones)	99	+	< 0.0001
Eliciting all the patient/caregiver concerns	99	+	< 0.0001
Negotiating the agenda	99	+	< 0.0001
How comfortable are you with developing a relationship with your patients/caregivers?			
Engaging in reflective listening	99		0.0004
Exploring the patient/caregiver's perspectives	99	+	< 0.0001
Responding with empathy	99		0.0004
How comfortable are you with ending the encounter?			
Sharing diagnosis and information	99		0.0006
Assessing understanding	99	+	< 0.0001
Summarizing and clarifying the treatment plan	99		< 0.0001
Providing closure	99		< 0.0001

P values based on Signed-Rank Test for perceived difference in comfort scores from pre and 3 month-postsurvey.
*Median > 0. EMR, Electronic Medical Record.

modifiable behaviors that are not innate, but learned and reinforced through deliberate practice.[37–40] Perceived inadequacies and gaps in communication education and training may also be contributing to participants' satisfaction of a more formalized, communication course.

Upon completion of the course, improved self-efficacy and comfort in utilizing the relationship-centered communication skills (7 out of 12 domains) were achieved and sustained for at least 3 months. Our findings corroborate prior research showing gains in self-assessment as a result of educational interventions for health care professionals.[20,41,42] Although the direct impact of our course on provider behaviors and implementation within practice was not analyzed, studies correlating self-efficacy as

Table 5. Total Summarized as Continuous Variables for Individuals with Pre and 3 Months

Label	Precourse Survey Median (IQR)	3 mo Postcourse Survey Median (IQR)	P*
Section A: emotional exhaustion	13 (9–19)	11 (7–19)	0.239
Section B: depersonalization	8 (4–12)	7 (4–14)	0.723
Section C: personal achievement	42 (37–45)	42 (39–46)	0.175

Post scores available.

*Based on Wilcoxon Signed Rank Test.

an evaluation measure of competence have been previously documented.[41,43–45] In delineating the relationship between self-efficacy and performance, Bandura's social-cognitive theory contends that behavior changes occur as a result of enhanced self-confidence in one's ability to successfully enact tasks or skills.[46] Because it plays a predictive and mediating role in relation to motivation, learning, and performance, many postulate that self-efficacy is necessary in the adoption and retention of new behaviors and skills.[44] Whereas individuals avoid tasks perceived as exceeding their capabilities, they undertake and successfully perform tasks they are capable of handling.[47]

Educational programs, which incorporate role play or simulated skills practice, have proven to be particularly successful when evaluating for self-efficacy.[48,49] Although there are varying degrees of discrepancy between self-assessment and observers' ratings of corresponding skills,[50] previous studies have shown positive correlations between self-efficacy and performance with communication skills training.[51,52] Brown et al.[41] demonstrated a statistical improvement in trainee's self-assessment of competence in overall and specific communication skills after conduct-

ing a randomized trial of a simulation-based multi-session workshop to improve palliative care communication skills. Longer term increases on self-efficacy, along with a significantly positive correlation between performance after training and self-efficacy 3 years later, was demonstrated after providers participated in a 20-hour communication skills training based on the Four Habits approach.[53] From their study, Gulbrandsen et al.[45] concluded that communication skills training may not only cause lasting improvements in physicians' self-confidence in their communication skills ability, but that the increased confidence is accurately associated with improvements in performance.

Many health care providers derive energy, strength, and professional satisfaction from the physician-patient relationship. Because the clinical encounter is a dynamic process, underlying patient, caregiver, and health care provider characteristics and behaviors can have a direct effect on verbal and nonverbal communication styles and can promote or alleviate interpersonal difficulty. Clinicians who repeatedly experience difficult encounters with patients and/or families tend to feel less job satisfaction and more professional burnout.[54] The impact of professional burnout is not inconsequential, with up to 60% of practicing physicians reporting symptoms of emotional exhaustion, depersonalization, and a low sense of personal accomplishment.[55] In 2012, Shanafelt et al.[56,57] conducted a national study of burnout in a large sample of U.S. physicians and delineated burnout rates by specialty, with emergency medicine, general internal medicine, neurology, and family medicine exhibiting the highest rates of burnout, and general pediatrics, dermatology, pathology, and preventative medicine with the lowest rates.

