Clinical Video TeleHealth (CVT) in an ENT Outpatient Clinic

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Disclosure

- **Disclosure**: The comments and ideas presented here are those of the author and do not necessarily reflect those of the Department of Veteran Affairs or the United States Government.
- **Conflict of interest**: I have no conflict of interest to disclose

Objectives

- List 3 types of telehealth
- Triage 5 consults for appropriateness for CVT vs face-to-face appointments
- Discuss at least 3 different ways CVT could be used in ENT specialty care

Case Studies

- **Let’s consider these possible opportunities...**
  - (Cases omitted)

Case #5

Consider which cases you may schedule for CVT vs traditional face-to-face visit.

Use of Technology

- Have you ever used technology to improve your healthcare experience?
  - Secured messaging with provider
  - Text reminders for appointments
- Would consider the use of technology to improve your healthcare experience?
  - To save time!
  - To save money!
Technology in use than ever
- Fewer publications/newspapers
- Cellphones for a wide variety of purposes
- Communications – phone, text, FaceTime
- Healthcare using email/secured messages
- Online access to personal health info

Access to Healthcare
- Top priority for Veterans Health Administration (VHA).
- Extensive nationwide Telehealth network increases opportunity for success
- VHA is one of the world leaders in use of CVT technology.
- High satisfaction rate among Veterans related to their experience with CVT

Improving Access to Healthcare

Healthcare and Travel
- How far do travel you for healthcare?
  - Primary care
  - Specialty care
  - Would you travel further if included in your plan?
- Impact of travel time for you
  - Time away from family/work
  - Cost of gas or use of public transportation
  - Wear and tear on personal vehicle or friend’s

Why Telehealth in VA

Why Telehealth in VA
This line shows the catchment area for the ENT clinic at the VA Ann Arbor Healthcare System. The distance from Ann Arbor varies from 37-528 miles roundtrip.

Why Telehealth in VA

- Travel Reimbursement - $0.415/mile
- Veterans qualify for travel benefits if Veteran has a service-connected (SC) disability of 30% or more (travel for care relating to any condition)
- Travel is in connection with care for SC disability
- In receipt of a VA pension
- Previous year income does not exceed maximum VA pension rate
- Projected income in travel year does not exceed maximum VA pension rate
- Travel is for a C&P exam
- Travel is to obtain a service dog
- Travel is in relation to VA transplant care

Telehealth

- The use of electronic information and telecommunications technologies to support long-distance clinical health care, patient and professional health-related education, public health and health administration

Types of Telehealth

- **Home Telehealth**
  - **Store and Forward**
  - **Clinical Video Telehealth (CVT)**

Types of Telehealth

- **Home Telehealth**
  - Monitoring physiological information
  - Allows for changes in medications
  - Improved adherence to recommendations
  - Used with diabetes and hypertension
Types of Telehealth

- **Store and Forward**
  - Asynchronous review of clinical information
  - Information: data, image, sound, video
  - Allows for clinician to review offline at a convenient time
  - Frequently used in Dermatology and ENT

**Tele dermatology**

- Patient with skin condition visits clinic
- Clinic GP/nurse records and sends patient case via mobile phone
- Remote dermatologist reviews and consults on case via website
- Clinic GP/nurse provides necessary treatment, referral or follow-up


**ENT- Audiogram Review – S&F**

- A retrospective review of 100 audiograms showing asymmetrical SNHL:
  - 1) MRI of the internal auditory canals with gadolinium to rule out retrocochlear lesion=$\text{32}$
  - 2) Auditory Brainstem Response to assess for possible retrocochlear lesion=$\text{12}$
  - 3) Medical clearance given for hearing aids with retest of hearing in 6-12 months=$\text{32}$
  - 4) Medical clearance given for hearing aids=$\text{24}$

**Outcome of Audiogram S&F**

- **ENT clinic appointments saved**: 100 appointments
- **Average days for initial evaluation**: 5.4 days
- **Potential VA travel reimbursement savings**: $4,606.50
- **Total travel miles saved for Veterans**: 10,804 miles

**Types of Telehealth**

- **Clinical Video Telehealth (CVT)**
  - Synchronous appointment with both parties and a communication link that allows a real-time interaction.
  - Video-conferencing equipment is one of the most common forms of technologies used
  - Use of peripheral devices, such as otoscopes, stethoscopes, and total exam cameras

**Keys to success for CVT**

- **Infrastructure**:
  - Equipment - include high definition monitors, excellent network connections, knowledgeable medical staff
  - Create a protocol where each individual’s roles are clearly defined.
- **Include the patient** in his/her care, expecting a video conference,
  - The telehealth coordinator obtains and documents verbal consent for CVT visit prior to first CVT visit
### Clinical Video Telehealth

#### Item

**Clinical Video Telehealth variation:** Does the introduction of telehealth modalities result in variations to the normal clinical routine? If so, describe.

#### Clinical reminders

- none

#### Vital signs & weight

- yes
- VS taken by patient, TCT, recorded in CPRS, verbally reported to provider during CVT visit.

#### Histories

<table>
<thead>
<tr>
<th>Interview</th>
<th>yes</th>
</tr>
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<tbody>
<tr>
<td>Yes—Will use webcam and/or videoconferencing equipment.</td>
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| Review of intervention results from previous visits | no—CPRS |

### CVT vs Traditional Visits

**Key Factors for success of CVT**

- Proper Triage
- High quality photos/images/video
- Effective infrastructure and culture

**CVT advantages:**

- Better, cheaper, and faster
- Patients travel shorter distances
- Decreased time away from work/home
- Decreased wait times for appointments

### Advantages to providers

- Often take less time
  - No waiting for pt to get to or leave from exam room
  - Vital signs, EKG, labs, etc all completed outside of visit
  - Removal of sutures/bandages and replacement, when needed by TCT
  - Plan CVT for patients who are flu or simple new problems
Case #1

- (Cases Omitted)

Impact of CVT

- Introduction of CVT in Jan 2014
- By the End of July 2014:
  - Completed 35 H&Ps
  - Completed 20 Post op visits
  - Completed 32 consultations
  - Saved 87 clinic appointments
  - Saved $7181 potential travel reimbursements
  - Saved 17,303 miles of travel

Improvements/Next Steps

- CVT consult to better track appointments
- H&Ps
- Post ops with time frame, +/- sutures to remove
- New consults
- Inception of consult March 2015- increase 4 fold
- Keeping residents/staff aware of CVT availability
  - Change every 3 months

References