Telehealth Applications in Audiology

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A&SP FY10 Strategic Plan - Telehealth Goals

- Foster the development and evaluation of telehealth applications in audiology in the areas of testing, programming, and rehabilitation.
- Identify and provide educational opportunities on telehealth to the A&SP field through VANTS calls and presentations at national meetings.
- Establish a SharePoint repository of resources for implementation of telehealth programs.

A&SP FY10 Strategic Plan - Telehealth Goals

- Identify and appoint a point of contact to investigate current telehealth outcomes research and facilitate research on evaluation and effectiveness of telehealth programs.
- Contact professional groups outside of VHA to gain additional telehealth resources and to consider collaborative efforts (e.g., ASHA, AAA).
- Assess the communication and swallowing needs of Veterans in rural settings.

Potential Benefits of Telehealth

- Decrease in travel time
- Decrease in demand for parking
- Decrease in costs associated with fee-basis clinicians (or difficulty finding clinicians)
- Decrease in travel pay costs
- Increased use of clinical services (pts may be less hesitant to come in for appts)

Potential Connections

- Medical Center with CBOC
- Medical Center with pt's home
- Medical Center with Specialty Center
- Two sites within Medical Center (e.g., intraoperative monitoring)
- Polytrauma I/II sites with Level III sites
- VA with DoD

Potential Audiology Applications

- ***Hearing aid programming***
- ***Hearing aid troubleshooting and f/u***
- ***Aural rehabilitation groups***
- ***Tinnitus groups***
- CI programming
- Hearing screening
- Hearing monitoring
- Diagnostic audiology
- Consultations with experts

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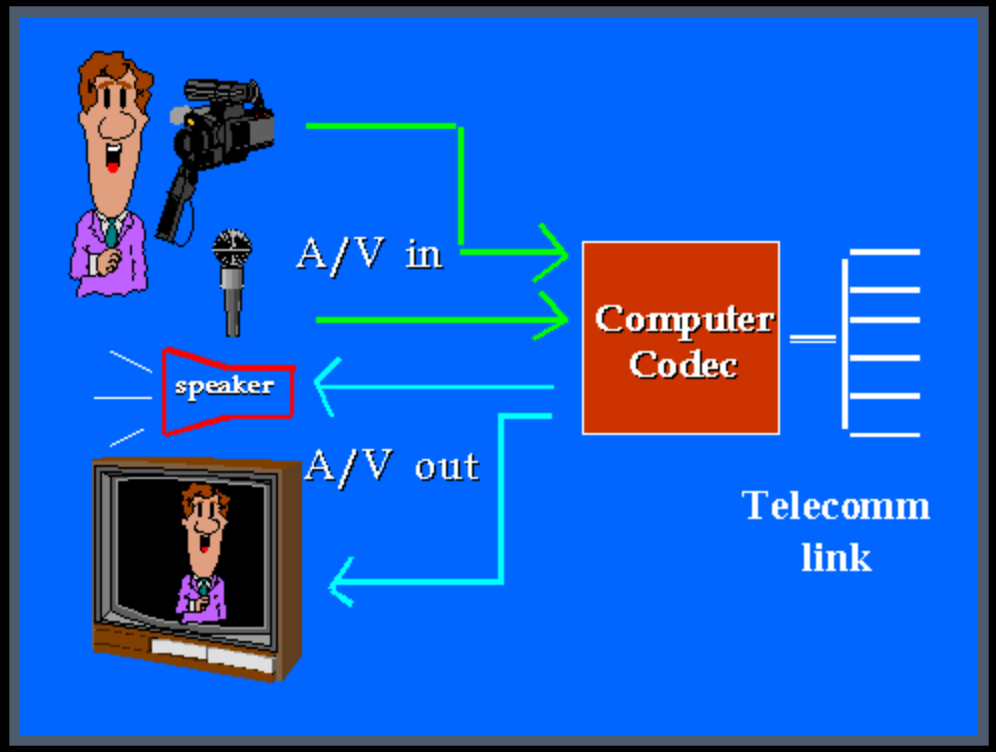
TELEAUDIOLOGY

Joint Defense/Veterans Audiology Conference 2010

Chad Gladden, Au.D., CCC-A
Clinical Audiologist
Supervisor, Audiology and Speech Pathology

- Provide a broad overview of the planning and implementation processes related to current telehealth services.
- Describe the specific VISN 12 telehealth initiative for audiology services.



Telehealth Overview: Part I

Background: Telehealth

- Involves use of video, digital pictures, and messaging devices to treat veterans in locations that may be hundreds of miles from a VA medical center.

- New way of providing "Care Coordination," using the computerized patient record and telehealth to link veterans with a care coordinator.

Purposes of Telehealth

- To provide alternative services in areas where it is difficult to recruit staff at the necessary level.
- To increase efficiency in places where travel time for current VHA clinicians would significantly diminish their clinical time.