Our study's MBI scores for emotional exhaustion and depersonalization positively improved for 25% of our participants. As the majority of our course participants were primary pediatricians, primary care advanced practice pro-

Table 6. P Values Based on Signed-rank Test for Differences in Scores between Pre and 3 mo Post Scores

Maslach Burnout Inventory Statements	No. Responses	Direction	P
For each statement, mark the box that most accurately reflects your response			
I feel emotionally drained from my work	85		0.672
I feel used up at the end of the workday.	85		0.028
I feel fatigued when I get up in the morning and have to face another day on the job.	85		0.533
I can easily understand how my recipients feel about things.	84	+	< 0.001*
I feel I treat some recipients as if they were impersonal objects.	85		0.254
Working with people all day is really a strain for me.	85		0.843
I deal very effectively with the problems of my recipients	85		0.983
I feel burned out from my work.	85		0.870
I feel I'm positively influencing other people's lives through my work.	85		0.610
I've become more callous toward people since I took this job.	85		0.978
I worry that this job is hardening me emotionally.	85		0.826
I feel very energetic.	85		0.853
I feel frustrated by my job.	85		0.066
I feel I'm working too hard on my job.	84		0.269
I don't really care what happens to some recipients.	85		0.446
Working with people directly puts too much stress on me.	85		0.793
I can easily create a relaxed atmosphere with my recipients.	85		0.214
I feel exhilarated after working closely with my recipients.	85		0.537
I have accomplished many worthwhile things in this job.	84		0.153
I feel like I'm at the end of my rope.	85		0.465
In my work, I deal with emotional problems very calmly.	85		0.515
I feel patients blame me for some of their problems.	85		0.897

* indicates statistical significance

viders and pediatric subspecialists, baseline MBI median scores of 13 (emotional exhaustion), 8 (depersonalization), and 42 (personal accomplishment) were unsurprisingly low. In a study published by Boissy et al.,[20] they reported moderate, baseline burnout scores for each MBI domain, and for 16% of National Provider Identifier-matched participants, improvement in all measures was noted at 3 months postcourse. Perhaps, our communication course's impact on burnout did not produce similarly significant change, given the low baseline burnout levels of our group.[54] Although statistical significance was not achieved, even small decreases in burnout may translate to more meaningful change, re: wellness, resiliency, and turnover.

Difficult to correlate with long-term outcomes, the consequences of burnout among practicing clinicians include both professional (poorer quality of care, increased medical errors and malpractice claims, and decreased clinician workforce) and personal (decreased ability to express empathy, problematic alcohol and drug use, stress-related health problems, broken relationships, and suicidal ideation) consequences.[58,59] Identifying, improving upon, and practicing empathic and other effective communication skills through frequent and deliberate practice may not only strengthen the health care provider-patient relationship, improve medical outcomes, increase patient satisfaction, and prevent future difficult encounters, but also enhance job satisfaction, decrease stress and burnout, and reduce medical malpractice and litigation.[60]

LIMITATIONS

Our study has some important limitations. Given the design of the study, we could not exclude other causes for the improvement in scores among those who participated in the course. By mandating enrollment for a select number of specialties (pediatric emergency medicine, pediatric hospital medicine, and primary care pediatrics) and offering CME credits to all course participants, we were able to control for volunteer and other unmeasurable biases that often weaken nonexperimental studies.

Aside from the MBI, we used a nonvalidated instrument for measurement of course satisfaction and self-efficacy of communication skills. Non-MBI survey questions were based on previously established course assessment surveys and piloted before study initiation. Additionally, the decline in survey completion for both post- and 3-month postintervention may have caused results not to be representative of all participants.

Performance utilization and improvement and patient satisfaction scores were not collected or analyzed for our study. Although positive correlations between self-efficacy and performance have been discussed, further research is needed to determine whether providers finding the course valuable and relevant is associated with behavior changes in application of the skill sets and patient satisfaction.

Finally, our communication course was offered to only one, largely employed, health care organization. However, we administered the training program to a diverse array of clinicians, including primary care pediatricians, pediatric subspecialists, pediatric surgical subspecialists, obstetrician-gynecologists, physician assistants, and nurse practitioners. Even though the single-site setting of our study might seem to limit generalizability, other large organizations, such as Kaiser Permanente, Cleveland Clinic, and Mayo Clinic, have demonstrated improved self-efficacy, empathy, burnout, and/or patient satisfaction scores.[17,18,20]

CONCLUSIONS

A pediatric-focused communication course was well-received by multi-specialty, practicing clinicians within a large, academic health care organization. This 5.5-hour relationship-centered communication course not only enhanced clinician self-efficacy and comfort with newly learned skills, but also improved burnout (domains of emotional exhaustion and depersonalization) and well-being. Further research is necessary to investigate the effects on communication skill utilization and performance, patients' experience of care, and clinical outcomes. Additionally, a future study measuring the impact of communication training on patient care, satisfaction, and follow-up would be of value.

PRACTICE IMPLICATIONS

Texas Children's Hospital Breakthrough Communication can be successfully implemented in a large, pediatric, multi-specialty organization. Course satisfaction, self-efficacy and comfort with relationship-centered communication skills, and provider burnout may improve after participation in a pediatric-focused, experiential communication course. Whether this course positively impacts quality and clinical outcomes, such as patient safety, enhanced teamwork, patient satisfaction, and adherence with treatment requires further investigation.

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