



The EMR and nonverbal communication

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objectives

1. To better understand nonverbal communication
2. To understand how the EHR affects communication, both verbal and nonverbal
3. To understand the communication problem with telehealth

Using words is just one of many ways we express ourselves

How other people understand us is not influenced by words alone

Only 7% of people's interpretation of a message is from what we say and the other 93% is based on nonverbal cues

There are five functions of nonverbal communication in order to be an effective communicator

Definition of nonverbal communication

- A form of communication that doesn't involve words
- It uses body language like facial expressions, gestures, and posture
- You see it in routines and habits

- People always use nonverbal and verbal communication together
- For example, you may fidget without being aware of it when you feel nervous
- Nonverbal communication doesn't carry the same meaning to different cultures
- For example, in most countries, a nod means yes but in Bulgaria, it means no

- We always use nonverbal cues
- They affect so much of our communication skills they can either support or destroy good intentions
- Must teach ourselves how to use them properly

Vocal and nonvocal elements of nonverbal communication

- The word vocal means relating to a person's voice
- Nonverbal communication has aspects that you can hear
- It's not only about body movements and expressions
- The vocal elements referred to paralanguage i.e. the voice or sound you hear aside from the actual words
- This includes the person's tone, pitch, intonation, volume, and pace

- Verbal communication also has vocal and non-vocal elements
- The non-vocal elements refer to symbols and unspoken signs
- Very good examples are sign language
- It is soundless but delivers words

Five functions of nonverbal communication

- Reinforcement
- Substitution
- Contradiction
- Accentuation
- Regulation

reinforcement

- This function means that you can use nonverbal communication to duplicate and support a verbal message
- It makes the spoken message more clear to avoid misunderstandings
- For example, your sister joins a competition and you not only say “good luck” and you hug her and give her encouraging words
- When the competition starts you not only shout her name but also wave your hands, clap, and jump to show that you support her
- These nonverbal cues confirm the message so the receiver can understand it well

- Likewise, when you're mad at your brother you not only say it, you also frown and raise your voice
- In extreme cases you may even lash out, clench your fists, stamp your feet and walk out and slam the door
- The combination of your verbal and nonverbal messages confirms your anger

- Now, imagine the above scenarios without the body language
- You say “good luck” to your sister without sounding excited.
- Imagine telling your brother that you’re mad at him without frowning or raising your voice
- You sound like a robot
- Your siblings think that what you say may not be true

substitution

- There are times when nonverbal communication is enough to send the message
- It can be more expressive and meaningful than words
- Some of the most common substitutions we use are waving our hands instead of saying “hello” or “goodbye”
- Oftentimes, we also hold a hand up instead of asking someone to stop talking.
- When our loved ones break down or lash out, we choose to touch them gently rather than tell them to take it easy.

- Aside from gestures, nonverbal communication is also achieved through eye contact and closeness.
- For example, if you want a person to leave you alone, you can simply give him an intense stare and move closer to him.
- Moving into someone's face sends a much stronger message than telling them to go away.

- One of the best uses of the substitution function is as a solution to a language barriers.
- Babies for example, are not able to use words. But, we can observe their reactions and body language to know what they want.
- When you visit other countries and cultures, you will rely on nonverbal communication.

- Nonverbal communication also substitutes words when dealing with heightened emotions.
- When you get great news, you often leap in happiness rather than saying “I’m so happy.”
- When you get hurt, you will find yourself speechless but in tears when something shocks you, your body responds with a drop jaw. You won’t even be able to say a word.

- Another useful use of the substitution function is in sensitive situations.
- Sometimes, words should not be said out loud because of the effect they may have on other people.
- We also use gestures to send silent messages when we don't want others to notice.
- An example is when attending a meeting or seminar, you use gestures to excuse yourself so you don't disturb other attendees.

- The substitution function is also useful when your surroundings are noisy or crowded.
- When you're in a concert with a friend, use signs and signals to communicate.
- The same can be done in restaurants to avoid disturbing other diners, you signal waiters instead of calling out to them.

