Health Education and Public Health
2020; 3(5): 346-350 doi: 10.31488 /heph.154

Review Article

Telemedicine: Par for the E4 Course

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Received: October 09, 2020; Accepted: October 23, 2020; Published: October 30, 2020

Abstract

The COVID-19 pandemic has changed our lives in so many ways. For those of us in healthcare, the context of providing patient care has changed significantly. Telemedicine, specifically using the virtual video visit, has become a mode of delivery for patient care that does not require a face-to-face visit. Such telemedicine visits have been accepted via regulation adjustments by the Center for Medicare and Medicaid (CMS) governing telemedicine which have been restrictive for decades. The E4 Communication Model [1] provides principles, concepts, and communication techniques supported by extensive research conducted during the past thirty years in patient-centered care, healthcare communication and intra-team communication. The E4 model presents four communication or relationship tasks required during the healthcare encounter (Engage, Empathize, Educate, Enlist). Each of the tasks require specific skills and techniques and has been tested in more than 500 workshops conducted for over 8000 practicing clinicians from every specialty and region of the United States during a five-year period and has been adopted by over hundreds of healthcare systems and thousands of clinicians since 1989 via CME/CE workshops conducted by the Institute for Healthcare Communication [2]. The E4 model is adaptable to telemedicine, specifically to the virtual video visit. The purpose of this article is to provide an overview of the clinical application of the E4 communication model to Telemedicine virtual video visits to increase clinicians' comfort and confidence.

Introduction

The COVID-19 pandemic has changed our lives in so many ways. Our day to day living has no doubt been restricted to a smaller social circle, and many of us have turned inward to reflect upon what is most important in our lives. For those of us in healthcare, the context of providing patient care has changed significantly. Telemedicine, specifically using the virtual video visit, has become a mode of delivery for patient care that does not require a face-to-face visit. Such telemedicine visits have been accepted via regulation adjustments by the Center for Medicare and Medicaid (CMS) governing telemedicine which have been restrictive for decades. Telemedicine via Virtual Video Visits (VVV) is far from new. Telemedicine has been offered to enhance better access to healthcare for patients and their caregivers living in rural and remote areas highlighting that distance may no longer be a barrier. Within states with large rural populations like Arkansas, telemedicine has been integrated for many years because 73 of 75 counties in the state are designated as medically underserved [3]. Even for patients who have access to transportation, the time investment involved in getting to and participating in a healthcare visit is significant. It involves the time to travel to the healthcare setting, the waiting room time before being called into the consult or examination room, waiting again for the clinician to come into the room, and then returning home. It has been estimated that this can take a half to a full day even for a visit that may take only 10 minutes with the clinician [4]. Virtual visits have multiple advantages including ensuring patients' and providers' safety from viral infection and offer advantages with respect to time- and cost- saving. During COVID-19 pandemic, we are now seeing an exponential growth of VVV.

Telemedicine and patient outcomes

For many clinicians, incorporating VVV into their practices poses logistical obstacles—implementing new technology requisites, defining the right patient population to be served, and translating their communication skills into a virtual setting [4]. A systematic review of 36 studies [5] to address the knowledge gap of telehealth visits on patient experience found that the virtual video visit platform can still remain a personal experience. From the patient perspective, the avoidance of travel, time and costs contributes to the satisfaction of tele health, yet face-to-face visits were preferred. It was hypothesized by the researchers that this preference may be more relevant to an older demographic [6] [7], the need to develop rapport [8], and being unfamiliar with tele health [9]. This underscores the importance of clinicians applying the communication skills that are valued by patients and investing time in building patient rapport by listening to patients, providing time and resources for helping patients adapt to virtual technology, and emphasizing patient input into decision-making.

E4 Communication Model

As stated, translating effective communication skills into telemedicine visits via virtual video can be challenging and may be met with hesitation. Yet, the benefits of effective communication between clinicians and their patients are far- reaching and well

documented. Effective communication is the foundation for a strong and trusting relationship, which contributes to clinician job satisfaction and decreases the likelihood of malpractice litigation. Patients are increasingly active in their own care, researching medical information, participating in health-related support activities and expecting to drive key decisions about their care and expecting to drive key decisions about their care. Payers now base payments on patient satisfaction scores, and the trend is expected to continue in the future.

