Acceptability and Feasibility of Delivering Real-time Video-based Coaching to Enhance Provider Communication Skills

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Abstract

Background

Despite a growing call to train providers in interpersonal communication skills, communication training is either not offered or is minimally effective, if at all. A critical need exists to develop new ways of teaching communication skills that are effective and mindful of provider time pressures. We propose a program that includes real-time observation and video-based coaching to teach provider communication skills. In this study, we assess acceptability and feasibility of the program using provider interviews and surveys.

Methods

The coaching intervention involved training providers to use five patient-centered communication behaviors. Two coaches were trained to observe and record live video feeds of provider visits. As coaches observed provider visits, they prepared feedback, which they delivered to the provider. During coaching sessions, coaches gave feedback while showing clips from the visit in which patient-centered communication behaviors could be included. Coaches practiced communication skills with providers using role-plays during coaching sessions. Providers included residents (n=15), fellows (n=3), attending physicians (n=3), and a nurse practitioner (n=1) from a VA clinic and county clinic specializing in care for patients with HIV. We report descriptive results from a survey taken by providers participating in the program. The survey was adapted from validated items used in I/O psychology to assess the feedback environment, including questions about the intervention's feasibility and acceptability. A qualitative analysis was also conducted on transcripts of provider interviews following the intervention. We used rapid analysis to identify themes within the interviews.

Results

Survey measures on showed high feasibility and acceptability ratings from providers, with mean item scores ranging from 6.2 to 6.8 on a 7-point scale. Qualitative analysis revealed that providers found that 1) coaches were credible and supportive, 2) feedback was useful, 3) video-clips allowed for self-reflection, 4) getting feedback on the same day was useful, and 5) use of real patients preferred over standardized patients.

Conclusions

Video-based coaching can help providers learn new communication skills in a way that is provider-centered, brief and timely. Our study demonstrates that real-time coaching using live feed and video technology is an acceptable and feasible way of teaching communication skills.

Contributions To The Literature

- We describe the development of a novel audit and feedback approach to developing provider communication skills using real-time video coaching.

- We present a feasible task-oriented way to teach providers specific and concrete communication skills.
- We assess the feasibility of training non-clinician coaches to conduct real-time video coaching sessions with providers and provide guidance for future implementation of this approach.

Background

Effective communication is of critical importance in developing relationships between patients and providers. Positive patient-provider relationships impact health outcomes across a variety of medical conditions and care settings.⁽¹⁾ Patients with positive relationships have greater trust in their provider and are more likely to take their medicines and engage in care.^(2–5) Positive relationships and effective communication also have the potential to mitigate racial and ethnic disparities in healthcare. Effective communication may have stronger effects on trust and feeling respected by the provider in African American and Hispanic patients.^(6–9)

Despite the importance of effective provider communication, teaching providers complex communication skills is difficult, and few evidence-based interventions exist. Most interventions focus on workshops and traditional didactic training, with largely mixed results. Some studies have found a weak correlation between these interventions and improved communication behaviors^(10–13); others have found no correlation.^(14–19) Given mixed results, a “basic science” of communication behaviors that can be taught and measured must be established. This requires breaking down communication into concrete elements that drive effective communication and determining the best ways to teach these elements to providers. These data are key to developing targeted and effective interventions.

In the United States, the Accreditation Council for Graduate Medical Education (ACGME) cites interpersonal and communication skills as core clinical competencies.⁽²⁰⁾ However, most programs lack the expertise to teach communication skills effectively.^(21,22) Medical students interviewed about their training in communication report that they are rarely observed, and feedback, if any, is not timely.⁽²³⁾ Most providers ultimately finish their medical education with little training in communication skills.^(23–25) When training occurs after residency, it typically takes place in workshops that may or may not include simulated patient encounters. These workshops are time-intensive and difficult for providers in busy clinical environments to attend.⁽²¹⁾ Most workshops take place as half to all day one-time events, and little data exists on the long-term effects of these training.⁽²⁶⁾ Given these challenges, a critical need exists to develop new ways of teaching communication that are effective and mindful of provider time pressures. We propose that a program with real-time coaching, using live feed and video technology, meets the challenge of teaching communication skills. In this study, we use qualitative and quantitative methods to examine the acceptability and feasibility of a real-time video-based coaching program delivered to providers in busy primary care clinics at a Veterans Affairs (VA) hospital and a county clinic.

