Delivering Care To Underserved Communities Through Telehealth Connected Teams

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Quick Poll

Who works with students at a community health center or other type of community clinic?
Quick Poll

Who has heard of teledentistry?
Quick Poll

Who feels they could explain teledentistry if asked about it?
Quick Poll

Who is currently working with teledentistry?
Quick Poll

Of those working with teledentistry and students, is anyone using teledentistry as part of the students’ clinical training?
Objectives

- Describe the use of teledentistry to deliver care in non-traditional settings
- Identify the potential barriers to developing a teledentistry program and how to overcome them
- Summarize the role of education in preparing future providers to practice using teledentistry
Some basics

- Teledentistry is not a service
- It is a means to communicate when patient and provider are not in the same location
Defining Teledentistry

- Tele - transmission over a distance
- Telehealth = medicine + dentistry
- Electronic health records + telecommunications technology + digital videos/imaging + the Internet
Synchronous
Real-time/synchronous
Asynchronous
Store-and-forward/asynchronous
Why teledentistry?

● Remove barriers
  ○ Time
  ○ Distance
  ○ Lack of providers

● Locations
  ○ Remote rural
  ○ Medically underserved urban

● Improve
  ○ Access to care
  ○ Delivery of care
  ○ Affordability of care
Equipment Used and Costs

- Videoconferencing technology - Teledent ($1200 + yearly subscription)
- Intraoral camera - Mouthwatch ($300)
- Extraoral camera - Dine ($800)
- Nomad/portable x-ray ($7,000)
- Radiograph sensor ($10,000)
- Patient chair ($2,000)
- Provider chair ($500)
- Dental unit - Dntlworks ($9,000)
- Intraoral mirrors and cheek retractors ($200/set)
- Laptop for radiographs and charting ($1000)
- Exam kits ($200/set)
- Perio kits ($350/set)
- Containers to carry supplies ($500)
All patients

Hygienist assesses patient and collects records in the field

Hygienist provides preventive services in the field

Referral given to patient to see dentist if need arises

Dentist reviews records at same time or later

Patient goes to dental office

Routine follow up provided by hygienist in the field

Dentist creates treatment plan, calls in Rx PRN

Dentist uses portable equipment to go to the patient

Surgical needs

Preventive needs only
What is affiliated practice dental hygiene?

- ARS 32-1289.01
- Practice relationship between dentist and hygienist
- Written agreement submitted to BODEX
- Assessments, radiographs, and preventive services
- Location specific
  - Ex: health care facility, long-term care facility, government agency
- Different name depending on state
  - California - Alternative practice dental hygienist
- Not the same as expanded function (which can include placing fillings, placing temp crowns, etc.)
Legal considerations

- Transmission of data
- Failure of technology and improper diagnosis/treatment
- Informed consent
  - Patient needs to be aware of the process and limitations of technology
- Licensure
- Practice limitations
- Reimbursement
- Hygiene supervision of assistants
  - Assistants may not be allowed to be supervised by hygienist (or, they may not be allowed to practice under general supervision of the dentist)
Limitations

- Patient comfort with technology
- Lack of surgical capability
- Unable to send files if no Internet
- Delayed response from practitioner
Overcoming Barriers

- Poor Internet connection - Save everything on hard drive and upload at a later time
- Reimbursement - work with local dental and dental hygiene associations and community stakeholders to educate state Medicaid agency
- Lack of awareness by community (including associations and providers) - forthcoming ASTDD paper on teledentistry; teledentistry white paper by University of the Pacific (www.milliman.com/uploadedFiles/insight/2018/value-proposition-teledentistry.pdf)
Support for Teledentistry - ADA

Comprehensive ADA Policy Statement on Teledentistry (Trans.2015:244)

https://www.ada.org/en/~/media/ADA/Member%20Center/Members/current_policies

Teledentistry refers to the use of telehealth systems and methodologies in dentistry. Telehealth refers to a broad variety of technologies and tactics to deliver virtual medical, health, and education services. Teledentistry is not a specific service, but a collection of means to enhance care and education delivery.

Teledentistry can include patient care and education delivery using, but not limited to, the following modalities:

- Live video (synchronous): Live, two-way interaction between a person (patient, caregiver, or provider) and a provider using audiovisual telecommunications technology.
- Store-and-forward (asynchronous): Transmission of recorded health information (for example, radiographs, photographs, video, digital impressions and photomicrographs of patients) through a secure electronic communications system to a practitioner, who uses the information to evaluate a patient’s condition or render a service outside of a real-time or live interaction.
- Remote patient monitoring (RPM): Personal health and medical data collection from an individual in one location via electronic communication technologies, which is transmitted to a provider (sometimes via a data processing service) in a different location for use in care and related support of care.
- Mobile health (mHealth): Health care and public health practice and education supported by mobile communication devices such as cell phones, tablet computers, and personal digital assistants (PDAs).