The E4 Communication Model [1] provides principles, concepts, and communication techniques supported by extensive research conducted during the past thirty years in patient-centered care, healthcare communication and intra- team communication. The E4 model presents four communication or relationship tasks required during the healthcare encounter (Engage, Empathize, Educate, and Enlist). Each of the tasks requires specific skills and techniques. The model was tested in more than 500 workshops conducted for over 8000 practicing clinicians from every specialty and region of the United States during a five-year period and has been adopted by over hundreds of healthcare systems and thousands of clinicians since 1989 via CME/CE workshops conducted by the Institute for Healthcare Communication [2].

The E4 model is adaptable to virtual video visits where effective communication skills are even more critical for successful patient encounters. The purpose of this article is to provide an overview of applying E4 to your virtual video visits to increase your comfort and confidence and improve patient satisfaction and health outcomes.

E4 model application to virtual video visits

E1 engage with your patient

Engaging with your patients via VVV requires a preparation checklist that we refer to as setting the stage. The first of two sets of setting the stage tasks is specific to technology:

1. Use hard-wired internet connection or broadband service to allow upload and downloads.
2. Use HIPAA-compliant secure software equipment.
3. Fixed monitor so that movement is minimized.
4. Camera at eye level (friendly view) with upper half of your body. Consider rehearsing with camera on you so you can see how you appear on camera
5. Test audio and video. Whenever possible use a high quality microphone and for privacy you can use headphones especially if you are in a conference room where others are nearby.
6. Close/shut down other programs and devices on your computer/device to reduce distractions.
7. Reduce distracting sounds including, paper shuffling, or loud keyboarding, etc.

The second set of setting the stage tasks is specific to preparing yourself for making a connection

1. Choose a quiet location with door closed.
2. Set a neutral background with professional backdrop (no distractions).
3. Dress consistently with your attire for in-person patient visits.
4. Increase your self-awareness specific to your own nonverbal messages. This is especially important as you start the visit with warm greeting and welcoming facial expression.
5. Keep in mind that making eye contact with the patient requires you to look directly at the camera vs at the patient. This may take a bit of practice to get used to.

E1 Engaging with your patient requires use of the tools and techniques for patient rapport-building starting with welcoming rituals, coaching your patient through the technology, time-saving agenda setting, effective questioning techniques, reflective listening and summarizing. Suggested talking points and sample scripts:

a) Greeting (new patient) — "Hello (name) – I'm happy I could meet with you today."(Follow-up patient) —Hello, (name) - so nice to see your face. Sorry this couldn't be in person, yet glad to meet you and be able to visit safely.

b) Introduce yourself:
State your name and role; ask verbal consent for visit; check to be sure patient is in private space (only persons present for whom they give permission)
"My name is Dr.____, and I'm a family physician here at ____."
"I want to check that you give permission for this visit, and that you are in a private place where only the people you want are in the room."

c) Technology check-in: -Did you have any trouble setting up for our call?
"Can you see and hear me okay? Any adjustments I can make to make you comfortable?"
"Because this maybe a new way for you to receive your healthcare, you may notice a short delay in my responses – that's the technology that we have to get used to."
Be open and honest; suggest-
"This may feel a bit awkward to you. Please know that I am listening, yet I would like for you to let me know if there is something that I need to know or that I've missed."

d) Assure privacy and confidentiality:
"I also want to let you know that everything we discuss is heard only by me"
"I'm in a private space as well"
"What questions do you have about that?"

e) Set visit length expectations:
"We have (15) minutes together today, so I want to be sure we address your most pressing concerns."

f) Elicit concerns and set agenda using open-ended questions.
"Mr. Johnson, what brings you to our virtual visit today?"
- Listen (no interrupting) with eye contact; appropriate facial expression; slight nod

"Ask, "What else?" and/or
"Other concerns you have and/or
"Anything else?"
- NOTE: As in face-to-face visits, the main concern may not be the first one, especially if a sensitive subject. Ask a few times so that all of the patient's concerns are shared up front.

g) Acknowledge agenda items and summarize (reflective listening); Check for clarity:
"So it sounds like you began coughing yesterday, and you woke up with a scratchy throat today, and you're worried it might be serious. Have I missed anything?"

h) If long list of agenda items, prioritize items for current telemedicine visit versus future visit.
"Of the health issues you've shared, which are most important for us to cover today in the time we have?"

i) Negotiate a plan for the visit:
"I'd definitely like to talk more about your cough and sore throat and your concerns about it getting worse, I'd also like you to share your blood pressure logs. Is it okay if we hold off on the sore knee for another visit?"

