Teaching Advocacy Communication to Pediatric Residents:

The Efficacy of Applied Improvisational Theater (AIT) as an Instructional Tool

Krista Hoffmann-Longtin (corresponding author)
Department of Communication Studies
Indiana University Purdue University Indianapolis
klongtin@iu.edu

Jason M. Organ
Indiana University School of Medicine

Jill V. Helphinstine
Indiana University School of Medicine

Deanna R. Reinoso
Indiana University School of Medicine

Zachary S. Morgan
California Institute of the Arts

Elizabeth Weinstein
Indiana University School of Medicine

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Abstract

In today's communication landscape, the public often turns to the internet and social media instead of their physician for health information. To remain relevant and respected amidst the wealth of health information available online, physicians need to offer something the internet cannot fully emulate: empathetic imagination and an ability to instantaneously tailor messages to reach and teach worried and often confused audiences effectively. We developed an instructional communication module for pediatric residents that used applied improvisational theater to help residents develop complex and dynamic communication skills. The module included opportunities to develop empathy, practice audience analysis, distill messages to key points, and apply these skills in media and community contexts. Attendees completed surveys regarding their perceptions of curricular structure, efficacy, and utility. Preliminary results indicate gains in communication confidence and skills. This type of instructional communication and training module encourages healthcare practitioners to position themselves as trusted experts and partners in helping clients make meaning of health information, thus empowering a new generation of pediatricians to bridge communication gaps created by new technologies and increased access to multiple information sources.

Keywords: Applied Improvisational Theater, Communication Education, Instructional Communication, Health Communication

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Physicians today must do more than heal; they must also teach patients to navigate an ever-growing sea of online medical information with a discerning and analytical eye (Funk, 2017; Konnikova, 2014). The challenge for physicians is this: when the public goes to the internet for information and advice regarding health and wellness, they often leave confused or misinformed; not knowing what or who to trust. This cultural phenomenon—googling symptoms, diagnoses, and even remedies for anything from the common cold to more serious diseases—has created a crisis in the health professions community, perhaps most notably seen with the anti-vaccination movement (Funk, 2017), which has compelled many to disregard scientific evidence. This movement and others have led many in the health community to think about communication with the public differently than in the past. In fact, a recent editorial in the *New England Journal of Medicine* posed the question, "How do we convince a skeptical public to believe in science?" (Rosenbaum, 2017, p. 1607). Whereas many physicians are trained in empathetic communication and medical expertise, most are not taught the kind of trust-building communication skills required to help patients manage these types of conflicting health messages (Lee & Hornik, 2009). The bottom line is that shifts in society's relationship with medical information means that doctors must learn a new set of communication skills.

As a subset of the general physician population, pediatricians are in a particularly important position when communicating with the general public. In 2005, former U.S. Surgeon General David Satcher and colleagues argued that it is the responsibility of pediatricians to advocate for children's health both in the exam room and the public sphere, as children are unable to advocate for themselves (Satcher, Kaczorowski, & Topa, 2005). Given the importance

of this advocacy work, the Accreditation Council for Graduate Medical Education (ACGME) began requiring that pediatric residency programs include elements of advocacy and community-based pediatrics. Specifically, residents must demonstrate proficiency in communicating "effectively with patients, families and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds" (ACGME, 2017, p. 16). Historically, formal instruction for pediatric residents on advocacy-related communication skills has been limited to lectures, field trips to learn more about community resources, and tool boxes, with the expectation that residents will learn to advocate in the same way that they learn clinical skills: "see one, do one, teach one" (Lichtenstein, Hoffmann, & Moon, 2017). These types of lectures and toolboxes may arm pediatric residents with necessary content expertise, but they may also leave them deficient in the actual development of the advocacy-related communication skills required to address the public's current lack of trust in medicine, particularly related to children's and adolescents' health.

This study explores a novel programmatic instructional intervention designed to teach pediatric residents how to communicate effectively in advocacy settings, whether with news media or the community. Our program used applied improvisational theater (AIT), a theoretically-based pedagogical approach that has become popular for teaching communication to health professionals (Hoffmann-Longtin, Rossing, & Weinstein, 2017; Kaplan-Liss et al., 2018; Sawyer, Fu, Gray, & Umoren, 2017; Watson, 2011). Specifically, we designed our day-long instructional intervention with the aim of helping pediatric residents become more comfortable and confident advocating for children's health issues. Ultimately, instructional programs like this one could be important tools to help pediatricians counteract misinformation proliferated in today's internet and social media landscape.

In this article, we first define physician advocacy and advocacy communication, particularly in the context of pediatrics. We follow with the theoretical grounding for using AIT in our instructional intervention program. Then, we discuss the landscape for communication instruction in healthcare settings, generally, and AIT specifically, and propose our research questions. We then describe our methodology and results. Finally, we conclude with a discussion about how this study fits into the larger conversation regarding effective communication instruction for healthcare professionals.

Health Advocacy Definitions and Frameworks

Although debates exist about how to define health advocacy, one often cited definition suggests that it involves "action by a physician to promote those social, economic, educational, and political changes that ameliorate the suffering and threats to human health and well-being that he or she identifies through his or her professional work and expertise" (Earnest, Wong, & Federico, 2010, p. 63). Calls for health advocacy training have been widespread (Earnest et al., 2010; Frenk et al., 2010; Gruen, Campbell, & Blumenthal, 2006; Kanter, 2011; Shipley et al., 2006), arguing generally for medical students "to develop skills in advocacy theory, execution, and communication" (Dworkis, Wilbur, & Sandel, 2010, p. 1549). Health advocacy skill development is also critical in the pediatric subfield. For example, in their 2005 call for pediatric health advocacy, Satcher and colleagues argued that—because so much of pediatric health is determined by social and community factors—it is pediatricians' responsibility to improve the health and wellbeing of their communities through advocacy efforts. As Satcher, Kaczorowski, and Topa (2005) explain, "to improve child health, physicians must work within their communities to identify the needs of the population they serve and take appropriate action to influence the needs of private and public policies that address these needs" (p. 1124). Heeding

