Telemedicine Introduction

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Objectives

• Overview and History of telemedicine
• Describe appropriate practices to initiate a Telemedicine service module
• Use simulation to help teach Telemedicine consultations properly
• Utilize peripheral devices that can be used in Telemedicine to remotely manage acute and chronic health conditions
My experience with Telemedicine

• Three years using Telemedicine equipment and participating in consultations with faculty
• Participated in approximately 300 telemedicine consultations per month
• Pediatrics, Urology, Orthopaedic Surgery, Dermatology, Burn/Surgery clinic, Pharmacy
Challenges that TTUHSC faced in West Texas counties:

- 98 were considered rural
- 22 had no physician
- 10 did not have any providers
- 21 did not have a community or clinic based pharmacy
- 32 did not have a hospital
- 75% of the region was more than 90 miles from a comprehensive trauma hospital
From the February, 1925 issue of Science and Invention
Showing how the teledactyl is worked. The impulses of the teledactyl are transmitted by radio to the patient, who, in turn, has a similar instrument, which not only receives but also transmits the same impulses. In the patient’s room is also stationed a television transmitter, which transmits the light impulses back to the doctor.
WHAT IS TELEMEDICINE?
What is Telemedicine?

- Other terms “Telehealth”
- Originally created to treat patients who were located in remote places
- Convenient medical care for patients
- Competitive healthcare landscape to help keep physician’s stay independent
Definition

Telemedicine allows for health care professionals to monitor, assess, evaluate, and treat patients that are in remote areas with no health care professionals.
Implementing it successfully

1. Know your program vision

2. Clearly show your program objectives and how they fit into your organization’s objectives

3. Build a long term financial plan
Financial Plan

Is it going to be a:

• Revenue Model
• Cost Savings Model
• Strategic Model
Implementing it successfully

4. Make sure it matches your usual workflow
Lessons learned and success stories

- Pediatric Geneticist in Alpine
- Follow-up burn patients
- Hurricane Rita patient seeking surgical consultation
EXAMPLE:

RIGHT

If the consulting physician usually expects to see the patient’s chart as they enter an exam room, they should see the same or similar patient chart as they enter the telemedicine consulting room with the same information in the same format. Note that telemedicine protocols have now been formally accepted by both the Dermatology and Ophthalmology Associations.
EXAMPLE:

**Wrong:** Telemedicine is presented as a “different way” to deliver medicine with its own workflow and different forms.
Training

• Using a simulated patient for the encounter to practice
• Practicing with equipment that are used at both sites
• Workflow that is practiced at the clinics
• Basic trouble shooting
Differences

Brick and Mortar clinic vs Telemedicine

• 3 Weeks vs Minutes
• Copayments range $20-45 vs $49
• Dr. Board certified physicians vs Dr. Board certified physicians
Projects taking place at TTUHSC

- Telemedicine Wellness, Intervention, Triage and Referral Project (TWITR): promotes school safety by providing psychiatric assessment and referral services to students struggling with behavioral and mental health issues who are dangerous to themselves or others.

- Youth Empowerment Training Initiative (YETI Project): Funded by Texas Healthy Adolescent Initiative, it addresses mental health, substance use and access to healthcare from a youth perspective.
Projects taking place at TTUHSC

• Innovative Health Information Technology (InHIT): formed to assist health care providers and hospitals in modernizing their organization with the use of certified electronic health records and telehealth technology (HIT)

• TexLa Telehealth Resource Center (TexLa TRC): Collaborative project with TTUHSC and Louisiana Health Care Quality Forum, they provide technical assistance and resources to new and existing telehealth programs through TX and LA, provide guidance and active, hands-on training in Telehealth.
El Paso and Telemedicine

- Dr. Alozie is working on securing a grant for equipment that will integrate with current clinical EHR and possible rural communities that will be working with the TTUHSC faculty.
GGHSON Distance Education

USDA Rural Utilities Service Grant:
To install video conferencing infrastructure and equipment at 10 sites in West Texas to deliver health education to rural communities. The network will also provide access to Continuing Nursing Education to these rural areas.
Telemedicine Chart
Equipment that we will see today
General Examination Camera
Digital Otoscope
Ophthalmoscope
Camera and Illumination System
Cameras can be attached
Dermascope
Telephonic Stethoscope
Depending on Specialty

- Naso-Pharyngoscope
- Sinuscope
- Digital Video Colposcope
- Dental Camera
- 12 Lead Digital ECG
- Digital Spirometer
- Abdominal USB Ultrasound Probe
- Transvaginal USB Ultrasound Probe
Resources


Kahn J. Virtual Visits-Confronting the Challenges of Telemedicine. New England Journal of Medicine 2015; 372;18