Communication Behaviors

A crucial step in developing providers' communication skills is identifying specific, evidence-based communication behaviors that promote positive patient-provider relationships. Patient-centered communication, considered the gold standard of patient-provider communication, includes (1) explicitly asking if patients have questions, (2) giving clear information about the patient's condition, (3) focusing on objective measures, (4) involving patients in the conversation, and (5) acknowledging emotions.(27)

Explicitly asking if patients ask questions. When patients ask questions during clinic visits, they engage in conversation and prompt providers to provide answers.(28) However, patients often feel they should not ask questions for fear of being labelled 'difficult.'(29) Patient reticence to ask questions can be addressed by teaching providers to explicitly ask patients if they have questions (e.g. "What questions do you have today?").(27)

Giving clear information about the patient's condition. Additionally, giving medical information in a way that is clear serves to increase patient understanding and promote a positive patient-provider relationship. Previous work has shown that patients value clear information about their treatment plan. (27) It is also particularly important for providers to support their recommendations with a rationale, to provide information in small chunks, and to check for patient understanding.(30) When possible, providers should also share with patients the specific, objective measures that are the basis of their recommendations, such as blood pressure or cholesterol readings, particularly when the conversation involves a condition that might make patients feel judged, such as overweight.

Involving patients in the conversation. Eliciting patient input aids in the development of positive patient-provider relationships. Directly asking patients how they feel about a treatment option or what they think is causing their symptoms, for example, provides patients with support and further builds patient-clinician partnerships.(31)

Acknowledging emotions. The same can be said for acknowledging patient emotions. Providers often find responding to patient emotions hard, and particularly feel less in control of the patient encounter when patients express negative emotions.(32) However, acknowledging when a patient expresses emotion strengthens patient-provider relationship.

Audit and Feedback

Audit and feedback is an evidence-based teaching method for improving performance. The method derives from industrial/organizational psychology (where it is known as 'feedback') and is used widely across diverse industries (e.g., education, athletics, aerospace). In healthcare, audit and feedback interventions have decreased the inappropriate use of antibiotics, reduced unnecessary imaging, and educated patients to manage their health conditions.(33–35) Feedback Intervention Theory (FIT) posits that feedback works by increasing awareness of a gap between a desired behavior and a person's actual behavior, thus prompting change.(36) Per FIT, three key factors determine the effectiveness of feedback interventions. These include feedback cues directed at changing behavior, the task at hand, and situational factors (e.g.threats to self-esteem, sense of control, feedback orientation, etc.).(37–39) To

maximize effectiveness, feedback cues should include information on the correct solution (i.e., tell/show the recipient “what ‘good’ looks like”) (40) and be delivered in a timely, individualized, non-punitive, and ideally customizable fashion. (41)

According to FIT, an effective audit and feedback intervention needs to target specific tasks or steps critical to improving performance. In communication, this requires breaking down broad communication goals into critical elements. For example, provider actions to increase patient involvement would be broken down into concrete communication tasks. These could include tasks such as using open-ended prompts (“Tell me about your condition”) or asking the patient to list goals for the visit (“What would you like to talk about today?”). Breaking down broad performance goals into key individual components, helps reframe communication as a set of tasks at the right level of specificity for delivering actionable, evidence-based feedback. This in turn allows providers to focus on specific, actionable communication skills that can lead to improved communication performance as a whole.(42)

A challenge in providing feedback on communication skills is the personal and idiosyncratic nature of communication behavior.(43) Communication tasks are inherently interwoven in complex patterns of learned behavior (i.e., the long-established communication habits we use every day).(44) This suggests that more so than other practices, feedback on provider communication requires performance evaluations that focus on specific behaviors in a manner that does not threaten a person’s individual communication “style” or habits. The manner in which feedback is delivered matters, and care needs to be taken to create a safe environment in providing and receiving feedback.(44,45)

Methods

Participants

Providers recruited for the study practiced in either a Prime Care clinic at the Michael E. DeBakey Veterans Affairs Medical Center or the Thomas Street Health Center, a county primary care clinic for patients with HIV infection, both in Houston, Texas. Recruitment for providers and patients took place between October 2018 and October 2019. The PI (Dang) developed relationships with site “champions,” leaders at both clinics who supported the coaching intervention and introduced the PI and study to potential participants at provider meetings (e.g. morning report, noon conference, journal club). Residents were offered a half-day of independent study, and all other participants were offered \$20 for participation in the coaching intervention. Members of the research team obtained consent from both participating providers and patients recorded during visits. Both pilots were approved by Baylor College of Medicine’s Institutional Review Board, and the VA pilot was also given permission by the Houston VA’s research review committee.