- Despite all the benefits of this function, we have to be careful in using it.
- Without words, nonverbal cues can be confusing.
- They can mean different things to other people.
- To some degree, they're subjective because people have different ways of gesturing messages.

contradiction

- Verbal and nonverbal communication are two sides of the same coin.
- But, they sometimes send opposite messages.
- The contradiction function can result in mixed messages.
- You probably heard people tell you that you look terrible; but, they look at you as if you're a beautiful painting.
- That means that they are just teasing you, and they think you're gorgeous.

- Some mixed messages can confuse and even hurt people.
- Others use contradicting verbal and nonverbal cues to make insults and a classic example of this is sarcasm.
- Sarcastic people are good at saying the opposite of what they think by contradicting words and paralanguage.
- When your food taste plain, they might say “what a flavorful meal.”

- Contradictions can occur unconsciously. Sometimes, we notice people acting differently than what they say.
- Our counteraction is to observe their body language and behavior to find out what they really mean.
- For example, your partner might tell you that she's okay but, you can notice that she doesn't enjoy the same things anymore.
- People trust nonverbal cues more than words.
- Nonverbal cues are developed way before we learn to speak.
- Reading body language together with facial expressions gives us clues as to whether a person is lying.

ACCENTUATION

- An upgrade to the reinforcement function.
- To accentuate means to put emphasis on something.
- Reinforcement function supports the meaning of your words.
- The accentuation function adds intensity or power to those words.
- We often observe accentuation when we say something exciting.
- We observe accentuation when someone is preaching or campaigning.
- The accentuation function is like the exclamation mark in our writing.

REGULATION

- The last of the five functions of nonverbal communication is regulation to the flow of our conversations.
- It helps us take turns in speaking without using any words.
- It helps us send signals when we want a response or when we are done talking.
- We can use paralinguage, gestures, and eye contact for this function.
- Pitch is a useful paralinguage in expressing our intention to ask a question.

- The volume of our voice and the pauses we take also mean something. Making our voice louder in some parts of our speech means that we need the audience to pay attention to the point we are making.
- Pausing also gives a signal. It tells the audience to think about what you just said.
- This is a very powerful to speech tool used by speakers and politicians.

EMR

- A computer system for storing, organizing, and retrieving information about patients.
- Electronic records have been shown to be more understandable and fully legible more than paper records.
- Prescriptions can be sent electronically to pharmacists or printed out for patients.
- On screen reminders help reduce the time it takes for physicians to adopt practice guidelines.
- Electronic sharing of medical information among multiple specialists treating the same patient.

- EMR use may influence the doctor – patient communication especially focusing on the nonverbal dimensions of the interaction.
- Better doctor – patient communication leads to improved healthcare outcomes.
- Physicians using EMR's have been observed to adopt a more active role in clarifying information, asking questions and ensuring the completeness of the record.
- However, they were less likely to explore psychosocial/emotional issues such as how health problems affect a patient's life.
- EMR use helped physicians with information – intensive tasks but made it harder to focus attention on relationship – oriented aspects of communication.

- EMR use can cause a disruption in the temporal sequence in the way in which patients explain their illness, a chronology that may be important for diagnosis.
- On the other hand, EMR use was correlated with better physician explanations of diagnosis and treatment, and more positive perceptions of patient involvement in decision – making.
- Based on previous nonverbal research, it is speculated that when physicians access computers while talking with their patients they may have difficulties maintaining the speech regulation signals that are normally associated with good nonverbal communication.

- We know that nonverbal immediacy cues such as sustained eye contact, close proximity distancing, forward leaning, and direct body orientation indicates social readiness, availability for communication, positive affect and liking.
- Nonverbal immediacy cues are also linked with feelings of emotional support and reflect active involvement in the conversation.

