

Telemedicine and Chronic Respiratory Illness

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Why telemedicine?

Circumstances that would make telemedicine a good option

- Dyspnea -Patient is too dyspneic to come to office
- Patient is too unsteady to come to office
- Patient is too busy to travel to office
 - Modern American - Amazon Prime/Walmart/McDonalds one stop shopping
 - Time
 - Distance
- Increase the frequency of patient interaction and expedited monitoring.
- Hypoxia
- Equipment
 - Oxygen
 - Portable ventilator
 - CPAP
 - Walker, Wheelchair

Why Telemedicine?

Prevalence of respiratory illness

- ▶ -COPD (MMWR 11/23/12. 61(46): 938 to 943)
 - 6.3% of Americans have COPD-15 million people
 - *age 18 to 44 = 3.2%
 - *age greater than or equal to 65 = 11.6%
 - 64.2% feel that dyspnea impairs the quality of life
 - 55.6% were taking at least one daily medication.
 - 43.2% reported visiting the physician for COPD in the previous 12 months.
 - 17.7% had visited an emergency room or had been admitted to a hospital in the previous 12 months

Why Telemedicine?

Prevalence of respiratory illness

▶ Hypoxia

- Based study of sustained oxygen therapy in the Medicare population from 2001 to 2010
- 329,482 patients.
- 38.9% used oxygen.
- In the Mountain region, of 16,235 patients, 53.2% or 8631 patients had used oxygen at any time and 5220 or 32.2% were on sustained oxygen therapy

▶ Pulmonary Fibrosis (AJRCCM;174:7, 10/1/2006), using broad case finding criteria

- 4 per 100,000 persons aged 18 to 34
- 227.2 per 100,000 a 75 and older
- 42.7 per 100,000 using broad criteria; 14 per 100,000 using narrow criteria

▶ Chronic respiratory failure

▶ Sleep apnea

- 26% of adults between ages 30 and 70 have sleep apnea (AASM 9/29/2014)
- Subject of its own Webinar
- Evanston Regional Hospital virtual pulmonary sleep clinic

What Diseases?

- ▶ COPD
- ▶ Pulmonary fibrosis, interstitial lung disease
- ▶ Neuromuscular respiratory failure
- ▶ Thoracic restrictive diseases
- ▶ Pulmonary hypertension
- ▶ Lung cancer
- ▶ Sleep apnea
- ▶ Asthma



What do you REALLY need?

- Originating site in a clinic/office
 - ▶ Computer or smartphone
 - ▶ Camera, microphone, speakers
 - Logitech camera, headphones, speakers
 - iPad
 - Kubi
 - ▶ USB or Bluetooth stethoscope
 - Eko
 - Littman
 - ▶ Otoscope
 - Firefly
 - ▶ Presenter - The person who is the interface between the patient and the physician

What do you REALLY need?

- Originating site at home
 - ▶ Computer or smartphone
 - ▶ Camera, microphone, speakers
 - ▶ Home BP kit
 - ▶ Pulse oximeter
 - ▶ Fingertick glucose - optional
 - ▶ Home thermometer
 - ▶ Peak flow meter
 - Simple to do, inexpensive
 - Home spirometry programs have not been found to be effective in altering outcomes.

What do you REALLY need?

- Subacute facility
 - ▶ The goal is to keep the patient in the facility and PREVENT readmission to the hospital
 - ▶ Electronic medical record
 - ▶ Establish policies and a care plan for acute evaluation.
 - ▶ Also a subject of its own Webinar

What do you Really need?

- Distant site
 - ▶ Call center to coordinate bringing the patient together with the doctor and the healthcare team at the RIGHT TIME
 - ▶ Physician or nurse practitioner or physician assistant
 - ▶ Nurse educator
 - ▶ Respiratory therapist or polysomnography technician
 - ▶ The physician and all paraprofessionals MUST be licensed in the state of the ORIGINATING SITE, where the patient is located.
 - ▶ Multiple distant sites could potentially meet with the same patient in a virtual room - Zoom, GoToMeeting, Vidyo.

Care coordination

- Preparation before and after the actual telemedicine interaction is the most important component to make a program work.
 - ▶ Call center coordination to bring the patient and the physician, nurses, technicians, together at the right time
 - ▶ Updating the electronic medical record with pulmonary function studies and the latest lab results, x-rays and ultrasounds before the actual visit
 - ▶ Arranging home oxygen, nebulizer, CPAP
 - ▶ Arranging home ventilation
 - ▶ Working with durable medical equipment suppliers
 - Coordinating their visits with the physician
 - ▶ Submitting prescriptions for medicines via electronic prescription
 - ▶ Arranging home visiting nurse, home physical therapy

Who will pay?

▶ Medicare

- The patient, or originating site, must be a clinical setting such as a doctor's office/clinic or hospital.
- The Alliance for Connected Care estimates that choosing telemedicine visits over in-person treatment for acute care would actually result in cost savings for Medicare of \$45 per visit
- The next generation ACO initiative is going to address removing this restriction

▶ Medicaid

- 48 states have some type of telemedicine coverage, though it is variable. 25 states recognize the home as an originating site

▶ Private carriers

- Many private carriers are recognizing the home is originating site with cost savings estimate of \$126 per acute care visit
- Variability of regulations among commercial insurers
 - United Healthcare
 - Anthem



Questions?????

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