Measures

This study takes two methodological approaches to assess feasibility and acceptability of a real-time video-based coaching intervention. We conducted a short survey with participating clinicians. Survey

data included questions about the intervention's acceptability, including the quality and delivery of feedback, as well as the credibility of the coaches. Questions were adapted from validated items used in I/O psychology to assess feedback environment.(46–48) We also interviewed providers and patients to gather data on expectations and experiences with the program, and suggestions for improving the program. See Table 1 for key interview questions. Interviews with providers and patients were audio recorded and professionally transcribed verbatim. Interviews ranged from 5 to over 20 minutes in length.

Data Analysis and Rigor

We used descriptive statistics to analyze survey data. We used rapid qualitative analysis to answer questions about the acceptability and feasibility of the coaching intervention. Rapid analysis allows teams to conduct rigorous analysis of interview transcripts in a practical and timely way. This method is used often in health services and implementation science research to analyze data and disseminate new ideas quickly.(49,50) To conduct rapid analysis, the research team created matrices, organizing quotes by interview questions. Matrices allow for quick comparison of interview data across participants, so that responses can be easily examined and split into themes.(51) Matrices were then shortened using an iterative process to identify final themes with exemplar quotations.(52)

Description of the Coaching Intervention

The coaching program targets five explicit, clearly defined provider communication behaviors that have potential to greatly improve the patient care experience .(27) Mindful of provider time pressures and key elements of FIT, the coaching intervention uses trained communication coaches and live feed technology to create an intervention that is brief (less than 15 minutes), timely (same day) and theory-informed. The coaching intervention uses live feeds to directly observe provider communication behavior during a patient encounter. Live feeds let the coach observe communication behaviors in real time and provide timely feedback to the provider. A coach trained in identifying specific provider communication behaviors places an encrypted laptop with a webcam in the examination room before the patient-provider encounter.

Once the visit begins, the coach records and watches a live feed of the patient-provider interaction in a nearby room. The coach takes note of provider communication behaviors, with attention to strengths and weaknesses within the five targeted behaviors (see Figure 1). While watching the live feed, the coach also time stamps periods during the visit that illustrate the clinician's effective use of communication strategies and periods in which more effective behaviors could be used. As soon as the visit ends, the coach uses the time stamps to find and create short video clips showing communication strengths and moments when communication tips can be helpful. Video clips are critical elements of the coaching program. They are used during the feedback session to promote discussion and foster structured self-reflection. The process of making video clips takes about 30 minutes, and within 30 minutes of the encounter, the coach is able to meet with the provider, pending workflow feasibility.

Video technology

The coaches in this pilot used Skype for Business 2016 and encrypted laptops to securely live stream and record patient-provider encounters from another location. Coaches used a hot spot device that provided a stable wireless connection for video recording. Video Studio Pro 2019 editing software was used to create video clips. There were no technical failures or confidentiality issues during filming.

Feedback Sessions

Coaches introduce themselves to the provider and agree on a time frame for video recording in their clinic. Providers do not receive guidance or instruction prior to the first coaching session but do receive the pocket card. Coaches consent patients who come in during the selected time frame for the coaching intervention. Providers are able to decline recording of visits if they deem the visit not suitable for recording.

Feedback sessions between coach and provider take about 15 minutes. The feedback session begins with the coach asking the provider open-ended questions about his or her goals for communication coaching (e.g., communication areas he/she wants feedback on), as well as the provider's thoughts on what he/she did well and parts of the encounter that he/she thought were difficult. The coach uses the first few minutes to develop trust and rapport with the provider and create a safe and supportive environment for receiving feedback. The coach leads the provider in a review of successful communication strategies used during the visit and areas for improvement based on the five targeted communication strategies.