EMR use influences the physicians nonverbal communication

- A study performed by John M. Mcgrath, Nedal H. Arar, and Jacqueline A. Pugh
- They videotaped 50 internal medicine clinic encounters in a VA hospital in the Southwest United States
- Physicians read and signed consent form that was approved by the hospitals institutional review board
- Patients were asked to participate as they waited to see the doctor and read and signed the consent form at that time
- Participants were informed that this study was designed to explore informational needs during the medical interview
- Patients were not told that the doctor – patient communication and the use of EMR was a focus of the analysis
- Data were derived from unstructured observations that were made independently by two observers
- The observers developed themes and linked them to identified dimensions of nonverbal behavior

Dimensions of nonverbal behavior

- 1. Kinesics: visual body movements, including gestures, facial expression, trunk and limb movements, posture, gaze, and gait.
- 2. Vocalics or paralanguage: use of vocal cues other than words themselves, including such features as pitch, loudness, tempo, pauses, and inflection.
- 3. Physical appearance: features such as clothing, hairstyles, cosmetics, fragrances, and adornments.
- 4. Haptics: use of touch, including frequency, intensity, and type of contact.
- 5. Proxemics: use of interpersonal distance and spacing relationships.
- 6. Chronemics: use of time as a message system, including such co-elements as punctuality, waiting time, lead time, and amount of time spent with someone.
- 7. Artifacts: manipulable objects and environmental features that may convey messages from their designers or users.

- EMR use was defined as any contact with the computer during the consultation, regardless of whether the physicians were talking or not.
- The two observers took detail fieldnotes of each interview, focusing on how physician EMR use influenced nonverbal communication.
- Using two observers enhance the validity of the observations.
- Researchers later were able to crosscheck each other's findings and eliminate inaccurate interpretations.

- An initial comparison between general categories of nonverbal behavior revealed strong agreement between the two observers.
- The results of the initial comparison show that observers agreed on six out of the seven nonverbal category.
- In summary, it was agreed that 4 of the seven nonverbal categories identified were associated with EMR use (kinesics, proxemics, chronemics and artifacts).
- Three categories were not associated with EMR use (vocalics, physical appearance and haptics).

RESULTS

- Both observers noticed that there was considerable variation among the physician interviews of time spent using the EMR.
- In most interviews physician's use of the EMR was extensive and appear to be an integral part of the interview.
- In a minority of the interviews physician spent very little time at the computer and the EMR appeared to have little or no role in the interaction.
- The interviews were timed; range was between five and 47 minutes with a standard deviation of 8.9 minutes.
- In 13 of the interviews the EMR was used in less than two minutes.
- Hence, 37 of interviews were considered substantial use of the EMR.

- In the 37 hi EMR use interviews it was found that EMR use was influenced by nonverbal communications related to kinesics.
- In order to access the EMR, physicians physically oriented themselves toward the computer rather than the patient.
- Computer use caused a reduction in the doctor – patient eye contact and gestures and an increase in the amount and length of pausing during the interaction.
- It was concluded that the doctor's physical orientation depended on the location of the EMR in relation to the physician.

- It was observed that with EMR use there was an additional effect on physician gaze, gestures, and head nodding.
- As physicians oriented themselves to the computer, they had to break eye contact with patients.
- This was a clear interruption in what one might consider a normal flow of interpersonal communication.
- Observers documented a pattern in the way in which physicians managed the orientation of them to the EMR and the patient

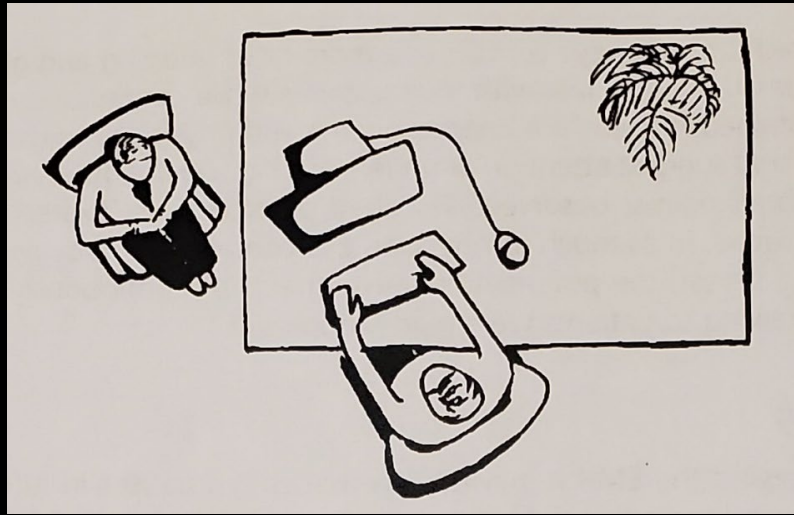
- In some cases physicians accessed the needed information from the computer, stopped, and physically turned toward the patient.
- This allowed them to establish eye contact and engage the patient in further verbal interactions.
- These pauses between EMR attention and patient eye contact were called breakpoints.
- Breakpoints allowed for better eye contact and more head nodding and gestures in cases where physicians tended to talk with their patients while continuously working on their computers.
- Sustained face-to-face interaction enable physicians to use the natural nonverbal indicators that suggest attention or understanding.