Care Coordination: Three Modalities

The Office of Care Coordination divides Telehealth into three smaller modalities and has established training centers for each modality.

- General (real-time) Telehealth
- Home (remote-monitoring) Telehealth
- Store-and-Forward Telehealth

Telehealth Program: Planning Process and Resources

VHA Office of Care Coordination offers:

- valuable and well-developed resource guidelines.
- a 7-step process that the VA teams can use to design and implement a new telehealth program.

Planning Steps (CCGT)

1. Select a development team.

2. Identify the existing primary care, consultative services and inventory resources that support the telehealth network mission and goals.

3. Complete a clinical and patient needs assessment.

Planning Steps continued

4. Identify opportunities to use the telehealth technologies to support the program mission and goals.

5. Identify technical aspects of the telehealth application(s).

Planning Steps continued

6. Identify specific operating processes to integrate telehealth network activities into current operation (the ACTION PLAN).

7. Identify methods, evaluate and sustain the new program.

Planning the Telehealth Environment

Room Design

- Location
- Size
- Power
- Space arrangement
- Lighting

Budget Considerations

- Costs associated with equipment, labor, and facilities.
- Capital investment, expenses, and overhead.
- Start-up and ongoing sustainability: distant site and originating site.
- Complicated by concerns surrounding workload and reimbursement issues.

General TH Challenges:
Credentialing and Training

- Credentialing and training of telehealth providers; an area of increased focus particularly through Joint Commission and CARF.

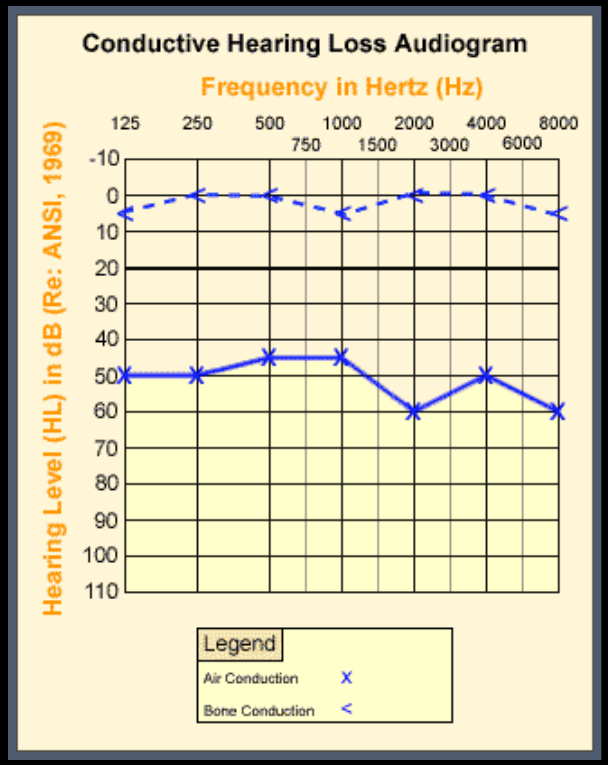
(CCGT offers recommended starting points for those interested in getting involved in telehealth services.)

General TH Challenges:
Evaluation

- Development of clear outcome measures, including addressing patient satisfaction via telehealth.
- Establishing candidacy or inclusion criteria for this type of rehabilitative service.
- Maintaining high quality of service is on-going commitment.

General TH Challenges
continued

- Local clinic responsibilities take precedence.
- Overall set-up (time, personnel, cost).
- Equipment acquisition and maintenance.
- Variability in technical skills of staff.
- Scheduling conflicts.