When delivering feedback, the coach discusses no more than two communication tips. Coaches choose the two tips based on areas in which the provider needs improvement. The focus on two tips in a coaching session is derived from goal setting literature, which emphasizes that goals are more effective if they are few in number.(53) While discussing the tips, the coach refers to their evaluation notes and shows illustrative video clips from the provider's visit. The coach also conducts role play with the provider so that the provider can practice the action discussed. At the end of the session, the coach and provider identify communication tasks the provider intends to practice (i.e. implementation intention).(54) Coaches provide a one-page handout summarizing tips discussed during the feedback session.

In this study, VA providers received one session of observation and feedback. Providers at the VA were the first to participate in the study, and the focus of the coaching intervention at the VA was to assess initial engagement and buy-in. Providers at the county clinic received 3–4 sessions, with subsequent feedback sessions focusing on communication tasks discussed during previous coaching sessions and new communication tips. Multiple coaching sessions provided opportunities for providers to set goals and continue improving their practice of the communication behaviors taught.(55)

Training Coaches

To be effective, feedback must be delivered in a manner which is timely, individualized and non-punitive. Because of the personal and complex nature of communication behaviors, program coaches

were carefully trained over 3–4 months to quickly develop client trust and rapport, efficiently observe and rate the five targeted communication tasks; give feedback in a way that is tactful, respectful and psychologically safe; and become proficient in using the technology (e.g., setting up the live feed, making video-clips).

Preparing Coaches: Rigorous Interdisciplinary Training Program

The original training for coaches was developed in conjunction with Lacey Schmidt, PhD, an industrial/organizational psychologist at Minerva Work Solutions, PLLC. Coaches in the intervention were not clinicians, as we wanted to examine the feasibility of using non-clinicians to conduct these sessions. Both coaches in this study have MPH degrees in health promotion and behavioral sciences (Johnson, Njue-Marendes).

Coaches receive training using the audit and feedback format

Coaches were trained to give feedback by a panel of experts in clinical care (Dang, Giordano), audit and feedback (Hysong, Schmidt), intervention mapping (Markham), and health communication (Street). Prior to training, the research team created a video repository of patient-provider encounters collected at the research sites, as well as encounters of clinicians on the research team (Dang and Giordano). During training, the expert panel met with coaches on a weekly to biweekly basis. Meetings were spent watching encounters from the video repository, and then giving coaches an opportunity to practice observing and rating communication behaviors of interest and providing feedback. Members of the team played the role of the recorded provider so that the coach could practice delivering feedback on each of the five communication behaviors to providers with varying levels of communication skills. All experts evaluated the coaches and gave coaches feedback on the practice session – what went well and what, if anything, she can improve.

Throughout this process, the research team developed and refined a written coaching guide, with strategies and sample language (See Figure 1). Coaches were rated using a performance rubric. Once coaches were confident in basic skills, meetings focused on skillfully working with resistant providers, creating psychological safety during feedback sessions, and establishing credibility.⁽⁵⁶⁾ As the intervention began, coaches continued to receive feedback on their performance. The principal investigator (Dang) watched live feeds of feedback sessions throughout the study to give feedback in real time to the coaches and check for fidelity. Coaches also received continuing one-on-one feedback and training from the expert train-the-trainer coach (Schmidt).

Results

We successfully deployed this intervention with 22 providers at two primary care clinics. Our participation rates were 76% for providers and 78% for patients. A total of 22 providers took part in the coaching intervention. These included 15 internal medicine residents, 3 fellows, 3 attendings, and 1 nurse

practitioner. The majority of the providers were male (n=14, 64%). Racially, the providers were primarily white (n=10, 45%) and Asian (n=10, 45%), and the remainder were Hispanic (2, 10%).

Patients and providers indicated that the coaching intervention was not burdensome. Patients did not mind the recording; all said that the recording had no impact on their experience and therapeutic relationship with the provider. Overall, >90% of providers would “probably” or “definitely” recommend the coaching program to other providers; and >90% reported that the length of the feedback session “was just right.”

Survey

Responses to the survey indicate high acceptability of the coaching intervention, with high scores across all domains: feedback quality, feedback content, and source credibility. Mean responses ranged from 6.2 to 6.8 on a 7-point scale. See Table 2. The high ratings on the survey provide a strong foundation for our qualitative results that follow.