- On other hand, in verbal exchanges without breakpoints, observers described physicians as 'fixated on' or even 'glued' to their computers.
- Inasmuch as physician eye contact and body positioning are indicators of patient interest, the potential negative effects of continuously focusing on the computer while talking to patients were readily apparent

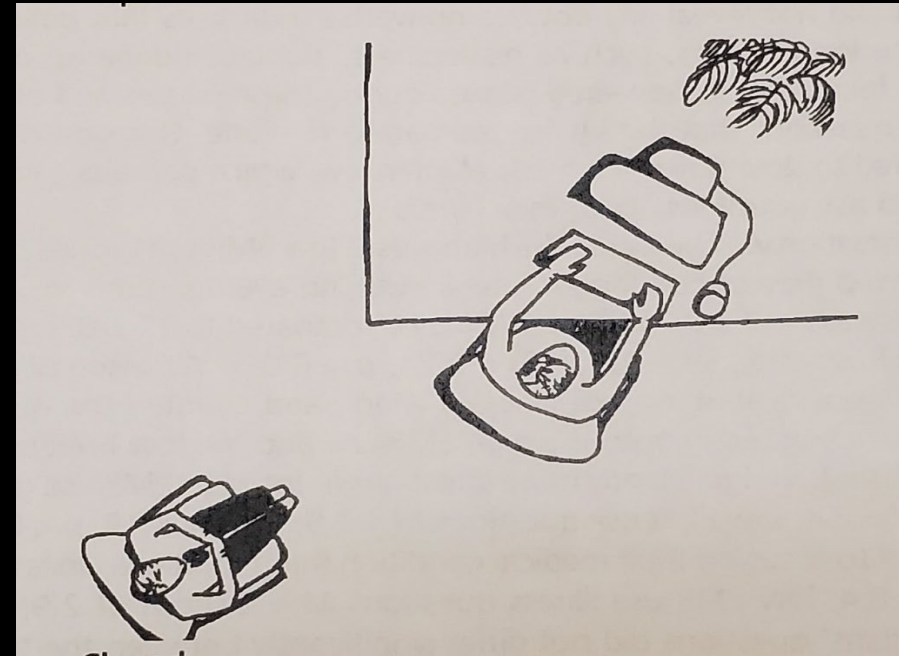
Physician pauses

- When physicians access the EMR it is inevitable that there will be pauses.
- Initially this was thought to be a negative aspect of EMR use.
- Further scrutiny revealed that there were no obvious nonverbal indicators indicating frustration of the patients with the long pauses.
- No restlessness, sighing, fidgeting, or looking around the room.
- In fact the patient's appeared to be more relaxed.
- The silence seem to facilitate the patient to make comments or even ask questions.