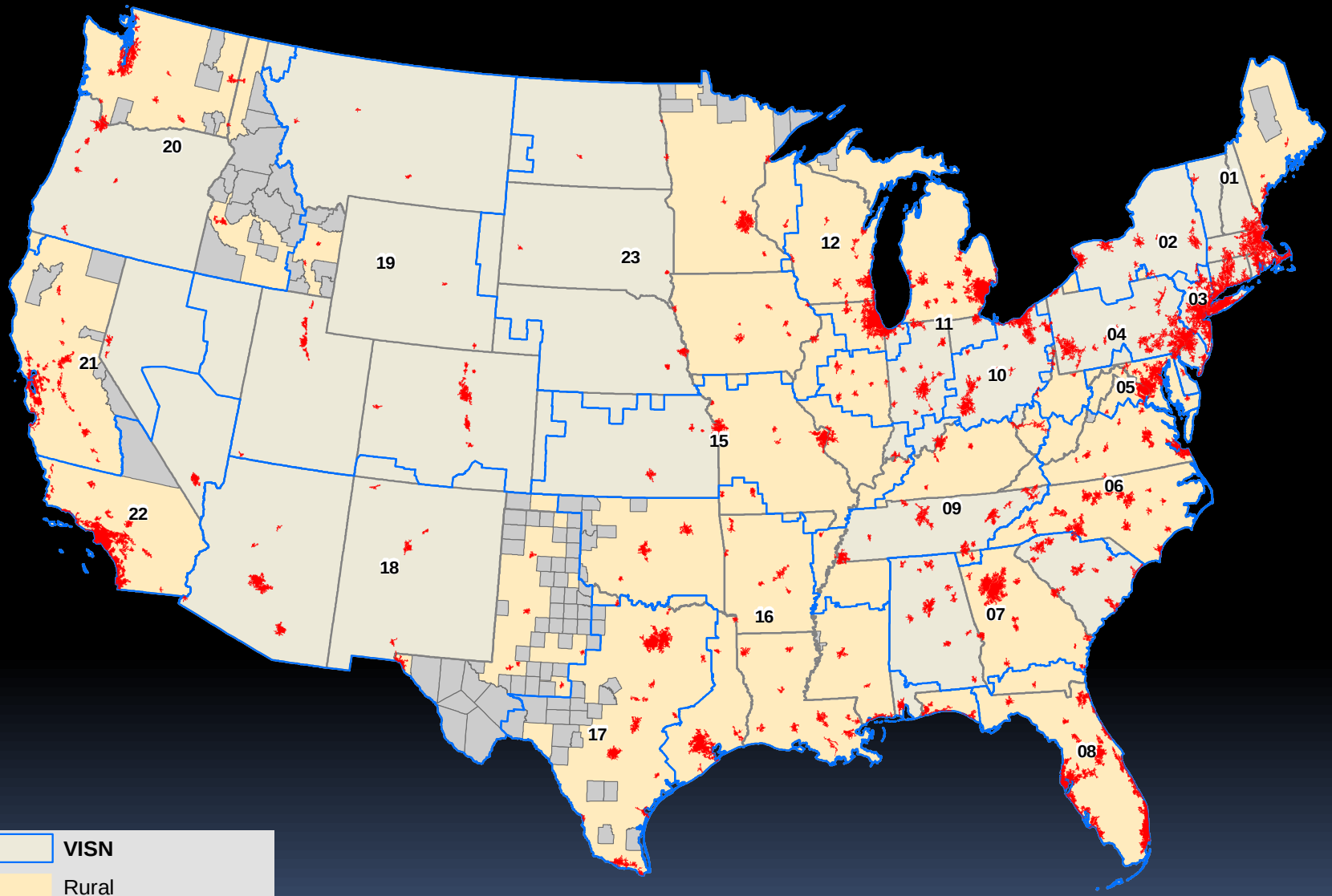


Teleaudiology: Part II

2005 ASHA Report: Audiology Telemedicine

Areas needing further investigation:

- Development and validation of telepractice clinical protocols
- Efficacy and effectiveness of clinical outcomes
- Minimal acceptable standards for delivery
- Reliability and validity techniques to ensure quality
- Increased advocacy for reimbursement



Map generated by VHA Planning Systems Support Group, field unit for the VHA Office of Assistant Deputy Under Secretary for Health for Policy & Planning, April 6, 2007

Audiology Challenges:

Telecommunications Set-up

- T1 line needs to be in place, as well as defined peripherals for approved videoconferencing equipment.
- Audiology equipment is not yet established with government contracted videoconferencing units.
- Remote access poses problems to hearing aid programming interfacing.
- Coding issues need to be addressed.

Audiology Challenges:
Compatibility

- NOAH is not compatible with a WAN as currently established by Hearing Instrument Manufacturing Software Association (HIMSA).

- HIMSA representatives state that we are 2-3 years from this application being commercially available.

Teleaudiology Design: Madison VA

Baraboo and Beaver Dam Design

- Initial diagnostic services will be completed at the Madison VA.

- Veterans who are candidates for hearing aids will be interviewed to determine if a teleconnections medium is appropriate for the fitting and follow-up services.

Teleaudiology, design continued

- Initially, health technician will travel to each site to serve as a site facilitator.
- Longer- term facilitation will be determined as appropriate.
- Real-ear verification unit is integrated with teleconferencing equipment.

Teleaudiology, design continued

- Software application is utilized to remotely control desktop for programming adjustments.

- Newer videoconferencing options allow clinician to engage with remote participants by interacting with objects/content on screen (e.g. high resolution patient education pieces)

TeleHealth® Services

- Basic information pertaining to hearing aid use is reinforced.
- Some educational information is provided prior to the fitting appointment.
- Follow-up and programming changes are made as needed.

TELEAUDIOLOGY

William S. Middleton Memorial
VA Hospital

Sample brochure

WHO WILL BENEFIT FROM TELEAUDIOLOGY?

- Veterans in geographically remote areas where audiology services are not available
- Veterans who rely on family or caregivers to drive long distances for appointments
- Veterans with busy schedules who would like to minimize travel
- Veterans who are able to communicate effectively using audio-visual equipment

Patients are evaluated for Teleaudiology candidacy at the initial hearing evaluation appointment.