this call, in 2009, the Pediatrics Residency Review Committee (RRC) began requiring advocacy training and experience for all pediatric resident physicians in the U.S. (Earnest, et al., 2010). Yet how to best teach medical students and pediatric residents to advocate effectively has been the topic of much debate in medical education (Dworkis, Wilbur, & Sandel, 2010; Hubinette, Dobson, Scott, & Sherbino, 2017; Kanter, 2011; Martin & Whitehead, 2013). Debates arise from differing definitions of what counts as advocacy and who counts as the expert in an advocacy setting. Whereas Earnest and colleagues' (2010) definition locates the responsibility for advocacy (and the expertise) with the physician, other scholars locate expertise and advocacy efforts in more of a communal setting. Moreover, Brown and colleagues (2004) differentiate between health advocacy and activism, arguing that advocates tend to work within the current systemic structure whereas health activists challenge the traditional structure by insisting on lay participation in knowledge production. Specifically, Zoller (2005) suggests that studying the communicative behaviors of health advocacy and activities has been problematic, since most research focuses on activism associated with a particular disease state (such as HIV/AIDS activism or breast cancer activism) rather than as a set of discursive practices used by community activist groups in general.

Debates aside, it is clear that issues related to advocacy and activism are complex. Hubinette et al. (2017) proposed a theoretical framework for advocacy in medicine that captures many of these complexities. The authors describe two axes of advocacy work: vertical and horizontal. The vertical axis represents the types of and levels at which advocacy occurs, from individual (developing individual agency by navigating through and removing barriers in the healthcare system) to institutional (engaging in activism activities designed to bring about system-level changes that persist once the efforts of the advocate have ended). Agency activities

include providing information to and educating patients, connecting patients with community resources, referring patients to non-clinical professionals, and navigating health or other systems that would difficult for the patient to navigate independently (e.g., supportive housing systems). Participation in these types of advocacy efforts affords health advocates an opportunity to act as an agent working within the constraints of the system on behalf of the patient. On the other pole of the vertical axis is activism, which is designed to alter the system (i.e. results in institutional, social, economic, or political change). Activist behaviors do not simply operate within the bounds of the system as agency activities do. They focus on changing the system, structurally. Examples of activism strategies include raising awareness of problematic issues on behalf of patients, or advocating for social, political, or economic changes in the system.

The horizontal axis of Hubinette et al.'s (2017) theoretical framework represents who determines the need for advocacy: a shared group of experts and community members or one expert (without the collaboration with the community). With shared approaches to advocacy, priorities are determined collaboratively among the patient, the clinician, and the community. Shared approaches to advocacy require that the clinician position their biomedical expertise alongside (and not above) the knowledge, experiences, and desires of the patient and community. Shared advocacy could involve a physician serving on a community board or advocating in the news media in partnership with a community group. Such shared approaches are contrasted with directed advocacy activities, where an individual clinician provides perspective, expertise, and guidance on an issue; speaking for (not with) an individual patient or community. Directed advocacy activities could include calling a clinical specialist to get an urgent investigation for a patient, making sure that patients have required health information, or offering referrals to community agencies and organizations. As Hubinette and colleagues (2017) argue, in order to

equip future healthcare professionals to reduce health inequities, we must equip them with communication skills to lead and advocate; the axes allow professionals to locate themselves strategically and intentionally within various advocacy roles. Although the model provides an important starting point for health professionals, it does not provide insight into the communication aspects of these advocacy roles. Pearce and Cronen's (1980) coordinated management of meaning offers one potential approach.

Coordinated Management of Meaning and Health Advocacy

The complex nature of health advocacy settings and the potential tensions involved with the varied participants and contexts (e.g., physicians, patients, the public; online, face-to-face, mediated), makes it important to understand how meanings are negotiated and instantiated within these settings. Coordinated management of meaning (CMM) (Pearce & Cronen, 1980; Pearce, 1989; Pearce, 2004; Pearce, 2007) provides a useful theoretical framework. According to Pearce and Cronen (1980), perceiving messages is not the challenging part of communication. Rather, we struggle to communicate effectively because we are constantly managing the meaning of our communication as a way to coherently tell the stories of our experiences. We always manage these meanings in the context of others, thus coordinating the meaning with them (Pearce & Cronen, 1980; Pearce, 2004) and creating the social worlds within which messages are understood and interpreted. Although advocacy is, by nature, persuasive, a CMM lens would suggest that advocacy be considered as a process of developing partnerships and coordinating meaning, rather than simply focusing on convincing an audience to believe a particular message.

CMM proposes two types of rules that govern conversation: constitutive (rules that help to determine what is appropriate in a given context and how to interpret the meaning of an event or message) and regulative (rules that govern action or next steps in a conversation). Both

constitutive and regulative rules are always enacted by communicators based on a context. For example, the constitutive rules of discussing vaccine hesitancy are different in a news interview than patient room. In both cases, the topic should be approached with empathy and a focus on acknowledging emotions rather just sharing facts. However, it may be more appropriate for a physician to focus on distilling the message to a few key points in a television interview, and alternatively, the patient room might warrant more of a focus on asking questions to seek understanding. Recognizing the contexts of the television interview and the patient room, and the varied advocacy strategies related to those distinct contexts and conversations, is important so that the physician can best reach the intended audiences.

Two more key concepts of CMM are useful as they relate to advocacy in healthcare settings: coherence (the stories participants use to make meaning within the conversations) and coordination (the extent to which two communicators agree upon the pattern or story they are creating together, within the conversation). For example, a pediatrician doesn't have to agree with a parent's hesitancy to vaccinate (they might not necessarily share the same story about vaccines); however, that physician must accept that the parent's fears are part of the story and meaning they are ascribing to the interaction. To move forward, the physician and parent need to coordinate their narratives; working together to decide where the hesitancy comes from and what to do about it. The extent to which this happens can largely influence the effectiveness of the advocacy efforts.

