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Cover Page Footnote

The authors would like to thank the American Academy on Communication in Healthcare for providing us with the foundation to create our communication workshop. We would particularly like to thank Calvin Chou, MD, PhD and R. Ellen Pearlman, MD who have provided their expertise and guidance throughout this journey.

Effects of a hospital-wide physician communication skills training workshop on self-efficacy, attitudes and behavior

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Abstract

Hospital systems interested in improving patient experience and physician engagement may look to physician communication skills training (CST) as a means of improving both. This study examines a 7.5-hour, multi-specialty, hospital-wide physician CST workshop in a large academic hospital system and its effects on participants' self-efficacy, attitudes, and behaviors related to communicating with patients. Data was gathered from October 2014 through June 2016 through a web-based questionnaire sent to participants 6-weeks post-workshop which focused on skills taught in the course, attitudes toward communication training, and provider behaviors when communicating with patients. Along with demographic questions, a ten question retrospective pre-post format was used with a 5-point scale for the domains measured. Retrospective pre-post methodology may provide a more accurate assessment of a learners' self-assessment of skills acquisition. A paired t-test was used to examine changes in participants' self-efficacy, attitudes, and behaviors toward communicating with patients prior to and 6-weeks post-workshop. Linear regression was used to determine if there were any covariates that explained these changes. A total of 161 responses from 490 participants (21 medical specialties) were collected for a response rate of 32.8%. In 9 out of 10 domains measured, a significant change in self-efficacy, attitudes, and behaviors related to communicating with patients occurred ($p < .05$). There was no significant change in perceived time management/efficiency during visits. Our conclusion is that a 7.5 hour hospital-wide, multi-specialty physician CST can be effective in improving participants' self-efficacy, attitudes, and behaviors toward communicating with patients.

Keywords

Communication, CST, healthcare, education, training, patient-centered care, physician engagement, self-efficacy, evaluation

Note

The authors would like to thank the Academy of Communication in Healthcare (formerly American Academy on Communication in Healthcare) for providing us with the foundation to create our communication workshop. We would particularly like to thank Calvin Chou, MD, PhD and R. Ellen Pearlman, MD who have provided their expertise and guidance throughout this journey.

Introduction

Communication skills training (CST) has been well documented to improve patient satisfaction, outcomes and safety.¹⁻⁶ It also has been shown to decrease physician burnout, improve medical interviewing skills, lower malpractice claims and increase provider satisfaction with visits.⁷⁻¹⁰ However, even though the potential of CST is recognized, many practicing clinicians have not received CST. While some clinicians may have had CST during medical school, postgraduate training in effective communication skills is not widespread either in residency

training or in continuing medical education. In addition to considering cost and time, hospital systems looking to implement system-wide CST must choose effective programs using evidence based adult learning methods that tie directly to physicians' daily practice.¹¹

To date, research on the effects of CST on practicing physicians has focused mainly on specific groups such as oncologists and primary care physicians. Less is known about the effects of hospital-wide CST aimed at practicing physicians across multiple specialties and practice locations.¹² In addition, very little has been written about

systematic, organizational efforts to impact clinicians' communication skills.

Two studies have looked at the effects of CST on hospital wide attending physicians, rather than specific sub-groups. The study by Bård Fosli Jensen et al., "Effectiveness of a short course in clinical communication skills for hospital doctors: results of a crossover randomized controlled trial," found that a 20-hour training course in Norway was effective in improving communication skills across a variety of medical specialties, and showed an additive effect on improving communication skills with repeat training.¹³ Another study by Adrienne Boissy, et.al., "Communication Skills Training for Physicians Improves Patient Satisfaction", done at the Cleveland Clinic in the United States, showed that an 8-hour course could improve patient satisfaction and also produce positive effects on physician empathy, self-efficacy and decreased physician burnout.⁶

Self-efficacy in particular, an idea introduced by Albert Bandura, reflecting a learner's "conviction that one can successfully execute the behavior required to produce the outcomes"¹⁴ has not been studied widely in shorter, hospital-wide CST programs. Self-efficacy in physician CST has been shown to be a reliable measure of "personally experienced improvements of skill"¹⁵ and is an important concept to consider not only for its beneficial effect on physician engagement while decreasing burnout, but also due to its importance in ensuring successful use of skills post-training.¹⁴⁻¹⁷

Most studies on self-efficacy have been conducted on communication skills programs ranging from 18 hours to 6 months, or have focused on specific groups or situations such as social workers, orthopedic surgeons, pediatricians, and end of life-discussions.^{15, 18-23} The current study examines the impact of a widely implemented 7.5 hour physician CST workshop within a single hospital system and its effect on participants' self-efficacy, attitudes, and behaviors related to communicating with patients.