The Department of Veterans Affairs and the Madison VA are leaders in using technology to improve the quality of care delivered to all veterans. The goal of Telehealth programs is to improve access, quality of care, and patient satisfaction through state-of-the-art technology.

Teleaudiology is a new and innovative service for veterans. Therefore, any feedback is welcome and would be used to improve the quality of services provided

William S. Middleton Memorial VA Hospital
Department of Audiology
Phone: 608-280-7175
Fax: 608-280-7188

WHAT IS TELEAUDIOLOGY?

Telehealth is the use of remote video, audio, and other information to treat veterans in rural locations that do not have access to specialty care such as audiology.

Teleaudiology is a type of telehealth care that aims to provide hearing aid fittings and follow-up services to veterans in rural locations using video and picture imaging with a trained and credentialed professional.

There are currently two pilot facilities located in *Baraboo* and *Beaver Dam*.

WHY IS TELEAUDIOLOGY IMPORTANT FOR OUR VETRANS?

Teleaudiology can:

- Increases veterans' access to hearing aid care
- Minimize travel distance for veterans who do not live near a facility that offers hearing services
- Improve support for our veterans' caregivers
- Promote immediate, convenient access to specialists

HOW DOES THE TELEAUDIOLOGY PROGRAM WORK?

<u>At the initial appointment</u>

The veteran will receive a comprehensive audiologic hearing evaluation and hearing aid evaluation at the Madison VA clinic.

<u>For following appointments</u>

Veterans will work with a credentialed professional who is stationed at the Madison VA.

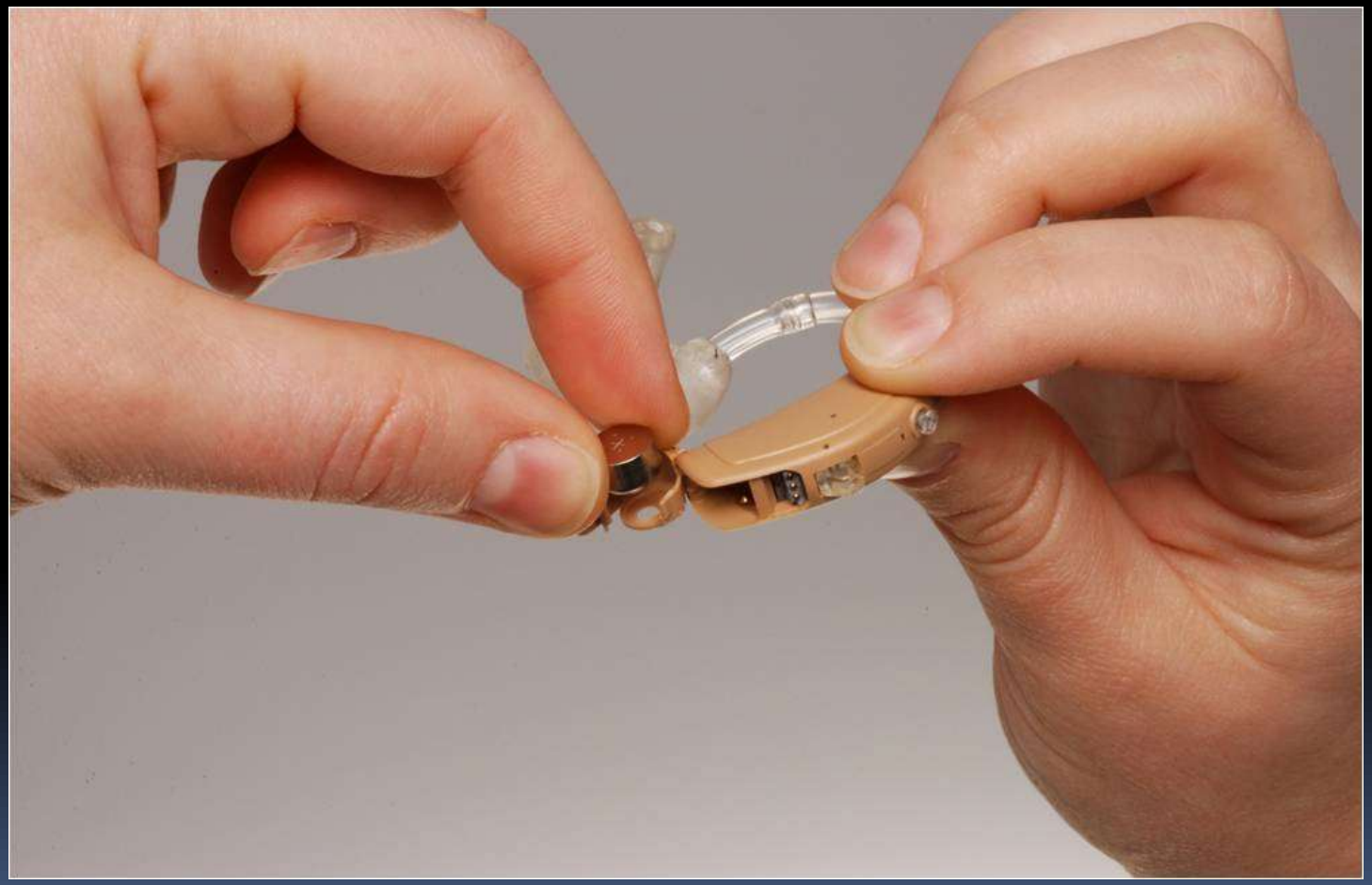
The veteran will report to his/her local VA clinic at the designated appointment time.