Qualitative interviews

Key features of the coaching program

Our analyses of the interviews identified key features of the coaching program, that relate to acceptability and which providers said were integral. Key features include: 1) coaches were credible and supportive, 2) feedback was useful, 3) video-clips allowed for self-reflection, 4) getting feedback on the same day was useful, and 5) use of real patients preferred over standardized patients. Each element is detailed below.

1) Coaches were credible and supportive

When providers were asked about their impressions, they focused on the coaches’ supportive tone and their credibility.

Coaches create a safe environment for feedback

All providers interviewed described coaches in a positive way. Feedback delivery was the highest rated program characteristic in the survey. Providers described coaches’ delivery of feedback as “nonconfrontational,” “nonjudgmental,” “friendly,” and done in “a tactful way.” One provider said, “She made me feel like it was completely *nonjudgmental* because when I first signed up I thought to myself ‘hmmm how open to feedback am I going to be?’” Another provider said a balance of affirming and constructive feedback made him feel more comfortable, noting that the coach “drew out both things that went well and things to work on, so that I felt good about what I did but also had some good *targetable actions* for the future.”

Coaches focus on communication, not medicine.

The majority of providers described the coaches as a credible source of information and feedback. Because coaches were not clinicians, several participating providers thought that the feedback session was less prescriptive, and they “didn’t feel intimidated or anything like that.” One provider said non-clinician coaches were more likely to identify with a patient and focus solely on provider communication. He had concerns that clinician coaches, in contrast, might be distracted by the medical aspects of an encounter (e.g. diagnostic work-up, treatment decisions). Only one of the 22 providers found the coaches lacking in credibility because, he said, the appropriate coach is “someone who is doing patient care.”

Coaches come prepared.

The coaches’ preparation contributed to providers’ impressions of their credibility. Providers who discussed the credibility of coaches pointed out the importance of coaches coming prepared to feedback sessions. Many found coaches credible because they focused on specific communication tasks and came with prepared video clips. Two providers noted that coaches could cite the research supporting the importance of specific communication tasks, as well as audit and feedback principles. Another provider also noted that coaches “were well prepared [for] how to coach me...they had a lot of things written down.”

2) Feedback was useful

Several providers talked about the lack of feedback specificity in past training. One provider felt frustrated because she wanted to know specific things she could do to improve her practice. She said, “A lot of [feedback is] based on patient surveys. [T]he biggest complaint patients would have is that their doctor didn’t show enough enthusiasm or care enough.” In her case, she struggled to organize her thoughts and take notes during visits with patients, and at the same time act in a manner that is caring and attentive. She and others said they needed “specific actions to improve patient care.”

Almost all providers said the feedback received from the coach was useful and helpful because the feedback focused on concrete communication tasks and the feedback was specific. In fact, one provider added, “I liked that there were *concrete* things that were picked out that you could see and there were *specific* things she would refer to.”

3) Video-clips allowed for self-reflection.

Nearly all participants said that watching video clips during feedback sessions increased self-awareness and self-reflection.

“Just the fact that you’re doing this *self-reflection*, like ‘Oh how am I doing? I’m going to be on video’ And then seeing that one little minute clip here.... When are you going to have the opportunity for that?”

Many said the video-clips were the most useful part of the feedback session, and for most, it was the first time they had ever seen themselves talking to a patient. In addition to learning new strategies, providers also talked about the video-clips reinforcing desired behaviors. For one provider, the video clip reinforced

desired behavior because she could see patients respond positively. She said that “seeing patients appreciate [effective communication and seeing] a benefit” motivated her to continue to use the strategies.

Some providers who received more than one coaching session also liked watching video clips in follow-up sessions, showing change in practice:

“That’s what’s sticking to me the most. Going over the [most recent] video and then saying ‘here’s what we saw, here’s what we practiced, here’s what you did. What would you do differently?’”

4) Getting feedback on the same day was useful

Providers liked getting feedback on the same day. One provider said the program provided him “the opportunity to get some *real-time feedback* and...see my own interaction from a different person’s [perspective].”

Providers also felt that viewing the video clips soon after the patient encounter augmented feedback because their recollection of the situation and context is fresh.

“I could immediately go back, like I remember this interaction. I remember what I was thinking, and I remember, here's how I said that.”