The CMM approach can be helpful in public advocacy settings, in addition to conversations at the bedside. Because they are trained as scientists, physicians' default approach to advocacy is often to share more information about a topic in order to persuade an audience based on evidence. Yet often the public are acting emotionally, on a basis of fear, when issues of

health are in question. For example, as related to the anti-vaccine movement, parents have likely heard stories or seen a social media video about the (inaccurate) relationship between autism and vaccines, creating anxiety and uncertainty. A CMM lens might suggest a physician approach a television interview by acknowledging the social media stories that are compelling to many parents; then focusing the message on the common values shared by parents and physicians—keeping children safe and healthy (thus attending to the emotions and fears parents could be feeling). After discussing this shared goal, the physician might share an anecdote of a patient who was helped by a vaccine, as well as data and information. Thus, the physician is attending to both the coherence (acknowledging the stories that contribute to parents' fears) and coordination (emphasizing shared values/commitments to children's health) and of the message with the audience.

This study uses a CMM lens, along with Hubinette and colleague's (2017) advocacy framework, to understand the complexities of communicating in health advocacy settings (and in particular, pediatric health advocacy settings). Given the myriad of health messages (of varying degrees of accuracy) that patients and families have access to, it is critical to teach future pediatricians to advocate effectively by navigating carefully between fact and fear and coordinating messages appropriately. It is no longer about simply delivering information. Rather, as CMM theory suggests, physicians (in order to be effective advocates) must work to create shared meaning in partnership with patients. Doing this may be challenging for physicians who have been trained to focus on data and information, rather than on building empathy to coordinate information with patients and the public. Since health advocacy has become more complex with the wealth of information available to the general public, there are multiple approaches and contexts in which physicians must advocate to improve the system of

care and, ultimately, the health of their patients. These complexities merit attention, particularly as they inform instructional training programs for physicians.

Communication Instruction in Health Contexts

Communication instruction in medicine (Makoul, 2001), nursing, and the veterinary fields is a cornerstone of the professional education process. In medical education specifically, communication instruction (often called communication skills training or CST) has primarily focused on one-on-one patient-provider communication at the bedside (Brown & Bylund, 2008; Brown et al., 2010; Cegala, & Broz, 2002; Gysels, Richardson, & Higginson, 2004; Donovan, Love, Mackert, Vangelisti, & Ring, 2017). The focus stands to reason, as it is in the context of the patient-provider relationship that diagnosis and treatment occurs. As Donovan and colleagues (2017) explain, "[i]mportant goals of communication training are enhancing providers' ability to build rapport, empathize, gather data, and explain complex information, all of which need to be understood as building blocks of communication knowledge" (p. 491). While many healthcare practitioners are trained in building empathy and trust at the bedside, the techniques best suited to teach these skills are understudied, in particular as they are related to advocacy efforts (Brown & Bylund, 2008; Donovan et al., 2017).

Cegala and Broz (2002) conducted a literature review of studies focusing on CST. Reviewing studies published between 1990 and 2002, the authors closely examined 26 studies focused on the objectives and communication skills taught in communication education programs in health fields. Their results suggest that research on communication skills training is varied: trainings ranged in length from one hour to five days and included multiple types of pre/post-tests and feedback mechanisms. Most importantly, trainings rarely specified an instructional focus on particular communication skills. Despite this, the authors concluded that

CST can be used to effectively alter participants' behavior in patient encounters. However, they did suggest that researchers should be much more specific about the communication skills being taught and evaluated, and that those skills should be grounded in a theoretical framework. Brown and Bylund (2008) later replicated this meta-analysis: in the 18 additional studies they found, they concluded that, although there was more alignment between objectives and assessment, trainings still failed to specifically identify concrete and measurable communication skills. To that end, Brown and Bylund (2008) developed the Comskil conceptual model, which defines the central communication components of a patient-provider encounter and strategies for teaching and assessing those skills. Their model differentiates and offers definitions for communication goals (what a communicator hopes to accomplish), strategies (what plans direct communication toward a goal), and skills (the unit of speech a speaker uses to achieve a goal). This model provides a more systematic approach to program design and allows curriculum designers to create teaching strategies and assessments which are grounded in particular communication needs of the health care setting. Although these analyses suggest CST is happening, both illustrate the need for more specific identification and rigorous evaluation of the CST themselves, leading to a better understanding of the most effective way to teach dynamic communication skills in healthcare settings generally and as related to healthcare advocacy specifically.

Applied Improvisational Theater (AIT)

Although studies have called for the identification of concrete measurable communication skills in CST, recent scholars have also acknowledged that training focusing exclusively on learning these skills in a checklist manner limits physicians' abilities related to communicative flexibility: being able to adapt their communication in the moment for a variety

of audiences and contexts (Egener & Cole-Kelly, 2004; Eisenberg, Rosenthall, & Schlussel, 2015; Kaplan-Liss et al., 2018; Salmon & Young, 2011; Zoppi & Epstein, 2002). For example, Levinson, Lesser, and Epstein (2010) contend that building effective relationships in healthcare "cannot be accomplished by mechanically applying skills. Rather they require genuine personal engagement and emotional involvement" (p. 1311). How to teach communicative flexibility has been the subject of a significant body of scholarship, as well (e.g., Deveugele, et al., 2005; Makoul & Schofield, 1999; Rider & Keefer, 2006; Kurtz, Draper, & Silverman, 2004). Some health education programs use experiential education methods (such as role play and simulation) (Cegala & Broz, 2002; Gysels et al., 2004) and specifically, programs have turned to the techniques of improvisational theater (often called "applied improvisational theater" or AIT) to train physicians to speak and write more spontaneously, flexibly, responsively, and engagingly to a variety of audiences (Hoffmann-Longtin, Rossing, & Weinstein, 2017; Kaplan-Liss et al., 2018; Sawyer et al 2017; Watson, 2011). As a theoretical lens and pedagogical practice, "[t]he field of AIT translates the theory, practice, and training strategies of the theater into real-world contexts on the basis that the communication skills and the habits of thinking and acting that make a successful improviser on stage are the same skills and habits that foster success in other contexts" (Hoffmann-Longtin, Rossing, & Donovan, 2018, p. 5). Instructional training models using AIT encourage participants to see communication as a participatory partnership between physicians and patients (within and outside of the patient room) and encourage a close analysis of the audience to develop and coordinate culturally competent and dynamic messages. Results of these AIT instructional programs have been promising. For example, Berk and Trieber (2009) suggest that improvisation allows learners to grow through experiential discovery and collaboration, which in turn promotes deeper learning. Additionally, these techniques have

demonstrated themselves to be effective in teaching communication flexibility in other disciplines, such as nursing (Hanley & Fenton 2007), pharmacy (Boesen, Herrier, Apgar, & Jackowski, et al., 2009), business (Scinto, 2014), and education (Rossing & Hoffmann-Longtin, 2016; Sawyer, 2011).