Hearing aid services including the fitting, orientation to the new hearing aids, and follow up care, will be provided through live interaction via a television screen.

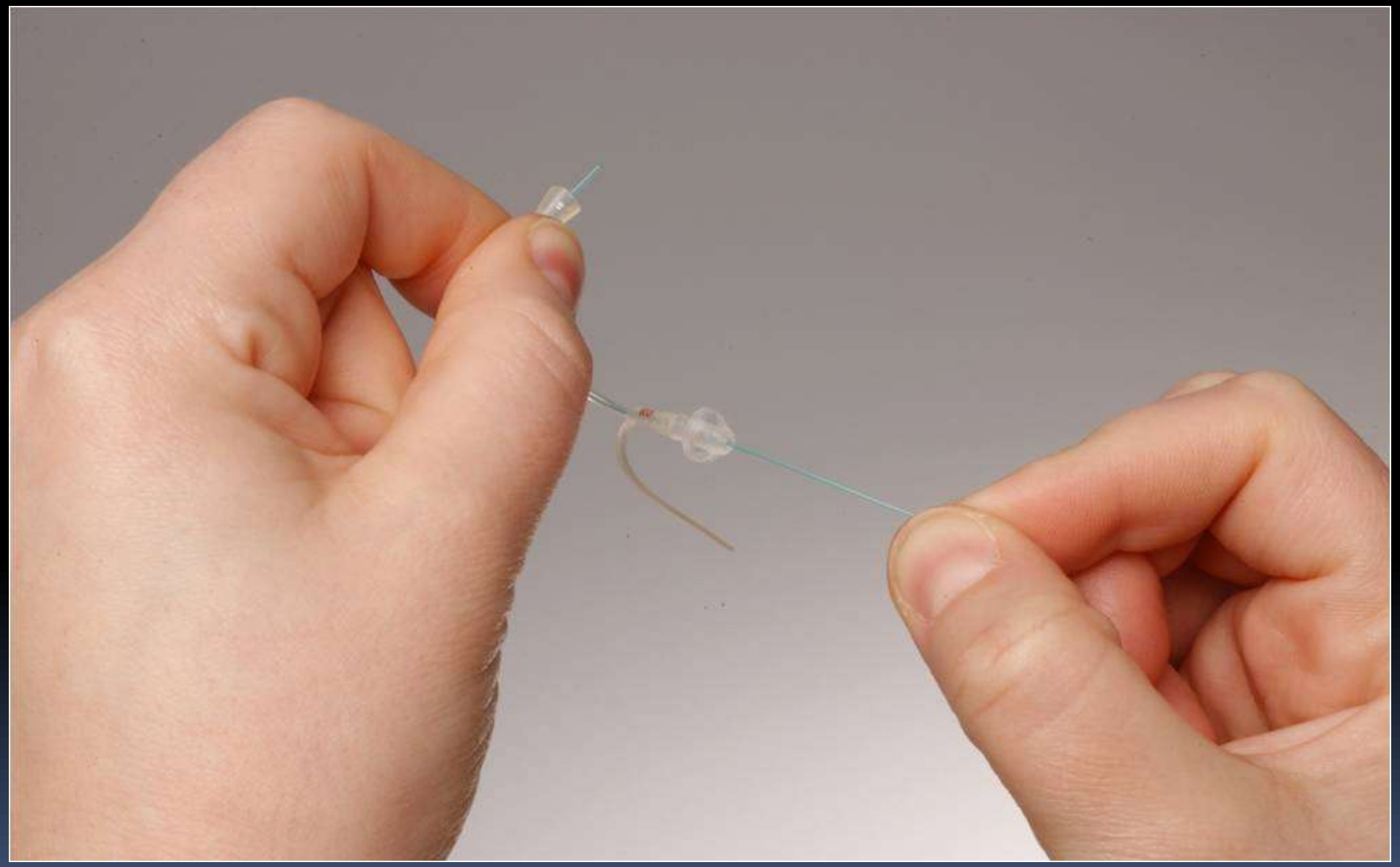
Throughout this process, privacy and confidentiality will be maintained and the veteran will only be visible by the clinician at the Madison VA.