E1 engage with the patient - final teaching point

Let your patients guide the conversation about their health issue, and then respond. You know from your training that if you listen to your patient, they will tell you the diagnosis, yet clinicians interrupt patients for a myriad of reasons. Studies over three decades show that patients are interrupted within seconds of beginning their story [10] [11]. In Face-to-face visits this is common, and in virtual visits it is even more likely due to

lack of visual cues and the lag time between speaking and transmission. When you interrupt your patient, you send the signal that your patient's story is unimportant. When you allow your patient the time to share, they feel heard and respected. You also will save time by getting everything out in the open up front so you can then realistically manage and negotiate the course of the visit.

E2 empathize with your patient

Clinicians and patients may be concerned that virtual visits impose obstacles to personal connections. Learning how to connect with a patient and display empathy is a skill that all providers must be able to express regardless of the delivery format. The dedicated time in the virtual video visit allows the clinicians to focus solely on the patient and listen more carefully. It may mean slowing down a bit so that the patient feels heard. Yet, in the long run, it can save time [12] because you leave patients with the sense that you truly care, even in a brief telehealth visit. That is empathy - one of your most valuable tools. The skills associated with conveying empathy in virtual visits are key to success as a virtual video provider. Suggested talking points and sample scripts:

1) Make an extra effort to respond with empathy to patient's cues throughout the visit:
   a) Listen and watch for patient's nonverbal cues (evident on thescreen):
      - Patient facial expressions, grimace, discomfort, tearing up, looking away, etc.
      - Patient's tone of voice, hesitation, changes in volume, etc.
   b) Acknowledge what you see and hear using verbal and non-verbal empathy:
      - Verbal empathy examples (slowly with caring voice tone)
        "I can see that you are very worried."
        "I'm glad you scheduled this visit."
        "I sense that you are feeling a great deal of stress right now."
        (Seeing tears) "It's okay, take a minute, I can see this is hard to talk about."
      - Nonverbal examples
      - Use monitor screen to lean in, nod, purposefully use your facial expressions to demonstrate warmth andconcern
   c) Listen for patient's verbal cues for you to expressempathy
      - Patient shares emotions (I'm scared), stressfulevent (divorce, financial problems, recent loss, etc.).
      - Patient shares positive events (marriage, graduation, newborn, new job, etc.)
   d) Use verbal empathy to validate patient's perspective and/or feelings:
   e) AVOID SAYING:
      - —I totally understand.‖ (You don't even if you've had a similar situation)
      - SAY: "I can imagine how (example) you'd be concerned about having a cough, especially now."
        "This has been a difficult time for you and your family with your mother in Intensive Care."
        "I'm so sorry to hear about your brother's recent death, I can see how much he meant to you."
2) Further examples of verbal empathy for use in telehealthvisits:
   a) Use partnership words:
   "We'll figure this out together."
   b) Use message of support:
   "I'm glad you reached out - we'll work out a plan today."
   c) Highlight or amplify a positive event orchange:
   "I'm impressed that you've been continuing to exercise during the quarantine."
   d) Legitimize and Normalize:
   "I think most people we get anxious awaiting a test result."

NOTE: Be mindful that your nonverbal and verbal empathy message is congruent. We have all experienced being on the receiving end of empathic words being spoken yet the voice tone or facial expression says otherwise and comes across as inauthentic.

E2 empathize final teaching point

The convenience of telemedicine aims to meet the evolving needs and demands of the health of our nation yet it can have its drawbacks if not executed well both technologically and interpersonally. The guidelines above for being empathic and caring with your patients during virtual video visits will likely lead to more satisfied experiences for yourself and your patients.

