Telehealth Ten: A Guide for a Patient-Assisted Virtual Physical Exam

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TexLa Telehealth at the Crossroads
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Conflicts of interest

• None
Learning objectives

- Identify different types of telehealth visits
- Describe change in ambulatory visit types in 2020
- Describe the Telehealth 10 patient-assisted exam
- Future directions for telehealth
Clinical confidence and the 3 C’s

• Caring
• Communicating
• Competence

Table 1 Qualities that convey confidence in a physician

<table>
<thead>
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<th>Caring</th>
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<td>“He treats me like a person who he cares about.”</td>
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<td>“Always tries to see what he can do to make me better.”</td>
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<td>“His approach to you.”</td>
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<td>Communication</td>
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<td>“Someone who listens, especially with empathy.”</td>
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<td>Repeats back concerns</td>
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<td>Explains the basis of his/her decisions</td>
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<td>“Explains things.”</td>
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<td>“A person who talks straight to me.”</td>
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<tr>
<td>“Someone with good communication; who gets back to me.”</td>
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<td>“I like a doctor who isn’t afraid to admit what he/she doesn’t know about my condition.”</td>
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<td>“Someone who listens; a lot of the young doctors don’t do that today.”</td>
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<td>“Someone who sits down and listens; some of the residents talk to you as they are walking out of the room.”</td>
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<td>Competence</td>
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<td>“It’s certainly not his degree; it has to do with time and attention and the doctor’s continual education.”</td>
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<td>“Someone with a good reputation who is competent; keeps up.”</td>
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<td>“A doctor who reviews tests personally and gives you his/her opinion on their meaning.”</td>
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<td>“A doctor who doesn’t prescribe something when you call with a complaint, but tries to understand what is wrong with you.”</td>
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Above are responses to the question “What gives you confidence in a doctor?”

Defining Telemedicine

- As defined by the American Telemedicine Association (ATA) “telemedicine is the use of medical information exchanged from one site to another via electronic communications to improve a patient’s clinical health status”.
  - Ex: tele-education, tele-consultation, tele-practice, and tele-research

- Telehealth Visit (hub-and-spoke)
  - Provider is in clinic; patient is in person in outreach clinic

- Virtual Visits (interactive videoconference or telephone)
  - Provider is in clinic (or home); patient is at home (or their workplace)

- E-visits
  - Patient is at home and answers questions. Provider reads patient’s story and responds electronically.
Essentia Health – Minnesota, Wisconsin, North Dakota

**Pediatric, family and internal medicine:**
- 162,710 primary care virtual visits (3/1/2020-12/20/2020)
- Virtual visits (primary care):
  - 52% telephone (N=84,411)
  - 39% videoconference (N=63,870)
  - 9% unknown (N=14,429)
- Top 5 primary diagnoses: long-term current use of opiate analgesic, hypertension, well-child visit, type-2 diabetes mellitus, and anxiety.

**Cardiology:**
- 12,479 virtual visits (vs. 32,580 in person) (3/1/2020-12/20/2020)
- Virtual visits (cardiology):
  - 66% telephone (N=8,298)
  - 25% videoconference (N=3,110)
  - 9% unknown (N=1,082)
- Top 5 primary diagnoses: coronary artery disease, chronic diastolic heart failure, paroxysmal atrial fibrillation, chronic systolic heart failure, and hypertension
Differences between primary care and cardiology

Compared to primary care, cardiology patients were older and more likely to have telephone visits (52% vs. 66%) compared to video (39% vs. 25%).
Trends in cardiology visit type over time

• Virtual visits (primary care): telephone (52%, N=84,411) and videoconference (39%, N=63,870), or unknown (9%, N=14,429).

• Top 5 primary diagnoses: long-term current use of opiate analgesic, hypertension, well-child visit, type-2 diabetes mellitus, and anxiety.
Five Key Trends That Will Influence the Growth of Telehealth Care Delivery

Table 1. Five Key Trends That Will Influence the Growth of Telehealth Care Delivery.

<table>
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<td>Continuous innovation in the consumer technology market (e.g., with respect to applications, wearable sensors with wireless monitoring capabilities, and related digital capabilities), which will continue to attract financial capital for product development.</td>
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<td>Continuous advancement in electronic health records and clinical-decision support systems, which has the potential to better integrate telehealth services into care-delivery processes and thus make care delivery more efficient for clinicians.</td>
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<td>Projected shortages in the health professional workforce, which will increase the need to provide access to primary and specialty care for rural and underserved urban populations.</td>
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<td>Reorganization in the delivery and financing of medical care, as a result of private-sector initiatives and the Affordable Care Act, toward value-based reimbursement, which provides an incentive for service delivery in lower-cost care settings outside of traditional hospital facilities.</td>
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<td>Growth of consumerism in health care, with increasing public expectations for convenient and real-time access to health services, personal health information, prescription refills, and other health interventions in a manner similar to other sectors of the economy.</td>
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The Telehealth Ten