Patient Education Visuals

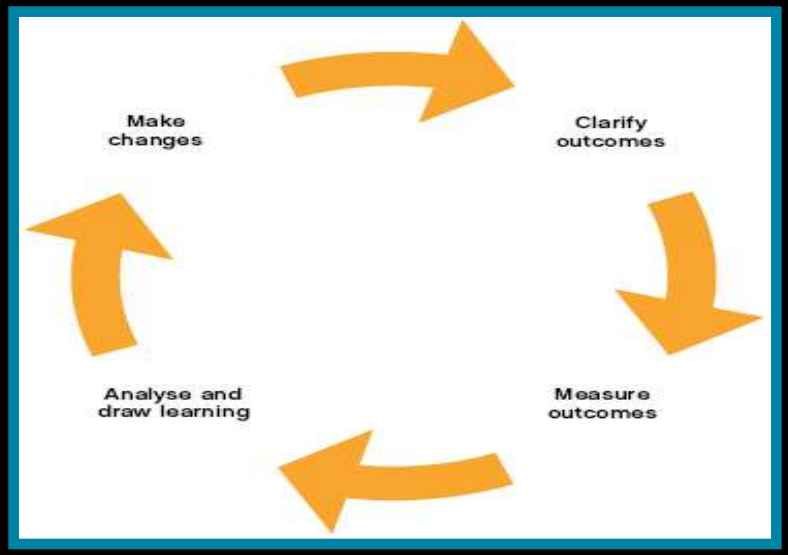
Patient Education Visuals



Patient Education Visuals



Outcomes



- Patient and clinician satisfaction
- Increased accessibility and reduced driving times
- Numbers of patients served
- Standardized hearing aid outcomes
- Efficiency, cost, and cost-effectiveness

Teleaudiology Impact

- Exportable service delivery model for rural and underserved veterans.
- National and regional leader in teleaudiology services.
- Increased visibility for CBOC staff.
- Pilot with Field Advisory Committee (FAC) for rural and telehealth.

Resources and training

- Office of Care Coordination Website: http://vaww.va.gov/occ/
- KLF Website-VSSC Support Center: http://klfmenu.med.va.gov/FAQ/HD request.asp
- American Telemedicine Association: http://www.atmeda.org/
- Telemedicine Information Exchange: http://tie.telemed.org/

Care Coordination Services

- General Telehealth (Real-Time)

http://www.carecoordination.va.gov/telehealth/ccgt/index.asp

- Home Telehealth

http://www.carecoordination.va.gov/telehealth/ccht/index.asp

- Store and Forward

http://www.carecoordination.va.gov/telehealth/ccsf/index.asp

Resources and Training

- Office for the Advancement of Telehealth: http://telehealth.hrsa.gov/
- Web-based courses through CCGT Foundation for clinicians and front-line staff. Checklist recommendations are currently being drafted, but will be released shortly from CCGT.
- Virtual forums

Resources and Training

- Live forums
- Annual skills review w/ facility or VISN Lead or Training Center staff
- Continuing education

Special Acknowledgments

- Jaime Adler, PhD, VISN 12 Telemental Health Director, Assoc. Director of Mental Health Services, Madison VA
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- Gail Takahashi, PhD, Service Chief, Audiology and Speech Pathology, Iowa City VA.

- Elizabeth Thompson, AuD, NE Government Services Manager, Phonak Hearing System

Telehealth Service
Miami VA Healthcare System

Erica L. Dombrowsky, Au.D.

Telehealth Usage at the Miami VA

- Used for:
  - Living With Hearing Loss class
  - Walk-in clinic
  - Tinnitus Management classes

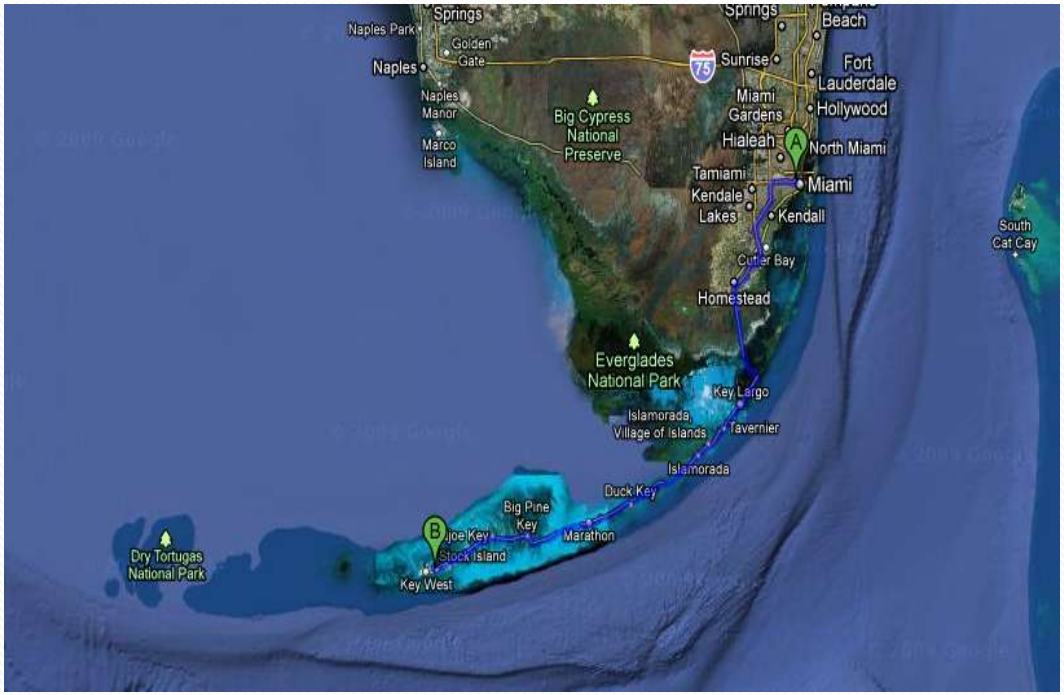
Why we started using Telehealth:

- Significant number of patients from Key West and Key Largo no-showing for their follow-up appointments.
- No-shows due to :
  - Distance
  - Travel time
  - Lack of transportation
  - Misinterpretation of appointments

Bruce W. Carter Medical Center
1201 NW 16th St, Miami, FL 33125

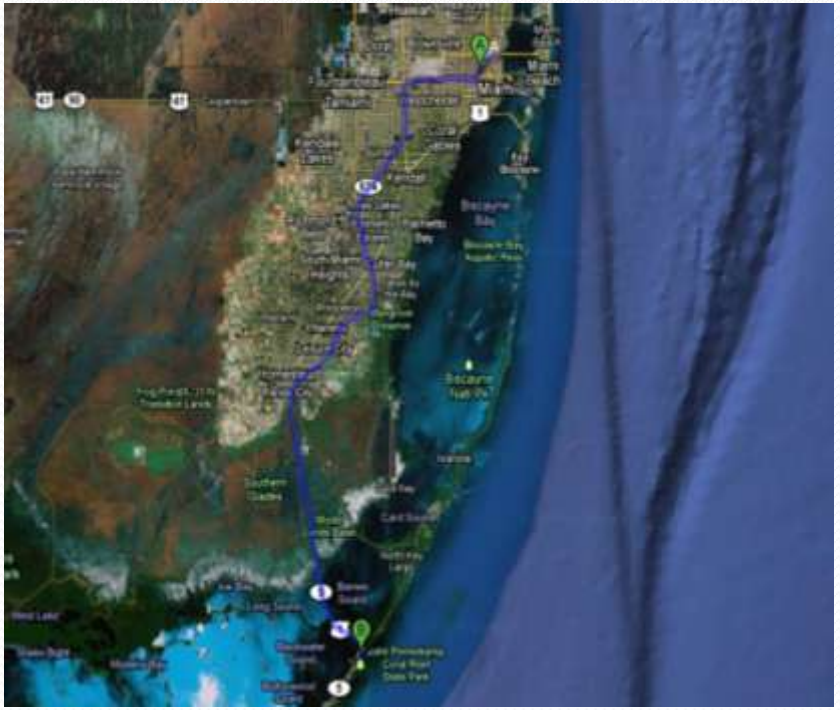
Key West CBOC
1300 Douglas Circle Bldg L-1
Key West, FL 33040

159 miles from the Medical Center; Approx 3 hrs, 44 mins drive.



Key Largo CBOC
105662 Overseas Highway, Key Largo FL33037

57.4 miles from the Medical Center; Approx 1 hr, 10 mins drive.



Telehealth Living With Hearing Loss

- Broadcast from the Medical Center to the Key West and Key Largo CBOCs as needed.
- Requires little to no involvement by the staff at the CBOC
  - Workload credit goes to clinician at medical center only;
  - CBOC gets facility fee code (Q3014)
- Participants at Medical Center and CBOC
- Can schedule up to 10 patients at the Medical Center and 5 at each CBOC

Tinnitus Management

- Began broadcasting Tinnitus management classes from the Hollywood CBOC in January 2009
- Obstacles that had existed to enrolling patients in the class at the Hollywood CBOC:
  - Lack of classroom space
  - Distance to CBOC from Medical Center and Keys CBOCs for patients that drive themselves
  - Lack of shuttle service to the Hollywood CBOC for patients that do not drive

Tinnitus Management continued:

- Can now schedule patients on the same day at the Hollywood CBOC, the Key West CBOC, and the Medical Center.
- Able to accommodate many more patients than were previously able to be seen due to lack of space.
- Limited involvement needed by staff at remote sites

Telehealth Walk-in Clinic

- Began November 2009
- Currently only at the Key West CBOC.
- For minor repairs and counseling issues. Can not reprogram hearing aids.
- After six months will re-evaluate the usage of the clinic and determine if it is necessary to begin using the system for walk-in at Key Largo and/or Homestead CBOCs.