Applied improvisational theater uses experiential exercises, sometimes called drills, to engage participants in practicing the habits necessary to accomplish learning goals. Rather than memorizing a list of communication behaviors, these drills ask participants to try out approaches to communication in their own words in a supportive environment. Following each drill is a period of debrief where participants are asked to reflect on the affective and social benefits of these approaches. In doing so, facilitators connect the participants' observations to extant communication theory, making explicit not just what behaviors work, but *why* they work in a particular interaction or context. A series of tenets or principles underscore the AIT pedagogy. In improvisational theater, these are often called rules. A short summary of these principles follows (for more detail, see Berk & Trieber 2009; Hoffmann-Longtin et al., 2018; Hoffmann-Longtin et al., 2017; Rossing & Hoffmann-Longtin, 2016).

- *Yes, and . . .* It is a communicator's goal to accept the reality of our conversational partner and keep the conversation moving forward.
- *Make your scene partner look good,* or *take care of your partner.* It is a communicator's responsibility to take care of and support their conversational partner by taking an other-oriented or audience-centered approach to their communication.

- *Follow the follower.* Communicators should look to their conversational partner for direction on what and how they should approach a topic. They should listen closely, without judgement, asking questions to determine next steps.
- *There are no mistakes,* or *everything is a gift*. Communicators should accept mistakes or missteps as opportunities to learn more about their conversational partner's perspective and to build empathy and trust.

Grounded in Hubinette et al.'s (2017) advocacy framework for understanding the ways in which physicians coordinate meanings with patients and the public, and using the Comskil training instructional design approach (Brown & Bylund, 2008; Brown et al., 2010), we developed our AIT pilot curriculum to teach advocacy-related communication skills to pediatric residents during their community advocacy rotation. By using the AIT pedagogy, we sought to problematize residents' current definition of communication as simply bi-directional message exchange. Rather, we hoped our residents would consider the roles of audience analysis, message design, and co-creation of meaning as an important part of their advocacy responsibility. This seven-hour interactive curriculum was embedded as a one-day workshop into an already existing month-long community advocacy rotation. The advocacy rotation is an ideal setting for this instructional program because residents are asked to move beyond bedside communication to consult in community educational settings and create a podcast for a community partner on a health topic of importance to their constituents. We hypothesized that, after completion of this workshop and rotation, residents would feel more prepared to participate in advocacy activities, such as speaking to the media and community partners, as compared to their baseline readiness. Four research questions (RQ) guided our mixed methods approach to evaluating the AIT curriculum and subsequent changes in our participants:

RQ1: How did residents' perceptions of their willingness and ability to advocate (both in the community and in the media) change after participating in the AIT workshop?

RQ2: What advocacy-related communication techniques (taught during the workshop) became sustained practices for residents over time?

RQ3: What did residents perceive as ongoing barriers to advocacy communication following the workshop?

RQ4: What did residents perceive as effective and ineffective advocacy strategies (from the workshop) in their workplace settings?

Methods

To answer our four research questions, we collected quantitative and qualitative data, immediately pre-/post-intervention, as well as in a follow-up survey a few months after the intervention. Prior to discussing the methodology in detail, we provide a summary of the AIT training curriculum, as it was the setting within which we collected data from pediatric residents.

Setting: AIT Curriculum in Pediatric Advocacy Rotations

We developed and delivered our AIT instructional workshop to a total of 51 residents. The audience for each workshop included 5-12 resident participants. The workshop was conducted in the context of the month-long pediatric community advocacy rotation. There were nine month-long rotations over the period of a year, within each of which we held one day-long workshop. The rotation included on-site observations and partnerships with community organizations to produce health messaging events and materials such as community meetings, pamphlets, and podcasts. All residents on the rotation were expected to attend the workshop prior to completing their rotation.

The overall goal of the workshop focused on using policy information and empathetic message design to build trust in the field of medicine, to better advocate, and to correct misinformation. Specifically, we focused on our residents' dynamic responsiveness, empathetic connection, and audience-centeredness in their communication. In order to acknowledge the complexities involved with advocacy in pediatric-patient-community relationships, we offered the ACGME (2017) definition of advocacy, while at the same time providing opportunities to discuss the notion of lay expertise and power imbalances in the context of communicating about health issues for systemic change (Earnest et al., 2010; Hubinette et al., 2017).

Learning outcomes for the workshop focused on residents' abilities to 1) explain the importance of clear communication and recognize how to create clear meanings with different audiences; 2) attend to the needs of an audience, read verbal and nonverbal cues, and adjust communication in the moment, as needed; 3) reduce self-consciousness in communication; and 4) use storytelling techniques effectively to evoke emotion, build empathy, and make personal connections through clear, vivid language. In developing the curriculum, we worked with the rotation faculty to understand the communication needs and challenges faced by their trainees and colleagues (Brown et al., 2010).

Our workshop consisted of four sections: 1) Improvisation for Physicians, 2) Distilling Your Message, 3) Partnering with the Community, and 4) Media Training. Each section was approximately 90 minutes, with short breaks in between. Each section included 1-3 AIT drills, with a semi-structured debriefing period immediately following. Drills were chosen based on established research on AIT in medical education (Hoffmann-Longtin, et al., 2017; Kaplan-Liss et al., 2018; Sawyer et al., 2017; Watson, 2011). The following is a description of each section of the workshop, with an example of the drills used and the communication goals for each.

Session 1: Improvisation for scientists.