General Considerations: The treatment of patients who receive services via teledentistry must be properly documented and should include providing the patient with a summary of services. Dentists who deliver services using teledentistry must establish protocols for appropriate referrals when necessary.

Patients’ Rights: Dental patients whose care is rendered or coordinated using teledentistry modalities have the right to expect:

1. That any dentist delivering services using teledentistry technologies will be licensed in the state where the patient receives services, or be providing these services as otherwise authorized by that state’s dental board.
2. Access to the licensure and board certification qualifications of the oral health care practitioner who is providing the care in advance of the visit.
3. That the delivery of services through teledentistry technologies will follow evidence-based practice guidelines, to the degree they are available, as a means of ensuring patient safety, quality of care and positive health outcomes.
4. That they will be informed about the identity of the providers collecting or evaluating their information or providing treatment, and of any costs they will be responsible for in advance of the delivery of services.
5. That relevant patient information will be collected prior to performing services using teledentistry technologies and methods, including medical, dental, and social history, and other relevant demographic and personal information.
6. That the provision of services using teledentistry technologies will be properly documented and the records and documentation collected will be provided to the patient upon their request.
7. That services provided using teledentistry technologies and methods include care coordination as a part of a dental home and that the patient’s records be made available to any entity that is serving as the patient’s dental home.
8. That the patient will be actively involved in treatment decisions, will be able to choose how they receive a covered service, including considerations for urgency, convenience and satisfaction and without such penalties as higher deductibles, co-payments or co-reimbursement relative to that of in-person services.
9. That the delivery of services using teledentistry technologies are performed in accordance with applicable laws and regulations addressing the privacy and security of patients’ private health information.

Quality of Care: The dentist is responsible for, and retains the authority for ensuring, the safety and quality of services provided to patients using teledentistry technologies and methods. Services delivered via teledentistry should be consistent with in-person services, and the delivery of services utilizing these modalities must abide by laws addressing privacy and security of a patient’s dental/medical information.

Supervision of Allied Dental Personnel: The extent of the supervision of allied dental personnel should conform to the applicable dental practice act in the
Support for Teledentistry - ADA

“D9995 and D9996 - ADA Guide to Understanding and Documenting Teledentistry Events”

http://www.ada.org/en/~/media/ADA/Publications/Files/D9995andD9996_ADAGuidetoUnderstandingandDocumentingTeledentistryEvents_v1_2017Jul17
Resolved, that the American Student Dental Association supports the Comprehensive ADA Policy Statement on Teledentistry; and be it further

Resolved, that ASDA encourages dental schools to incorporate teledentistry into their respective didactic curricula and to utilize teledentistry in clinical settings when appropriate; and be it further

Resolved, that the adopted policy be distributed in Spring 2017 to dental school deans, offices of academic affairs and clinical affairs and shared with the American Dental Association, the American Dental Education Association, and the American Association of Public Health Dentistry.
Guidance on Teledentistry - CCHP

Center for Connected Health Policy regularly produces report on current laws and regulations regarding telehealth (including teledentistry). Start here if you don’t know what your state allows.

Existing policies and legislation: https://www.cchpca.org/telehealth-policy/current-state-laws-and-reimbursement-policies

Teledentistry Resource - ATDA

American TeleDentistry Association

First Teledentistry Conference, June 7 and 8, Eastman Dental Center, Rochester, NY

The ATDA’s mission is to increase access to dental care through advocacy for and the implementation of innovative teledentistry guidelines and solutions.
Teledentistry at ATSU-ASDOH
Teledentistry at ASDOH

- $1.7 Million HRSA Grant, D85HP20045
  - Objective: Expand clinical interprofessional practice and education telehealth-connected teams at local underserved partnering sites
- Additional $40,000 grant by Delta Dental of Arizona Foundation to purchase van
- Develop curriculum
  - Didactic
  - Lab
  - Clinical
Goals of Teledentistry Education

- Provide students with the concepts of teledentistry
- Provide students with an opportunity to work with teledentistry equipment and in a digital environment
- Introduce students to unique populations that are best served in remote, non-traditional locations
- Apply public health concepts to real world situations
- Provide resources for students should they wish to develop their own teledentistry program after graduating
Didactic

- Three days of classroom teaching
- **D2 Year**
  - Day 1: 90 minute overall introduction, usually in December
  - Day 2: Two hour review of concepts, group exam using Kahoot, case review (diagnosing and treatment planning) using digital records, usually in the late spring
- **D3 Year**
  - Day 3: Two hour group project, “Design Your Own Teledentistry Program”, in conjunction with Dentistry in the Community course, usually in November
Lab

