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 and 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
  - Fingerstick 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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