The first session was designed to introduce the participants to AIT as a training strategy for advocacy communication. The exercises were chosen to help the residents speak about their work effectively and responsively with multiple audiences, from peers and professors to family members and policymakers. During the exercises, residents practiced connecting with an audience, paying attention to others, reading nonverbal cues, and responding freely without self-consciousness. For example, in one drill called *Mirror*, participants were asked (in pairs) to move their bodies nonverbally, serving as a mirror to each other (Kaplan-Liss et al., 2018). When person A began to move, person B would try to mirror person A's movements. Success was defined as near-perfect mirroring, such that an observer would not know who was leading and who was following. This game encouraged participants to focus exclusively on their audience, making continuous adjustments to ensure that their audience was following their communication. Consistent with AIT pedagogy, participants were side coached while participating in the activity (Hoffmann-Longtin et al., 2017). Facilitators encouraged participants to take care of their partners (a principle of AIT), illustrating the co-construction of meaning that occurs in communication settings. In another activity called *Photograph*, learners were asked to describe a meaningful photograph from their lives using a blank white sheet of paper as their canvas (Hoffmann-Longtin et al., 2017). This exercise encouraged participants to use rich descriptive language and analogy, such that the audience could imagine the actual portrait. Debriefing included a conversation about the extent to which the audience remembered the emotional or relational message more saliently than the content of the message (Watzlawick, Beavin, & Jackson, 1967). These exercises helped residents to be audience-centered and to build clarity and engagement through verbal and non-verbal communication. Further, it oriented them

to the importance of ensuring that their audiences were following their messages in a way that promoted understanding and connection.

Session 2: Distilling your message.

Session two introduced principles of clear communication and featured AIT drills through which residents practiced speaking clearly and vividly about science in ways lay audiences could understand and appreciate. The participants practiced crafting a short, clear, engaging statements about their work and why it matters. While doing so, the session addressed how to communicate at different levels of complexity to different audiences. Learners practiced defining their communication goals, identifying main points, explaining meaning and context, responding to questions, and using storytelling techniques to enliven messages. In the cornerstone exercise for this session, participants utilized short policy statements from the American Academy of Pediatrics (AAP) on important advocacy topics (such as car seat use, smoking cessation, and vaccination) as catalysts for conversation (AAP, 2018). In an activity entitled *Half Life*, participants worked in pairs to take turns distilling their chosen advocacy topic into increasingly shorter time periods, from 2 minutes to 1 minute to 30 seconds and then finally to 15 seconds. Afterwards, each speaker interviewed their partner, asking them to identify the main point of their message, the most memorable parts of the message, as well as what the message makes the listener want to do. This process compelled the communicator to clearly define their goal in short, accessible terms; teaching them to add vivid detail and description as time and audience interest allows.

Session 3: Partnering with the community.

This session focused on equipping learners with techniques for shared meaning-making and collaboration with community partners. These methods have been shown to be particularly

useful in health advocacy because, as Hubinette and colleagues' (2017) explain, they level the playing field between experts and community members, acknowledging the expertise that patients bring to any interaction. Activities focused on developing trust, opening lines of communication, and sharing expertise in a way that values and respects the lived experiences of community members. Many of the exercises focused on finding areas of connection, rather than disagreement, with patients and community members. During the final exercise of this session, learners were invited to repeat a version of the "photograph" exercise from session one, this time painting a picture of a meaningful patient encounter and how this story might be told in an advocacy context. This exercise focused on helping learners to connect the tenets of effective storytelling with the goal of advocacy.

Session 4: Media training.

The final session of the day was designed to build confidence and efficacy in speaking in one advocacy setting: a public interview with a journalist about the advocacy topic identified during the "Distilling Your Message" session. The following scenario was provided to the residents:

> You have been invited to a local parent-teacher meeting to participate in a public interview based on the topic you chose earlier from the AAP policy statement. During your short interview, you will be asked to speak authoritatively and engagingly on this topic. Local media will be there, so you expect that a few sound bites from your interview might be used on the evening news.

Each participant was given 5-10 minutes to prepare, then the interview was conducted with a journalist in front of the workshop participants. After each interview, the participant was asked to reflect on what they thought they did especially well, and what they would do differently if they were interviewed again. Additional feedback was solicited from the workshop participants. While traditional AIT techniques were not included in this session, facilitators consistently employed debriefing techniques informed by AIT to maintain the tone of the

workshop. For example, after the interview, those workshop participants who observed the interview are asked what they would add to the interview. By focusing feedback on extending the conversation, rather than what went wrong, the facilitators reinforce the AIT principle of Yes, and . . .

Participants

Fifty-one pediatric residents participated in the training program. Resident physicians are those trainees who have completed medical school and are now completing an additional 3 to 7 years of training in the specialty field of their choice. This training (called residency) is comprised of a set of specific rotations designed to expose physicians to critical areas in their specialty.

During residency, residents complete rotations to learn to care for patients with varied needs. For example, in pediatrics, rotations might include caring for critically ill and premature newborns, children with lung disease, and children with cancer. Rotations may vary in length but are usually four weeks long. Some rotations are embedded longitudinally throughout training, and many rotations are repeated multiple times during residency training. Community advocacy is a rotation that is required by the accrediting body for pediatric residents (ACGME, 2017). At our institution, the community advocacy rotation occurs in years one and two of the pediatric residency program. We imbedded our workshop within this month-long rotation.

Of our resident participants in the workshop, 65% were women. This overrepresentation of women mirrors the field of pediatrics, where approximately 62% of the population are women (Association of American Medical Colleges, 2015). Due to the relatively small sample size, race and ethnic data about the participants was not collected to protect their anonymity.

Data Collection and Analysis

Two sources of quantitative data were used to evaluate the effectiveness of the AIT workshop: a pre-/post survey and a follow-up survey. The pre- and post-surveys asked identical questions and were developed and employed previously by the course directors for the community advocacy rotation.[1] These surveys were distributed to all 51 residents who participated in the workshop. The questions primarily asked about willingness to engage with the media to discuss health topics, as well as the extent to which the residents felt the media influenced their patients' health practices and beliefs. All questions used a 5-point Likert scale, except for one question which used a 4-point scale (not at all difficult to very difficult). We maintained the same survey, despite the inconsistency in the Likert scale, for comparison between the groups before and after the workshop intervention. Survey questions[2] asked to what extent the participants thought media influenced their patients' health practices and beliefs, as well as to what extent they were willing to engage in advocacy activities in the media (such as participating in interviews or writing magazine articles). To measure the program's effectiveness, independent sample t-tests examined the difference in means between the surveys completed before the workshop and those completed after the workshop.