5) Use of real patients was preferred over standardized patients

Providers said it was useful to get feedback based on direct observation of encounters with real patients. When asked to compare observations of encounters with standardized versus real patients, providers said they prefer the latter. One provider said:

“The whole standardized patient interaction, the whole time you know it’s all artificial because this person is not a real patient with real symptoms or real problems.... So I think doing that same exercise with *real patients*... [is] more helpful.”

To that provider, interactions with a standardized patient feels artificial, and provider behaviors with a standardized patient may not reflect how he or she would act with a real patient.

Situational factors

Motivation to take part in coaching

When providers discussed motives for taking part in the program, a recurrent theme was the desire to be more effective communicators, though reasons for wanting to improve differed. Providers framed their motivation as a responsibility to self and patients. Most stressed the importance of clinical communication skills, saying effective communication is a “good thing to do” or the “right” thing to do as a provider, implying a sense of responsibility to their profession. These clinicians were interested in

“anything that helps me become a better communicator.” Some clinicians expressed their sense of responsibility to their patients. One wanted to improve their own clinical skills so that “there’s nothing [more] I can be doing to [provide] a better experience for the patient.” Another clinician focused on his institution’s performance measures and used language common to quality improvement goals and metrics: “More effective communication...can help improve patient outcomes and satisfaction.”

Comments on program format

Brief, same day format effective

Two providers discussed the length of coaching sessions; they thought 10 minutes for each coaching session was a good length of time and that sessions occurring on the same day were “efficient” for the coaching program. Two providers noted that the number of coaching sessions needed could vary by provider; one argued that 4 sessions might be “more than necessary” for a provider to implement a skill they master quickly, and another argued that the number of sessions should vary according to the provider’s workload.

Working around the provider’s schedule is key to uptake

Providers talked about the need for any coaching program to be mindful of time pressures, particularly with sick patient encounters or in busy clinics. One provider pointed out that patients who presented in serious condition limited the provider’s willingness to participate in coaching for the day because of the stress caused by treating the patient’s more urgent needs. For example, one provider “had to send [a patient] to the ER, and so the video...I wouldn’t say it inhibited me, but it was just an extra thing.” Another provider echoed this sentiment by pointing out that what works well in a lower volume clinic may not work in a busy clinic.

Providers want and appreciate strategies to save time

Some providers thought that incorporating the tips, such as agenda setting, saved time during visits. One described using agenda setting to keep a new patient visit on track, and “whenever [the new patient] started diverging or going off on tangents to talk about something else, we went back to the list.” Another thought that asking open-ended questions at the beginning of the visit saved time by better organizing the encounter, “.... it gave the patient the opportunity to ask all of the questions up front not to come up with a whole bunch of by the ways.”

On the other hand, other providers were concerned that incorporating communication tips would take too much time during a clinic visit. One provider was skeptical that he would use a technique such as asking open-ended questions: “I don’t think so, just because of time constraints.” Others also cited a lack of time during visits and suggested alternative, time sensitive ways of using agenda setting. One said “primary care physicians...are too busy” to use the strategies, but “if we could improve [and for example] patients [could] already have a list of what they want to talk about...maybe it would be a little more attractive for them.” Another provider advocated for “anything that could help outside of the

[examination] room.” She suggested that, for example, staff checking patient in at the clinic could ask patients to make a list of questions. In fact, patients could be asked when scheduling the appointment, while checking in or while waiting in the waiting room.

Discussion

This study indicates that real-time video-based coaching intervention targeting provider communication skills is feasible and acceptable to providers and patients. The program had a high participation rate from providers and patients, and was deployed with little, if any, interruption to clinic flow. The coaches used the live feed and video splicing technology with ease and seamlessly incorporated it into the development and delivery of feedback.

Quantitative data demonstrate strong acceptability, and qualitative data provides insight into key elements of the coaching program, that providers say are integral. Specifically, analyses of provider interviews revealed the following: 1) coaches were credible and supportive, 2) feedback was useful, 3) video-clips allowed for self-reflection, 4) getting feedback on the same day was useful, and 5) use of real patients preferred over standardized patients. Each element is detailed below.

As with any intervention focused on provider behavior, attitudes towards learning and being coached that may influence uptake, must be addressed in program development. Many providers participated in the program because of a moral and personal commitment to improving their communication skills. These responses are consistent with previous work in which personal improvement and moral goals motivate change in practice.(17,18) These providers would likely support implementation of the intervention and could benefit most from it. Studies suggest that providers who perceive improvement in their clinical skills, as well as those who perceive their relationships with their patients to be closer report more job satisfaction and less burnout.(57,58) This potential benefit of the program can be used to encourage these providers to participate in the intervention.