- Three hour lab during the D2 year, practice using intraoral camera to take photos and videos on a partner following specific parameters
Using the Camera

Taking videos
- Always dry the tooth with cotton or air
- Be as far away as possible from the surface you are capturing
- If you get too far away the image will get blurry, but too close and you won’t see everything you need to see
- Complete one quad in less than 90 seconds
- Use two hands or a fulcrum for a steady video
- Buccal/lingual
  - Need to capture the full height of the tooth (occlusal to gingival) plus 2-3 mm of the gingiva but do not need to get the full width in one shot (mesial to distal)
- Occlusal/incisal
  - Need to capture the entire width (buccal to lingual) of the tooth but but do not need to get the full width in one shot (mesial to distal)
- Recording
  - Complete one quad at a time
  - Start from the distal buccal of the most posterior tooth
  - Move anteriorly to record all of the buccal and facial surfaces
  - Stop at the midline
  - Rotate to the incisal/occlusal to record all incisal and occlusal surfaces
  - Move posteriorly and stop at the most posterior tooth
  - Rotate to the lingual to record all lingual surfaces
  - Move anteriorly to the midline and stop
Clinical

- Care provided in the field primarily by D3 students, supervised by APRDH
  - Assessments, radiographs, prophylaxis, fluoride varnish, OHI
Clinical

- Case review at the dental school with D3 and dentist
  - Read radiographs, develop treatment plan, review medically complex concerns, discuss public health topics
Community Partners

- Maricopa County Juvenile Detention Center - on going
  - Kids aged 8 to 17 years old
- Arizona Recreation Center for the Handicapped - on going
  - Adults with disabilities
- Horizon Health and Wellness (FQHC) - previously teledentistry, transitioned to traditional clinic
  - Adults with serious mental illness
- East Valley Adult Resources - beginning in January,
  - Low income seniors
- District Medical Group - on going,
  - Children with complex medical conditions
Preparing Sites for Clinical Care

- Detention center and Horizon - Education provided to medical providers to aid in screening patients to refer to teledentistry clinic
  - Utilized parts of Smiles for Life, http://www.smilesforlifeoralhealth.org
- Detention center - Education on using Teledent (teledentistry cloud based technology, https://www.mymphoutwatch.com/teledentistry.php) and intraoral camera to send clinical data directly to dentist
Preparing Sites for Clinical Care

- ARCH - working with center to get consent as guardians were originally not interested
  - Partnered with another dental school program, Day for Special Smiles, to share consent forms
- East Valley Adult Resources - educating staff about dental school services
- DMG - working with medical service team on the ins and outs of running a dental clinic
Unique Aspects of Partnerships

- Detention Center
  - Limited opportunities for comprehensive care due to short duration of stay
  - Focus on triaging, preventive care, and urgent care (provided at dental school)

- EVAR
  - Low income adults who will benefit from low-cost comprehensive services provided at school
  - Can take up to 3 visits to begin care at dental school
  - Will replace these initial visits with teledentistry visits
  - Students will get to treatment plan entire cases digitally
Unique Aspects of Partnerships

- District Medical Group
  - Medical clinic based hygiene practice
  - On site care provided solely by APRDH
  - Dental students exposed to extremely rare and unique medical conditions when reviewing cases remotely
  - Patients referred for follow up to dentists all over Phoenix, including to the dental school
  - Similar to Virtual Dental Home used by University of the Pacific
Future direction

- Additional community partnerships being developed
- Assessing D4 students interest in and attitudes towards utilizing teledentistry upon graduation
- Assessing patient satisfaction with care provided through teledentistry
Questions?

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Community Partners

- **Maricopa County Juvenile Detention Center - on going**
  - Kids aged 8 to 17 years old
  - Collection of data by hygienist, OHI and prevention at the site, info reviewed by dentist at school with students and determines urgent needs. Referral for urgent needs to school is more efficient when we know what they are coming for.

- **Arizona Recreation Center for the Handicapped - on going**
  - Adults with disabilities
  - Hygiene and students collect data and provide OHI and documenting health status for future evaluation. No dentist evaluation yet

- **Horizon Health and Wellness (FQHC) - previously teledentistry, transitioned to traditional clinic**
  - Adults with serious mental illness
  - Hygiene data collection, treatment planning at school, refer to school with treatment plan

- **East Valley Adult Resources - beginning in January,**
  - Low income seniors
  - Collect data with dentist, develop tx plan back at school, present tx plan, get to school. Use SDF at site by hygienist.

- **District Medical Group - on going,**
  - Children with complex medical conditions
  - Review rads and provide consultation on triage and referral. Virtual dental home - initial care is provided under the hygiene team, data reviewed by dentist and then referral to dentist (referral list) when needed stay with hygienist when not needed.