The second set of data involved a follow-up survey[2] sent to the participants between 6 and 12 months after they had participated in the workshop. This follow-up survey asked to what extent, as a result of participating in the program, the residents used communication techniques such as listening to their audience, using rich descriptions and storytelling, and building trust through voice and body language. These items also used a 5-point Likert scale. As there was no pre-survey for these data, we report resident responses using simple descriptive statistics. To

[1] The survey was developed for program assessment purposes and would need further refinement and validation if it were to be used in the future for additional research purposes.
[2] The full surveys are available from the first author upon request.

provide a richer description of the participants' experience, we also asked several open-ended qualitative questions on the follow-up survey, including those which asked participants to define effective and ineffective communication.

Responses to the qualitative survey items were analyzed for emergent themes. Consistent with the trustworthiness strategies established by Lincoln and Guba (1985), each member of the research team read the written answers to each open-ended question at least twice and discussed the meaning of the response in the context of the research questions and the other responses. Then, the research team used an inductive process to identify emergent themes across multiple responses. Separate elements were placed into larger categories, and the research team developed thematic descriptors to represent the sentiment of each section or cluster (Patton, 2002). We analyzed the relationships among the clusters, referring to process notes to confirm themes, and developed higher-level themes that connected several related concepts (Patton, 2002). After returning to the original data, representative examples of each theme were identified from the surveys. To ensure a rigorous analytical process, colleagues not involved in the research (but familiar with the program) served as peer debriefers (Lincoln & Guba, 1985), asking questions and helping the research team to clarify themes and categories.

Results

Of the 51 residents who participated in the workshop, 37 completed the pre-survey and 34 completed the post-survey, indicating response rates of 72% and 67% respectively. Twenty-five of the 51 residents completed the follow-up survey—a 49% response rate. Results of the pre- and post-survey and the follow-up survey, including the qualitative response thematic analysis, are combined and discussed together with consideration to our central research

questions. Representative quotations from each theme are included, and participants were assigned pseudonyms to protect their anonymity.

RQ 1: Perceptions of Willingness and Ability to Advocate in Media and Community

Residents reported that their willingness to engage in advocacy communication with community members, policymakers, and the media to discuss health topics significantly increased following the workshop, as shown in Table 1. Also, residents felt much better qualified to give an interview or otherwise participate in the media on health topics as a result of participating in our workshop (mean increase from 2.73 to 3.43). (Other responses in Table 1 were not significant after Bonferroni correction). The table also shows that participants found writing and recording a health podcast to be less difficult after the workshop when compared to their responses prior to the workshop. [TABLE 1 NEAR HERE]. In the follow-up survey, most participants agreed or strongly agreed that they continued to find additional resources to communicate healthcare issues more effectively. They also seem to agree that they continue to use the techniques of the workshop.

Open-ended questions in the follow-up survey suggested that participants saw themselves as being willing to advocate both in organization-based advocacy and individual-based advocacy, and a few saw this work as occurring in the media. For example, some residents mentioned their participation in professional organizations as an important part of their advocacy communication. Katherine mentioned her role on a hospital-based patient safety advocacy committee, and Lyle mentioned joining the local American Academy of Pediatrics chapter. More frequently, our participants remarked on their individual participation in advocacy. Phoebe explained, “I had the ability to contact my state senator regarding topics that I have felt strongly about.” Similarly, Trisha said she had been “calling and leaving voicemails related to the

Children's Health Insurance Plan and healthcare funding with my representative." One participant, Gail, indicated that she continued to engage in the production of the podcast created within her advocacy rotation.

RQ 2: Sustained Communication Techniques

Residents indicated that they learned several communication techniques during the workshop that they continued to employ following the workshop. These techniques included 1) listening more closely to understand the needs of their patients, patient families, colleagues, and the community; 2) using rich descriptions and analogies to enhance empathy with their audience and to help their audience understand complicated information; 3) using storytelling as an effective way to communicate with an audience; 4) modifying communication plan based on the response of their audience; and 5) using voice and body language to create a sense of trust with the audience. [TABLE 2 NEAR HERE]

Qualitative data also illustrate how residents sustained their communication practices in three areas: message distillation, empathy, and language transformation. Residents identified increased attention to making messages more succinct and understandable for non-experts; a technique we call *distilling* in the workshop. This concept was mentioned frequently in the participants' comments. Ashley suggested: "I try to simplify my message and tailor my phrasing based upon the level of sophistication of the audience." Rachel also stated, "Leaving a voicemail related to children's health insurance funding, I think I used short, relatable information."

In addition to distilling, the participants also mentioned developing more empathetic messages after the training. This is best exemplified by Phoebe who stated, "I think I try to understand more where the other person is coming from and what their goals are." Trisha mentioned an exercise where they used vivid detail to describe their experience taking care of a

patient that may be related to an advocacy issue. As she remarked, "Being able to describe my favorite patient that I've gotten to take care of. Always nice to have reminders that the more we connect with our patients, the more we fight for them." Finally, residents reported language transformation as a sustained communication practice. They articulated activities that involved describing a picture using vivid and rich detail, with the goal of translating that into their advocacy settings. Additionally, participants remarked that they continued to change language to better meet the needs of audiences. For example, Katherine said, "I sit down and explain in more understandable terms." Frances similarly explained, "I try to tailor my phrasing based upon the level of sophistication of the audience." Trisha echoed this, "I'm able to relate to [patients] using anecdotes and analogies better."

RQ 3: Ongoing Barriers to Advocacy Communication

In terms of ongoing barriers to communicating in advocacy settings (and in particular, with the media), several residents noted that they did not perceive any barriers. Those who did report barriers focused on lack of time, opportunity, and self-efficacy. Many respondents simply gave one-word answers to identify these barriers (e.g., "opportunity," "schedule," "knowledge"). Others provided more detail; for example, Rachel suggested, "Time, and I haven't really initiated any opportunities." For those who did provide more detail, a lack of self-efficacy was a prevalent theme. For example, Gail noted, "Fear of saying the wrong thing. It is a big responsibility." Similarly, Candice wrote, "I'm not famous or interesting enough." Phoebe stated a barrier she faced was "comfortability in front of the camera."