The coaching program’s focus on specific communication behaviors was accepted positively by providers. Many communication interventions focus on broad goals, such as persuading a patient to change their behavior, as opposed to specific communication tasks.(59,60) This program differs from those interventions in that it focuses on a discrete set of tasks that are concrete, which providers overwhelmingly viewed as helpful. Many providers responded to feedback and indicated that they wanted to continue to develop their skills. Using concrete tasks can engage providers who struggle with their communication skills and serve as reinforcement for providers who practice these behaviors successfully. As medical training programs make efforts to incorporate communication skill training into their curricula, programs such as coaching and feedback are an important way to continue to build on this training.(61,62)

This pilot involved two non-clinician coaches with extensive training who were generally well received by providers. Although training requires intense initial effort, the extensive training the coaches received contributed to their ethos. Provider responses show that highly trained non-clinician coaches can

deliver useful feedback and garner the respect of providers. It is important to note that many providers thought that non-clinicians were better suited to observe and deliver feedback on their communication skills. It also contributed to feedback delivery that was not threatening and “non-judgmental.” These findings are encouraging, as non-clinician coaches are lower cost and if equally effective, heighten scalability and sustainability. Future implementation and dissemination projects might also consider training peer coaches or patient advocates (e.g., social workers, case managers) to become communication coaches. Future training may be condensed to an intensive course for coaches or may use a “train the trainer” approach, with trained coaches providing audit and feedback training to new coaches.

Providers also responded overwhelmingly positively to another distinguishing feature of the program, video feedback. They appreciated it for the same reason it is used in education and sports, to provide a tangible behavioral assessment in real time. (63–65) This underscores the desire of motivated clinicians to hear and see how they communicate. Moreover, training coaches to prepare video clips, akin to a highlight reel in team sports, allowed coaches and providers to focus exclusively on specific excerpts of the encounter. Providers, particularly those who received more than one training session, pointed out that they could see themselves improve on the clips. This type of longitudinal audit and feedback is more likely to produce discernable effects on outcomes.(66,67)

Despite the benefits of communication skills training, lack of time is a major challenge to provider uptake, particularly for providers in busy practices. In our study, providers indicated that keeping the feedback sessions to 15 minutes and provider-centered strategies, such as having the coaches work around the provider’s schedule, were key to provider acceptability. In creating similar coaching and feedback programs, attention to provider concerns and needs is paramount. Future areas of research include possibly leveraging online HIPAA compliant platforms (similar to telemedicine apps) where virtual coaches can watch live feeds of encounters from anywhere in the world and give feedback to the provider with a few clicks.

Another issue to address is provider concerns about slowing down the patient encounter. The use of video clips provides one way to address this problem: by providing total visit time as well as time stamps that show the duration of specific communication tasks. Reviewing video could also help providers use the strategies more efficiently. Finally, changes outside of the clinic visit could also help facilitate implementation of tasks such as setting a visit agenda. For example, patients could be asked to work in conjunction with providers to think of questions and to set their agenda for the visit ahead of time.

Our small sample and qualitative approach capture an initial response to the real-time video coaching intervention. The results of this study can be used to inform future implementation studies that measure the feasibility of the intervention rigorously. In the future, large-scale implementation of the coaching intervention will enable an examination of the efficacy of the intervention.

Conclusions

Programs designed to help providers improve their relationships with patients tend to be scarce, time-consuming and unable to garner provider buy-in. Based on the results of this study, a real-time video feedback and coaching program can be perceived as acceptable and feasible by providers. Although some elements of the program may be adapted to meet the needs and expectations of individual providers, overall, providers see video-based coaching sessions as acceptable and feasible. Video-based coaching can help providers learn new communication skills, in a way that is provider-centered, theory-informed, brief (less than 15 minutes) and timely (same day). Our study demonstrates that real-time coaching, using live feed and video technology, is an acceptable and feasible way of teaching communication skills.

Declarations

Ethics approval and consent to participate

The Baylor College of Medicine IRB approved both pilot studies (H-43479, H-42191). The study involving VA participants (H-42191) was also approved by the Houston VA's approval committee.