E3 educate the patient

What's the same and different about patient education in telemedicine visits? Patients traditionally receive healthrelated education during their face-to-face visits with their clinician, yet telehealth and computer-based technologies are a viable complementary and/or alternate educational platform. A systematic review [13] examined the influence of using telehealth to deliver patient education that compared virtually delivered education to usual care (face-to-face or paper delivery). The researchers examined five outcomes including clinical indicators, patient knowledge, quality of life, self-care, and healthcare utilization. Overall, the researchers found that 69% of the studies (11 of 16 studies) demonstrated significantly improved outcomes for patients who received virtual education as opposed to usual care. The remaining five studies revealed that virtual education resulted in comparable outcomes to control conditions. These findings support the notion that virtual education is more effective or comparable to usual care for patients with chronic diseases. The skills associated with educating your patient during virtual visits are key to success as a telemedicine provider. Suggested talking points and sample scripts:

1) Ask about self-diagnosis:
   Most patients make a self-diagnosis. [14]. It is human nature to do so. We know that one of the main sources of health education is the internet, information from the news, etc.
   "What ideas do you have about what might be causing this cough?"
   "What do you think is going on?"
   "I know that you're very concerned about this and I know that many of my patients go online to get information. I'm wondering what you are most worried about?"
   The ―why‖ behind asking for self-diagnosis
   Keep in mind by asking, you are communicating respect for your patient and the invitation to discuss is important to the relationship. It underscores how the clinician-patient relationship is changing to more of an active collaboration.
2) Explore perspectives and normalize (empathy is go-to skill):
   ―I can imagine how scary this must be for you, especially since we've all been hearing that cough is one of the major symptoms of COVID-19.‖
   a) Discuss potential differences between your diagnosis and the self-diagnosis. Be careful not to evaluate outside input: family, friends,

internet, news programs, or other clinicians.
"I'm glad you told me, and it sounds like you've been thinking a lot about this. If it's okay with you, I'd like to walk you through some information so we can see together, if this is or is not coronavirus. From there we can find a plan to help you feel better."

b) Incorporate the patient's perspective:
"You are also worried about what this will mean to your family if you do have coronavirus and we can review the best way to protect them."

1) Demonstrate a Teach Back Method [15] using –Ask Tell Ask:

a) ASK
"Tell me what you know about protecting your family members in your home while you are feeling sick."
Reflect back what your patient shared and use body language such as an affirmative nod
"You are correct, it's important to … In addition, I'd like to now go over 3 more things to do."

b) TELL patient in clear, straightforward language (non-jargon), small chunks of information (up to 3 key points)
Speak slowly
Warm facial expression
Smile as appropriate
Eye contact - remember to speak to the camera
Okay, number one, I'd like you to…. Pause
Tell using patients words
Use concrete instructions
Examples:
"Take a tablespoon of your cough medicine before bed at night. Rest during the day—even if you are on the couch and keep a glass of water next to you so you will remember to drink."
"Yes, you will have to stay in your bedroom and be the only one to use your back bathroom."
"There are some medicines that might make you feel more comfortable."

c) ASK patient to go over what you said,
"To be sure I was clear, what stands out as most important to share with your wife?"

d) Based upon their answer, TELL them what additional information they may need to know.
"Thanks for going over that together. I find that by asking my patients to review with me, I feel more certain that we are on the same page."

e) As needed, use the technology to send educational materials to the patient electronically following the telehealth visit.
"After our visit today, I'd like to also send you…. I think you'll find it helpful to have these instructions also in writing."

E3 educate the patient final teaching point

Patient education in telehealth visits employs many of the same communication approaches and techniques recommended for effective face-to-face visits, with a few caveats. To assure patient connection, it is advised that clinicians develop a ―video presence‖ which includes staying visually attentive of your patient's nonverbal and verbal cues, exaggerating facial expressions at times (nods and smiles) and checking to ensure your patient has a clear view of your face and body language. Speak slowly, avoid jargon by using patient's words and reinforce and summarize important teaching points to improve the likelihood that your patient will understand and retain the information.

E4 Enlist with your patient

Communicating in Partnership

This is an important aspect to an effective virtual video visit yet common barriers can impede clinicians such as their level of willingness to discuss the value of partnership. Exploring your patient's goals are essential and a critical element of "shared-decision making" (SDM). A recent study [16] where researchers aimed to lower hospital readmissions concluded that using patient-identified goals as a starting point for discussing medical decisions led to action plans whereby patients were more invested.