RQ 4: Effective and Ineffective Communication Techniques

Residents identified three key skills germane to advocacy communication, following the workshop: co-creation, clarity, and audience-centeredness. In describing the co-creation of

meaning, participants used words such as connecting, understanding, and closing the loop in communication. For example, Edward said, "speaking on the same level with empathy" and Phoebe described it as, "like two people walking away from a discussion understanding the other's goals/point and feeling as if the discussion was useful." Dawn described this as, "Meeting patients at their level. Phrases and analogies that they understand, and constantly pausing to assess their understanding." Beth said that effective communication was "having the audience understand the message and be able to teach back . . . " On the negative side, Vicki described ineffective communication as "steamrolling an interaction."

Clarity was another common theme participants identified as effective communication (and the lack of clarity was identified as ineffective). Rachel, for example, described ineffective communication as "overly detailed or complicated," Candice described a lack of clarity as, "the information is perceived in an unintended way or not received at all." Conversely, Rachel called effective communication, "clear, concise, and easy to relate to." Trisha described effective communication as simply "clear and concise," and ineffective communication as "not clarifying question or points, making assumptions, laziness." Frances described his approach: "I try to simplify my message and tailor my phrasing based upon the level of sophistication of the audience."

Participants also identified audience-centeredness as a key aspect of effective communication. For example, Jennifer said, "paying attention to your audience, back and forth, both contributing and listening," and Vicki explained effective communication as "give and take, reading the audience." Dawn said it was "using phrases and analogies that [the audience] can understand." The notion of audience-centeredness was embedded in all of Phoebe's responses. She described effective communication as "walking away from a discussion understanding the

other's goals/point and feeling as if the discussion was useful," and ineffective communication as, "when one party feels an inability to communicate effectively or feels as if the discussion was not valuable." [TABLE 3 NEAR HERE]

Discussion

This research sought to fill a gap in the literature by closely examining a pedagogical intervention (AIT) designed to teach advocacy communication to pediatric residents. Because AIT has been used in a number of other settings, we found it important to investigate to what extent an instructional intervention like this could be helpful in the health care setting, given the changing relationship between the media and the public and therefore the need for ongoing communication flexibility of health care professionals. Future physicians, especially pediatricians, face growing communication challenges. They increasingly need to move outside the patient room to effectively connect with an ever-more skeptical public. Applied improvisation training offers unique complements to more traditional CST and is particularly powerful in addressing these challenges by emphasizing dynamic responsiveness, empathetic connection, and audience-centeredness. As our training program illustrated, these skills helped pediatric residents reframe conversations to ensure both parties work toward the same goals, providing them with an agility not afforded by traditional CST.

Our survey data consistently demonstrated that our residents found the workshop to be worthwhile and effective. Moreover, at long term follow-up, they identified co-creation of meaning as a key component of effective communication, which was central to the larger, overarching instructional goal of the AIT workshop. Finally, results suggest that residents did incorporate topics from the training into their day-to-day interactions. These results further evidence what others have found: communication instruction can successfully alter participants

behavior (Cegala & Broz, 2002; Brown et al., 2010). After completing our program, resident physicians consistently felt they were better prepared to engage in advocacy work, including interacting with the media.

Even though this workshop was effective in providing learners with new tools to communicate more confidently, it is important to note that it did not, on its own, provide residents with the degree of self-efficacy some believed they needed to fully see themselves as an advocate. We see this as an important theoretical implication warranting further exploration. Our participants were interested in participating in advocacy; however, they lacked the self-efficacy needed to fully embrace that role. Although we would argue this is a lofty goal to accomplish in a single-day workshop, there are interesting theoretical considerations worth exploring considering this finding. Questions for further exploration, drawing on coordinated management of meaning (Pearce & Cronen, 1980; Pearce, 2007), include: what communicative patterns and context have created this lack of self-efficacy in resident physicians? What is the role of self-efficacy in advocacy communication? How could we design resident and physician training programs to improve self-efficacy, given the multiple, complex stories that characterize provider-patient-public relationships?

Furthermore, the advocacy approach championed by Hubinette et al. (2017) may be missing this key aspect of advocacy communication (self-efficacy). Perhaps many novice physicians do not feel comfortable directing advocacy efforts because of their perceived lack of experience and expertise. For residents to feel comfortable in a public advocacy forum, they must view themselves as experts, and this is not something a person can develop quickly. Instructional programs using AIT may be one step in this direction, but further research should explore these issues in more depth.

Limitations and Future Research

Our program differed from many other training programs for physicians in that we focused on advocacy communication for pediatric residents, as opposed to patient-provider communication and the physician population in general. Additionally, we used AIT as a tool to improve residents' communication skills, rather than traditional CST. These two approaches, though relatively successful in this context, also invite some limitations and opportunities for future research. As mentioned, there is still a fair amount of definitional work required to understand advocacy communication by health professionals and our study did not fully explore these definitional distinctions. For example, in what ways is advocacy communication similar to and different from patient-provider communication and how might training be modified based on these differences? Given that advocacy rotations are required of pediatric residents, it is important that we continue to pursue these definitions while still providing training to these junior physicians. Similarly, resident physicians are very new to the practice of medicine. So, it is no surprise that their confidence is limited. Future research could explore how more veteran practitioners might respond to a training such as this one. That said, AIT as a teaching tool can be difficult for some audiences to accept (Berk & Trieber, 2009; Hoffmann-Longtin et al., 2017). Additional investigation is needed to understand the circumstances under which training audiences would be comfortable accepting this approach. The length of our training program (one day) also creates a limitation. It is challenging to argue such a short intervention would create significant differences in behavior. More locations, types, and lengths of instructional programs would help us to answer some of the questions posed by Donovan and colleagues (2017) about which types of communication training are most efficacious in health contexts. Finally, we used self-report data from our residents to evaluate the AIT training program, thus

inviting a social desirability bias of our participants simply saying what we want to hear. While these data are generally appropriate for program evaluation, their utility in the broader context of communication training efficacy is limited. Future research could include independent researcher observations or patients' reporting of the residents' skills both before and after the intervention.