Consent for publication

Not applicable.

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

BD and JF had full access to all the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis. BD, SH, RS, CM, TG, SJ, SNM, and RW participated in the development and implementation of the intervention. JF, BD, and JC were responsible for data analysis and interpretation. All authors read and approved the final manuscript.

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Tables

Table 1. Schedule of Interview Questions

Provider Questions

Initial Prompt

I'd like to know what you think about the coaching and the feedback you received, and what we can do to improve the program.

Interest & Expectations

First, let's talk about your interest in and expectations for the study.

1. Why did you decide to take part in the coaching program?
2. What expectations, if any, did you have when you decided to participate?

Coaching and Feedback

Now I'd like to talk about the coaching and the feedback you received.

3. What was it like being coached?

PROBES:

- a. What did you like about the coaching?
- b. What did you not like about the coaching?
4. What did you think of the feedback the coach gave you?

PROBES:

- a. Tell me about the feedback you got.
- b. How helpful or useful was the feedback?
- c. What was not helpful or useful?
5. What, if anything, do you plan to do differently based on the feedback you received?

Improving the Coaching Program

Now I'd like to talk about the coaching program in general.

6. What can we do to improve the coaching program?
7. Did any part of the coaching program negatively impact your work?

PROBE SUBJECTS:

- a. Clinic flow
- b. Rapport with your patient

c. Clinic space
d. Length of the coaching session
e. Perceived burden
f. Opportunity cost
8. What is the best way to integrate the coaching program into < VA/ TSC >?

Table 2. Provider Feedback Survey Items and Response Distribution		
	Scale	Mean (n=22)
Feedback quality		
The coach gave me useful feedback	1-7	6.8
The feedback I received from the coach is helpful	1-7	6.7
The feedback session was a good use of my time	1-7	6.2
I value the feedback I received from the coach	1-7	6.7
The feedback I received from the coach helps me communicate more effectively with my patients	1-7	6.5
Feedback delivery		
The coach was tactful when giving me feedback	1-7	6.8
The coach made me feel comfortable	1-7	6.8
The coach respected my thoughts and opinions	1-7	6.8
Source credibility		
I respect the coach's thoughts and opinions about my performance	1-7	6.7
The information I received from the coach was fair	1-7	6.7

Figures

1: Explicitly ask if patients have questions

Start the visit by getting a list of the patient's questions & concerns

- "Before we start, I'd like to get a list of the things you would like to talk about today."
- "What questions/concerns do you have today?"

Ask "What else?" until the patient completes list of questions and concerns

Use facilitative statements to encourage the patient to elaborate:

- Uh-huh, ok, tell me more
- Silence/pauses – let the patient talk without interrupting

Restates points raised by patients, before delving into the rest of the visit

OK to prioritize & negotiate the agenda, after getting the patient's list

Tip 2: Give patients clear information about their condition

Use the **RRI** method to communicate effectively and avoid misunderstanding

- **Recommendation:** Say what you want done
- **Rationale:** Explain why you want something done
- **Intent:** Say what the patient will accomplish or avoid by doing something now

Example: *I recommend you stop smoking. Smoking increases your risk of getting lung cancer and heart disease. If you quit smoking, you can decrease your risk of getting these preventable diseases.*

Show patients their actual tests on the computer or print out, & explain what they mean

Present information in small chunks

Check for understanding

- "I want to make sure I explained things well. Can you tell me how you will take this medication when you get home today?"

Tip 3: Involve patients

Asking for the patient's input increases cognitive engagement and perceptions of being involved

- "What do you **think** is causing the symptoms?"
- "How do you **feel** about starting this medicine?"
- "What questions/concerns do you have about [x]?"

Tip 4: Acknowledge emotions/ concerns

Acknowledge/restate the patients' feelings and/or position

- "I can see you're scared; I can tell this is tough."
- "Yes, I understand this is frustrating."

Tip 5: Focus on objective measures

Navigate delicate topics (e.g. obesity, high cholesterol) by focusing on objective measures and goals of treatment.

- "Do you have sex with men or women?" or "Have you ever used IV drugs?" NOT "How did you get HIV?"
- "The pain in your knees can depend on how much weight you carry. What would really help is to bring your weight down, and I know you're working on that."

Figure 1

Pocket Card

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [TIDieRChecklistWord.docx](#)