Methods

Overview

In October 2014, we initiated a "Relationship Centered Patient-Provider Communication Workshop" to provide CST to our practicing physicians in a XXXX- SUBJECT HOSPITAL-XXXX system comprised of XXXX-MULTIPLE-XXXX campuses in XXXX-A MAJOR US CITY-XXXX, with over 6,500 affiliated physicians and over 2 million patient visits yearly.

Recognizing the importance of the patient-provider relationship in the delivery of medical care, our hospital system sought assistance in curriculum development and training from the American Academy on Communication

in Health Care (AACH). Twelve physicians from a variety of medical and surgical specialties were selected by hospital leadership to undergo a train-the-trainer course based on an experiential adult learning curriculum developed by the AACH.

Through our study period, each 7.5 hour workshop was taught by two physician facilitators, with no more than 12 participants per class, and was offered three to five times a month at various locations within our hospital system. It was taught with a combination of didactics followed by small group skills practice with direct feedback from facilitators and participants. Material covered included themes related to rapport setting, eliciting concerns, agenda setting, empathy, shared decision-making, and difficult/challenging communication scenarios. Although participation in the workshop was voluntary at the beginning of implementation, some departments chose to mandate attendance by all or some of their physicians at the start of August 2015.

Design

Participants who attended the communication skills workshop from October 2014 through June 2016 received a web-based questionnaire via an automated email 6-weeks after completing the workshop. In order to maximize existing resources, a web-based platform already used for hospital training programs was used for workshop registration and to send the automated emails. Surveys were voluntary, de-identified and not linked to Continuing Medical Education credit. XXXX- SUBJECT HOSPITAL-XXXX IRB deemed the study exempt from review as it involved research using educational tests and survey procedures with de-identified information.

Information about demographics and experience with CST were collected. A ten question retrospective pre-post survey was used to assess skills taught in the workshop, attitudes toward communication training, and provider behaviors when communicating with patients (See Table 1).

The retrospective pre-post format was used with a 5-point scale from "5-Almost Always/Always" to "1-Never/Rarely" for the domains measured. This methodology was chosen based on previous studies that have used similar scales and questionnaires to evaluate self-efficacy as it relates to the skill being measured.^{6, 15, 17} The retrospective pre-post survey format was chosen instead of a traditional pre-post survey format in order to minimize response shift bias. If present, this bias can cause underestimation of program effectiveness in traditional pre-post surveys because participants may overestimate their knowledge prior to training.²⁴⁻²⁷

Table 1. 6-week post-workshop retrospective pre-post survey questions

Prior to this Workshop: (Pre)	Since Completion of this Workshop: (Post)
Scale: 1-Never/Rarely 2-Occasionally 3-Half the Time 4-Often/Usually 5-Almost Always/Always	
1. I was satisfied with my communication with patients	1. I am satisfied with my communication with patients
2. I was eliciting my patients' concerns effectively	2. I am eliciting my patients' concerns effectively
3. I was empathizing with my patients	3. I am empathizing with my patients
4. I was aware of my body language when speaking to patients	4. I am aware of my body language when speaking to patients
5. I had patients repeat back to me instructions I had given them	5. I have patients repeat back to me instructions I have given them
6. I asked patients about their understanding of their condition	6. I ask patients about their understanding of their condition
7. I was satisfied with my rapport with my patients	7. I am satisfied with my rapport with my patients
8. I was satisfied with how I conducted my patient visits	8. I am satisfied with how I conduct my patient visits
9. I was struggling with time management/efficiency during my visits	9. I am struggling with time management/efficiency during my visits
10. I felt that communication skills training for attending physicians was important	10. I felt that communication skills training for attending physicians was important

Participants

The study included 490 participants from 21 medical and surgical specialties (See Table 2) who completed the workshop between October 2014 and June 2016. Although the majority of participants were attending level physicians, a total of 25 resident physicians and Nurse Practitioners also completed the workshop. Some departments mandated attendance at different points in time after August 2015.

Analysis

Simple frequencies were used to look at demographic factors including years in practice post-residency, percent time spent in direct patient care, primary practice location, specialty, and experience with CST. A paired t-test was used to examine changes in participants' self-efficacy, attitudes, and behaviors toward communicating with patients prior to and 6-weeks post-workshop. For those variables that were significant using the t-test, linear regression was applied to determine if there were any covariates that explained these changes. The analysis was performed using SPSS v21.0.

Results

161 participants responded to the post 6-week survey for a response rate of 32.8% (161/490). Most survey respondents had been in practice for 15 years or less (60%), spent more than half of their time in direct patient

care (76%), and were in a medical or medical sub-specialty field (65%). 50% of participants worked in a primarily outpatient setting and 66% had not had post-residency CST. Analysis did not account for whether a participant was mandated or not (See Table 3).