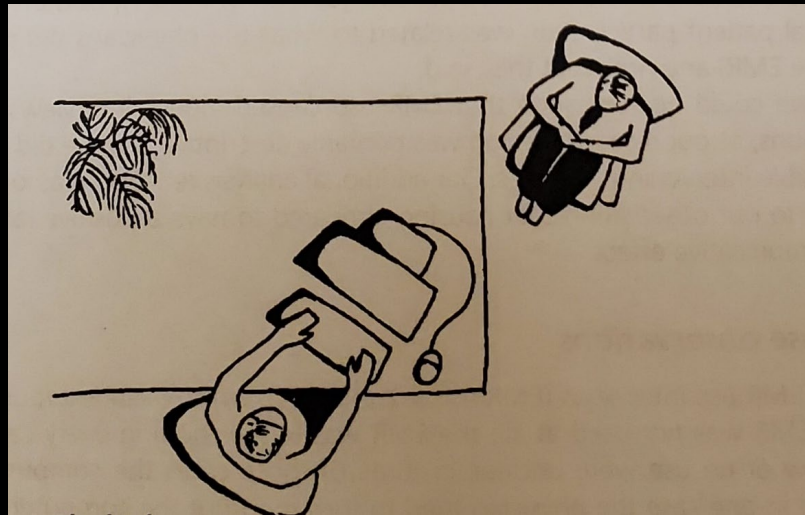
McGrath et al. EMR usage in medical interview



Open



Closed



Blocked

Figure 1 Spatial arrangements (illustrations by Brittany Power)

Spatial considerations

- The open arrangement was the most conducive for effective communication.
- The EMR does not obstruct the visual field between the doctor and patient.
- Physicians and patients were positioned at a 45° angle and also physically set closer to one another.
- Physical orientation at a proximally 45°, eye contact, and close proximity distancing our nonverbal immediacy cues.
- This orientation has been previously linked to perceptions of interest, liking, trust, and emotional support.

Communication and telehealth

- Telemedicine is a vast subject but there are limited data on clinical effectiveness and cost – effectiveness of most telemedicine applications.
- Hence, objective information about the benefits and drawbacks of telemedicine is limited.
- There are many potential benefits of telemedicine: improve access to information; provision of care not previously deliverable; improve access to services and increasing care delivery; improve professional education; quality control of screening programs; and reduce health – care costs.

- Telemedicine also has some disadvantages.
- The main one is a breakdown in the relationship between the health professional and the patient.
- A second would be a breakdown in the relationship between health professionals.
- There are issues concerning quality of health information.
- There are organizational and bureaucratic difficulties.

- Telehealth includes healthcare services provided using audio and visual technology.
- Originally it was developed to provide basic care to rural and underserved patients.
- High rates of use of telehealth are now standard in many practices since the coronavirus pandemic.
- Increasing emphasis on patient satisfaction, providing efficient and quality care, and minimizing cost have also led to higher telehealth implementation.

- Patients and providers have enjoyed the benefits of telehealth, but widespread adoption has been hindered by regulatory, legal, and reimbursement barriers.
- Legislative initiatives have advocated to further telehealth advancements especially with the rapid implementation following the coronavirus epidemic

Telehealth and telemedicine

- Telehealth could be defined as using audio and visual technology to communicate between healthcare professionals, healthcare institutions, and also patients.
- Telemedicine on other hand is a use of the same technology to TREAT patient's conditions.

Five tips for effective communication in a telemedicine visit

- 1. The first step is to 'be present'.
 - This step involves good communication skills including your posture, eye contact, facial expression, and pace of speech.
- 2. Identify the patient's needs.
 - In order to make for a better telemedicine visit you must understand what the patient is concerned about and question when they finish whether that is all they are concerned about.

- 3. Listen to the patient.
- The patient also has nonverbal cues which the provider needs to be cognizant of both the content and their emotions when asking.
- 4. Respond with empathy.
- It would behoove the provider to reflect back what the patient has said so they both understand what the visit is about.
- 5. Share information.
- This is what the patient who is engaged in telemedicine is expecting from the visit.
- The provider must share their thoughts about the situation and make sure that the patient understands what is recommended and what to do if things are not improving.

summary

- The nonverbal cues we give our patients may be more important than what we say to them.
- Effective communication involves both nonverbal and verbal cues.
- Learning the elements of nonverbal communication could be an effective tool in our armamentarium of taking care patients.
- The EMR could enhance our ability to take care of patients, but we need to be cognizant of the nonverbal cues that it may send.
- As the use of telehealth advances we must be aware of its limitations and in this advancement promote better reimbursement