Exploring your patient's goals for care with the aim of shared decision making (SDM) will increase the likelihood of reaching agreement while taking into account the best scientific evidence, as well as the patient's values and preferences. This invitation for the patient to collaborate in decision-making around the goals for care will provide you with the information to develop a healthcare plan that the patient will feel committed to follow.

As relevant, ask about expectation and goals of care

"We've discussed a few options to improve your symptoms, what are your preferences at this point?"
"As you think about the next few weeks staying home with your family, what most concerns you?"
"Given what you know about this illness, what's most important to you?"

Invite patient to share in decision making

"We've talked about your goals and we've discussed the treatment options, what option feels like it would work best for you?"

a) Invite questions:
"I encourage you to ask any questions and be open with me about your concerns. You are in the driver's seat and my job is to support you."
ASK
"What questions do you have for me?"vs
"Any questions?"

b) Acknowledge and encourage patient values and priorities:
"It's hard to keep up with everything right now."
"I know you are concerned about your family."

Explore factors that may impact adherence

Invite questions:

a) Acute or chronic condition
"Your options for treatment may likely change as time goes on."
"The good news is that you will only need to remember to take this for 3 days."

b) Biological variability
"We know that this medication works well for some patients yet may not for others."

c) Financial concerns (NOTE: normalizing statement encourage patient to share concerns more willingly)
"Many patients I treat have financial concerns or insurance coverage issues with this treatment. Is that something you'd like to discuss?"

d) Social support
"Mrs. Rutherford, who is available to assist you at home at this time?"
"My patients who start this treatment seem to do better when they have someone to remind them about…"
"Can you think of someone who you can turn to for support?"

"Mr. Johnson, I encourage you to also discuss this with your family. If you want to have someone with you at our next telehealth visit, that would be great. We know that when patients have support from loved Ones, they have a better chance of doing well."

1 Orient the patient to the end of the visit:

"We have just a few minutes left with our call today, I want to summarize and plan next steps."

Close the visit on a positive note – express hope, as appropriate

Clarify the plan as needed.

"Mrs. Smith, I am glad we talked today. Please reach out and contact us with any further questions."

"John, thanks so much for scheduling our time today, I look forward to seeing you again for our follow-up in two weeks. In the meantime, if you have any questions, please check in by phone or through our secure patient portal."

E4 enlist your patient as a partner final teaching point

A 2012 study for the Institute of Medicine's Evidence Communication Innovation Collaborative [17] reported:

1 Ninety percent of surveyed patients want to hear about their options, and not just the doctor's best recommendation for making their decision.

2 Few people were offered this information by their doctors and almost half wanted to discuss the option of doingnothing.

3 Fewer than half said that their provider considers their goals and concerns.

Summary

Communication skills that typically help or hinder patient engagement in your face-to-face patient visits can be applied to your virtual video visits. In addition, there are a variety of tele technical guidelines, tips and this article has demonstrated the application of the E4 Model of Communication [1] to enhance your patient interactions using this medium. In addition to drawing new knowledge and techniques, remember to tap your own vast experience and wisdom gained from your face-to-face patient interactions.

Abbreviations

Term: "CME" Definition: Continuing Medical Education; Term: "CE" Definition: Continuing Education; Term: "VVV" Definition: Virtual Video Visits; Term: "E4 Model" Definition: Engage, Empathize, Educate, Enlist; Term "E1" Definition: Engage; Term: "E2" Definition: Empathy; Term: "E3" Definition: Educate; Term: "E4" Definition: Enlist.

Conflicts of interest

The author declares no conflict of interest.

Acknowledgements

The author wishes to acknowledge the time and expertise of the following colleagues in the production of IHC's(www.healthcarecomm.org) online CME course to improve clinician communication skills during telemedicine visits: Ms. Barbara Andrews, Ms. Mary Barrett, Dr. Dwight Burney, Ms, Cindy Kalenga, Dr. Michael Marks, Dr. Donna Phillips, and Ms. Karen Zupko.

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To cite this article: Bonvicini KA. Telemedicine Par for the E4 Course Health Education and Public Health. 2020; 3:5.