A significant change in self-efficacy, attitudes, and behaviors related to communicating with patients occurred in 9 out of 10 questions on the retrospective pre-post survey ($p < .05$). (See Graph 1) There was no significant change in perceived time/efficiency during visits. In the multivariate analysis the following two covariates were significantly associated with the changes observed ($p < .05$). First, the providers who spent less time in patient care ($< 50\%$ of time in direct patient care) felt they elicited patient concerns more effectively and felt that communications skills training for providers was more important than prior to the workshop. Second, providers who had previously participated in CST were more likely to feel satisfied with how they conducted their patient visits after the workshop compared with before the workshop. Although this was true for all participants, these populations most strongly helped explain these particular changes. In addition to changes in their own self-efficacy related to communication, participating in the course resulted in a change in their ratings of the importance of communication training demonstrating an increased perception of value of communication training.

Table 2. Participants by Medical Specialty (October 2014-June 2016)

Specialty	Number of Participants	Specialty	Number of Participants
1. Emergency Medicine	92	12. Neurology	8
2. Pediatrics	92	13. Family Medicine	7
3. Internal Medicine	81	14. Plastic Surgery	5
4. Radiology	58	15. Rehabilitation Medicine	5
5. General Surgery	26	16. Pediatric Surgery	3
6. OB/GYN	26	17. Dentistry/OMF	2
7. Anesthesiology	25	18. Otolaryngology	2
8. Orthopedic Surgery	16	19. Dermatology	1
9. Psychiatry	16	20. Ophthalmology	1
10. Cardiothoracic Surgery	14	21. Radiation Oncology	1
11. Neurosurgery	9	TOTAL	490

Table 3. Demographic information for post 6-week survey, n=161

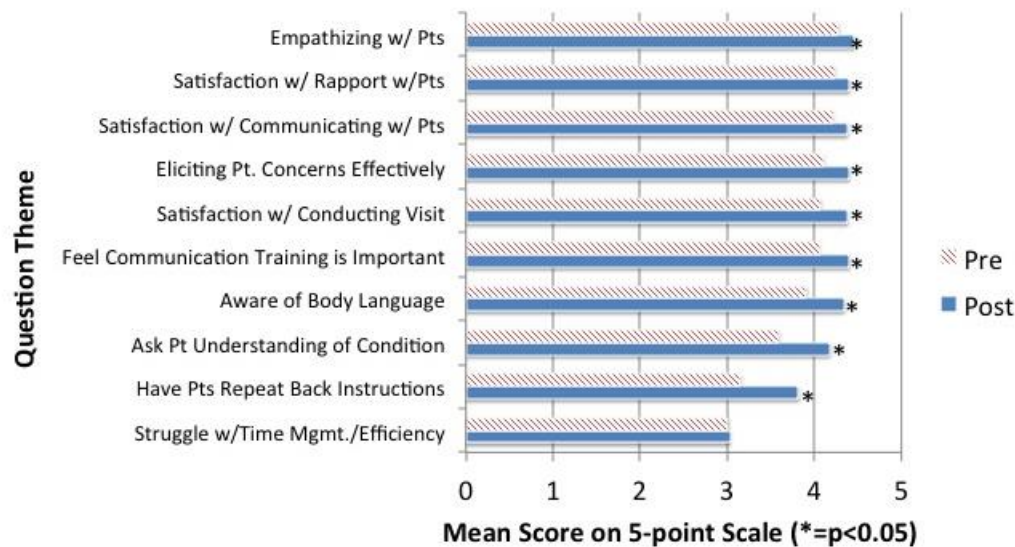
<u>Years in Practice Post-Residency</u>		<u>Specialty</u>	
<5 years	26%	Medical	42%
5-10 years	23%	Surgical	6%
10-15 years	11%	Sub-specialty Medical	23%
15-20 years	14%	Sub-specialty Surgical	14%
>20 years	26%	Some Medical and Surgical	15%
		Medical	42%
<u>Percent Time Spent in Direct Patient Care</u>		<u>Primary Practice Location</u>	
0-25%	11%	Mostly Inpatient	31%
25-50%	13%	Mostly Outpatient	50%
50-75%	24%	Equal Amounts Inpatient/Outpatient	19%
75-100%	52%		
<u>Have you had Communications Skills Training after completing Residency</u>			
Yes	34%		
No	66%		