- Systematic way to conduct a virtual visit and obtain key physical exam components
- Triage patients who need to be seen in person
- Note: this is not a comprehensive list. Nor do I perform all of these on every patient

Step 1: Vital Signs

- Digital automatic blood pressure cuff
  - Blood pressure (systolic / diastolic)
  - Heart rate
- Scale
  - Body weight
- Thermometer
  - Temperature
- Pulse oximeter
  - Oxygen and heart rate

Step 2: Skin assessment

• Self-assessment
  • New bruises, rashes, lacerations, psoriasis plaques (elbows, knees), or swelling
  • Inspect face, neck, arms, elbows, chest, abdomen and legs

**Video**: have them show you the area of concern
Step 3: Head, Eyes, Ears, Nose and Throat

“Can you hear me now?”
- Do they wear hearing aids?

Video:
- Close their eyes to look for xanthelasma on lids
- Open their eyes and look up to assess for prominent corneal arcus

Images from: https://www.pinterest.com/pin/532972937145393390/
https://www.acc.org/education-and-meetings/image-and-slide-gallery/media-detail?id=5dece92992ef465b9f5e685ab164fb
Step 4: Neck

- Instruct patients to look over their right shoulder and then left shoulder. Any pain or limitation with motion?
- Ask patient to swallow. Any pain with swallowing, which can be a clue to a goiter.
- Ask if they note a bounding pulsation in the neck?

**Video:** While sitting, ask patients to turn their head to the left and observe the neck veins while sitting.
Step 5: Lungs

• Ask patients to deeply inhale and exhale through an open mouth. Listen for cough or wheezes.

• Ask patients to deeply inhale again and hold their breath while you count to 10 and listen again.

Video: Watch for tachypnea and accessory muscle use as signs of impaired respiration.
Step 6: Heart

- Ask if the patient or caregiver can take the pulse at the wrist. Have them count out the beats they feel.
- Ask if there are any skips or pauses or if the pulse is irregular in nature, which can be a clue to atrial fibrillation, atrial flutter with variable block, or atrial or ventricular ectopy.
- If the BP cuff has the visual pulse indicator, ask if they noticed irregularity (or error reading).
Step 7: Abdomen

- Ask patients if their abdomen is soft, nontender, and normal in size. If tender or distended, and especially if coughing causes tenderness, then an in-person clinic visit may be required.
- Ask if any abdominal scars are present, and if so, what they were from.
Step 8: Extremities

- Ask if patients’ hands or feet are colder than usual
- Have patients use the thumb to note any pitting edema
- Put hands around the calves. Is one more swollen than the other?
- For those with high cholesterol, have them feel the Achilles tendon and see if it feels lumpy or bigger than their thumb, which can be a clue for an Achilles tendon xanthoma seen in familial hypercholesterolemia.

**Video:** Confirm impression of lower leg swelling, especially if one leg is more swollen.
Step 9: Neurological

- Ask patients to hold their arms out with elbows straight, spread their fingers, and turn their hands up as if catching rain.
- Ask patients if they have noticed a tremor (or if tremor when using utensils to eat) or if one arm is weaker than the other.
- Ask patients to rise up from a seated position with arms folded across chest to detect proximal weakness.
- Ask them to walk to the door and back.
Step 10: Social Determinants of Health

- Inquire about issues regarding changes in diet, physical activity, sleep, stress, and social support. Ask about if they have insecurities related to food, medicines, and supplies, if they have adequate housing and transportation, and if they feel safe at home.

**Video:** Observe patients’ surroundings and interactions with caregivers. Assess their mood and facial expressions during the visit.
Limitations in documenting the physical exam
Future Direction

1. Adapting telehealth visits to different populations, including the elderly, individuals with cognitive impairment, or individuals with low health technology literacy
2. Rates of feasibility, acceptability, and fidelity of patient-assisted virtual examinations
3. Integration of virtual examinations with interpreters
4. Meeting patients’ psychosocial needs
5. Gaining and maintaining trust through a virtual interface
Limitations

• Tradeoffs: telehealth visit vs. in-person examination
  • No rooming staff doing medication reconciliation, allergies, vital signs
    • Remote monitoring
  • No “After Visit Summary” or Check-Out process to ensure timely follow up
  • Clinic protocols to aid in scheduling patients
  • Standardized clinic documentation
    • Telehealth visits (TCON – patient at outreach clinic site) Dot phrase: .telemedmnma
    • Virtual Visits (video/telephone – patient at their home or in facility) Dot phrase: .virtualvisitdocumentation

• Special populations: pediatric, geriatric, nursing home
Key to successful telehealth visit

1. Listen to the patient. 3 C’s: caring, compassion, competence
2. Perform a limited, but potentially useful, patient-assisted physical examination
3. Perform closed-loop communication
Questions?

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