Implications for Teaching and Learning in Health Contexts

Although our study does have limitations, we believe it offers a new and innovative approach to teaching advocacy communication to pediatric residents. More broadly, our study offers three important implications for communication scholars who teach and research in healthcare settings. First, we would encourage scholars to use extant communication theory to problematize overly simplistic definitions of communication in medicine. As Egener and Cole-Kelly (2004) argued, it is certainly possible to pass the test but fail the patient when communicating in healthcare contexts. Health information and the healthcare system are too complex to understand using simplistic definitions, and several communication theories could be fruitful in helping change the perceptions of those who believe communication is simplistic. With that in mind, our study illustrates that resident physicians are willing to accept and apply more complex, social constructionist definitions of communication. By designing programs with these kinds of theoretical approaches, we can give physicians language and tools to address what many already know all too well: communicating effectively is one of the hardest parts of their jobs.

Secondly, communication scholars have an opportunity to help healthcare practitioners realize that their communication skills beyond the bedside are worth focus and attention. So much research has been conducted on the effectiveness of health messages, yet many non-

academic physicians know little about this work. Given the calls for pediatricians to serve as advocates for children's health, they must be effective advocacy communicators as well. By providing training that focuses specifically on advocacy settings—and on audience analysis and message distillation within those settings—we can help physicians see that public communication is a key part of the job that is as high stakes as bedside communication.

Lastly, we hope this study encourages communication scholars to consider creative approaches to teaching communication, particularly in healthcare settings. Many traditional approaches to communication skills training (CST) need to be reconsidered, given the need to help physicians enact the empathy and dynamic responsiveness necessary to address today's complicated healthcare environment and media landscape. By employing AIT, we hope to illustrate how these creative approaches can help deconstruct some of the structures that prevent skill development. We hope future scholars and teachers will bring in additional creative pedagogical approaches to the health care setting.

Conclusion

The AIT instructional intervention, which is at the center of this study, focused on encouraging pediatric residents to redefine advocacy communication as co-creation of meaning, rather than simple information transfer. Through a day-long AIT workshop, we sought to increase pediatric residents' responsiveness, empathetic connection, and audience-centeredness. This kind of skill development is critical, given today's healthcare communication landscape. Patients often come to their physician with information (sometimes incorrect) obtained from social media and internet searches, as well as friends, family, and community groups. Physicians have the daunting task of helping patients to interpret this information, while building trust and confidence. This responsibility extends beyond the patient room. Physicians are asked to serve

as health experts in community settings and the news media. They are called upon by their professional organizations to advocate for improved health policies and systems of care. In short, physicians are asked to do more than simply deliver information. They must serve as advocates for accurate information and healthy habits, at the bedside and in the community.

As our data and the work of others in the field indicate, CST programs can improve physician communication skills. By understanding the basis on which health decisions are made and offering opportunities for context-based practice, instructional programs using AIT can provide residents with a platform to explore their own perceptions of communication and develop the dynamic communication skills needed to advocate effectively in a variety of contexts. In doing so, perhaps training programs such as this one—that employ creative pedagogical approaches—can assist physicians in better navigating complexities of the healthcare communication environment that can paralyze novice and experienced physicians alike. As Viola Spolin (1999), widely considered the foremother of improvisational theater, suggested, “When it bogs down, play a game” (xiii). An experiential, game-based approach to communication training, like AIT, may have the potential to help physicians improve the bogged down healthcare environment, by working in partnership with their patients for better health outcomes.

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Table 1. Pre- and Post-Survey Summary

	Pre-Survey Mean (SD)	Post-Survey Mean (SD)	Mean Diff.	Sig.
If asked, I would be willing to discuss a health topic with a reporter on the evening news.	3.08 (0.97)	3.55 (0.79)	0.46	0.03
If asked, I would be willing to do a telephone interview for a parenting magazine.	3.30 (0.85)	3.70 (0.73)	0.40	0.04
If asked, I would be willing to make a written contribution to a magazine or newspaper article on a health topic.	3.91 (0.51)	4.18 (0.52)	0.26	0.04
I feel qualified to give an interview or otherwise participate in the media on health topics.	2.73 (0.83)	3.43 (0.78)	0.70	0.001*
How difficult do you think it is to write and record a health podcast?	2.86 (0.76)	2.39 (0.83)	-0.47	0.17

* indicates significance beyond the 0.01 threshold based on a Bonferroni adjustment of the .05 for 5 analyses.

Table 2. Follow-Up Survey Summary

	Mean (SD)
I have identified additional resources to communicate about health care issues effectively.	4.20 (0.65)
I use techniques from the Workshop to communicate about health care issues.	4.16 (0.69)
I listen more closely to understand the needs of my audience (e.g. patients, families, colleagues, and the community).	4.28 (0.79)
I use rich descriptions and analogies to enhance empathy with my audience.	4.12 (0.83)
I use rich descriptions and analogies to help the audience understand complicated information.	4.16 (0.69)
I use storytelling to connect with my audience.	4.08 (0.76)
I modify my communication plan based on the response of my audience.	4.56 (0.58)
I use voice and body language to create a sense of trust in my audience.	4.36 (0.57)
I feel more confident in my ability to listen to audience concerns.	4.28 (0.61)
I feel more confident in my ability to reframe my message based on my audience's needs.	4.44 (0.65)

Table 3. Research Questions, Qualitative Themes, and Representative Examples

Research Question	Theme	Example from Participant Quotations
RQ 1: Willingness and Ability to Advocate in Media and Community	Organization-based advocacy	Role on a hospital-based patient safety advocacy committee
	Individual advocacy	I had the ability to contact my state senator regarding topics that I have felt strongly about
RQ 2: Sustained Communication Techniques	Message Distillation	I try to simplify my message and tailor my phrasing based upon the level of sophistication of the audience
	Empathy	I think I try to understand ore where the other person is coming from and what their goals are.
	Language Transformation	I try to tailor my phrasing based upon the level of sophistication of the audience.
RQ 3: Ongoing Barriers to Communicating with the Media	Time and Opportunity	(Participants used these words specifically)
	Self-Efficacy	Fear of saying the wrong thing. It is a big responsibility.
RQ 4: Effective and Ineffective Communication Techniques	Co-Creation	Like two people walking away from a discussion understanding the other's goals/point and feeling as if the discussion was useful
	Clarity	Using phrases and analogies that they can understand
	Audience-Centeredness	Paying attention to your audience, back and forth, both contributing and listening