Discussion

Results from our retrospective pre-post survey support that a significant improvement occurred in participants' self-efficacy, attitudes, and perceived behaviors toward communicating with patients within a 6-week period following the "Relationship Centered Patient-Provider Communication Workshop." Our study adds further support to the findings from the few studies that exist on multi-specialty hospital-wide CST initiatives for attending physicians. To our knowledge, this study is only the

second one to address self-efficacy in a multi-specialty hospital-wide initiative among attending physicians in the United States. Other than the Boissy study⁶, most other studies have examined self-efficacy in the context of a three-day to 6-month course, and often have been focused on one specialty. In addition, our use of the retrospective pre-post format may provide a more accurate representation of participants' self-assessment through the reduction of response shift bias.^{15, 18-23} Our findings show that improvement in self-efficacy can occur through a one-day course and among a mix of physician specialties. In

Graph 1. Retrospective Pre/Post 6-week Survey Results (n = 161)



addition, our study included psychiatry which was excluded from Jensen's study.¹³ Since higher self-efficacy is related to more successful performance of a learned skill¹⁴, this improvement in self-efficacy should translate into a more successful application of the communication skills learned in our CST workshop. Better communication skills by physicians should also lead to the associated improvements to both physician well-being and also to patient satisfaction, outcomes, and safety noted in many studies.¹⁻¹⁰

Our multivariate analysis found two other effects that might explain the changes observed. The first effect suggests that CST may have a larger impact on providers who do not have the chance to interact with patients frequently. Although all clinicians benefited, further research is needed to tease out the reason behind the greater benefit to clinicians who were engaged in <50% clinical time. This subgroup may have included physicians in leadership positions who are engaged in more administrative work and highlights the importance of participation by this group in CST to drive institutional efforts in spreading these initiatives.

The second finding was that previous CST made physicians more likely to be satisfied with how they conducted their patient visits. Jensen refers to this additive effect as a "booster" effect,¹³ and Rosenbaum and Silverman highlight evidence that ties together reinforcement of skills and training effectiveness.^{11, 13} As CST in medical schools and residencies becomes more widespread, one can anticipate that supporting CST later in one's medical career among attending level faculty would garner these additive effects. Although further

research is needed, this finding related to physician satisfaction with visits may be especially important for physician engagement efforts and preventing burnout.

Strengths of our study include its hospital-wide sphere of implementation, inclusion of a wide variety and distribution of specialties, and its focus on a short course that can be completed in one day, as taking time off from clinical care was a major challenge for our faculty. Our program's effectiveness in increasing self-efficacy around communication skills also helps support continued financial investment by the institution in its goal to improve communication skills among its attending physicians. As attending physicians model communication behaviors to our medical students and residents, a hospital-wide initiative focused on attending physicians also furthers a wider institutional effort to spread a more patient-centered respectful culture across the institution.

Limitations

Limitations of our study include the low response rate of participants (32.8%). Thus our results may not be representative of all of the participants who completed the workshop and may be vulnerable to selection bias. In addition we were not able to separate out the 25 resident physicians and nurse practitioners who registered for the course since the survey data was not linked to individual participants and thus their responses may have been in our analysis. However this small number would not have had a great effect on our data. Lastly, we were not able to analyze the data by mandated vs. voluntary participants as the study began when the workshop was completely voluntary and there was no specific moment for a

hospital-wide mandate. Instead, the mandated departments decided individually at random times which made this difficult to track even if we had made a modification to our study protocol. Data from other surveys evaluating the course showed that the individual mandates did not appreciably change the percentage of people who would recommend the course. Because of this, the impact of the mandate on acceptability and perception of usefulness to the participant was unlikely to have been affected to any substantial degree.

As with the Boissy study,⁶ participants' perception of struggling with time management and efficiency of visits stayed essentially the same before and after completion of the workshop. This may be a result of conducting our survey too soon after completing the workshop in a time period when mastery of skills has yet to be attained. Rosenbaum and Silverman point out that "studies also demonstrate that clinicians' skills can show an initial decrease immediately after training and then improve after passing of time. Authors of these findings have argued that training can initially decrease satisfaction and confidence until recipients have had some opportunity to transfer learning into actual practice."¹¹ Further research into more long-term (>1 year post-workshop) outcomes on skills retention and examination of differences among mandated participants and voluntary participants are also warranted along with effects on patient outcomes and experience.

Conclusions

A one-day hospital-wide CST workshop for attending physicians across medical and surgical specialties is effective in improving participants' perceived self-efficacy as it relates to communication skills taught in the AACH CST curriculum. Our study also supports the additive benefits of ongoing communication training and increased satisfaction for clinicians in their patient visits. Short, one-day, hospital-wide, multispecialty CST courses for attending physicians, even when mandated, can be an effective option to increase self-efficacy related to communicating with patients. This is particularly important for physician engagement efforts and when time and hospital resources preclude the feasibility of longer multi-day courses or specialty specific courses.

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