What is needed for a Telehealth class:

- Classroom/conference room at both sites.
- Computer linked to system to broadcast the slides.
- Handouts easily available to patients and staff at the remote site.
- 2 appointments made for patient
  - Appointment at remote site
  - Appointment at broadcasting site

(*a very patient and supportive Tele-Medicine coordinator is extremely helpful as well)*

Telehealth Audiology

VA Nebraska-Western Iowa Health Care System

Daniel L. Chadwell, Ph.D.

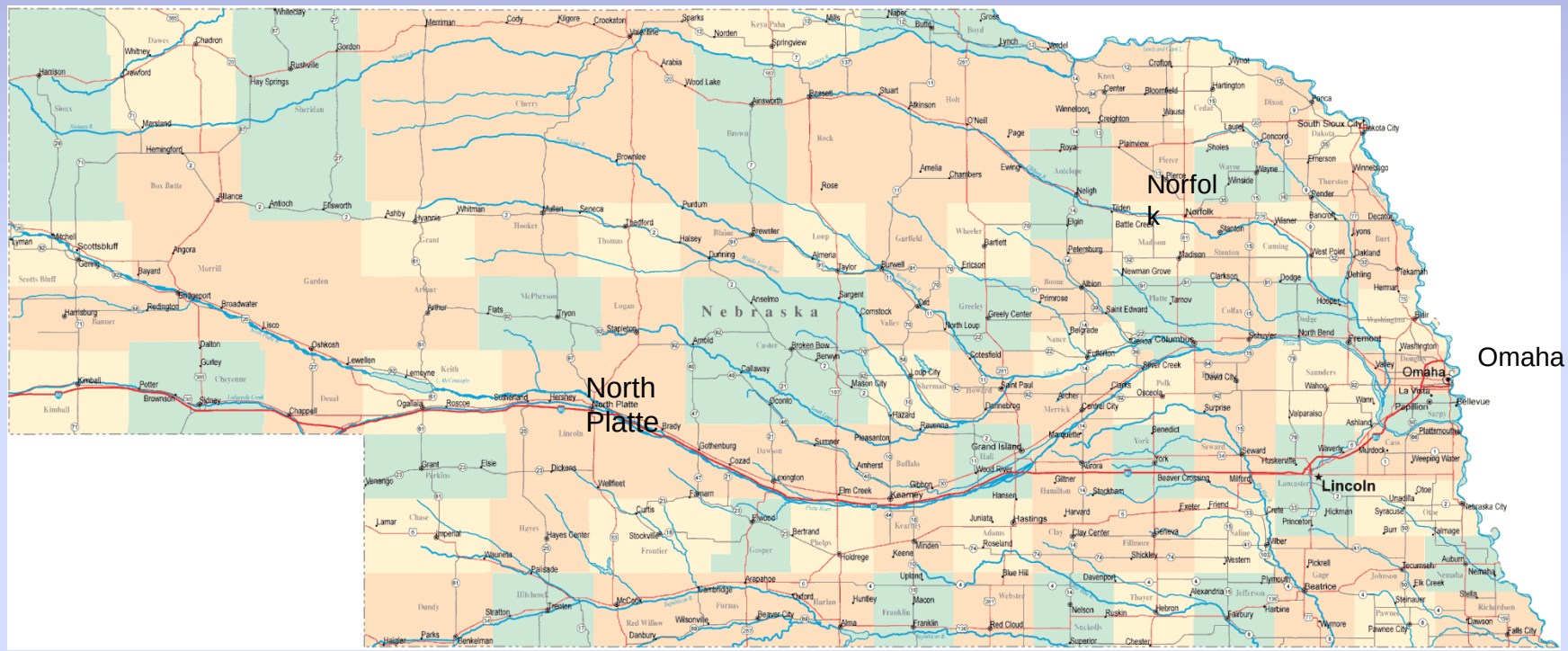
Audiology Telehealth

- Only 578 hundred miles

Audiology Telehealth

- Only 578 hundred miles
- VSN 23 Initiative Funding

Where the Cattle Roam



Audiology Telehealth

- Only 578 hundred miles
- VSN 23 Initiative Funding
- Equipment/Concept/Assistant
  - ENT Scope/Camera
  - Monitor
  - Immittance meter/audiometer
  - Telemedicine camera already in place

Audiology Telehealth

- Only 578 hundred miles
- VSN 23 Initiative Funding
- Equipment/Concept/Assistant
- Challenges
  - Training
  - One VA, one CBOC
  - Scheduling
  - Resources
  - Standstill
  - New funding rural health

Audiology Telehealth

- Next step
- Programming