Telehealth
Bridging the Gaps in Healthcare Delivery

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1st Annual Geographical Management of Cancer Health Disparities Meeting
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Objectives

• Utah Telehealth Network
• Overview of telehealth
• Telehealth strategies
• Challenges & issues
• Future trends
Disclaimer

• *The resources presented on this presentation are provided for informational purposes only.*

• *The images and information is not intended to promote any device, vendor or organization.*
• Established in 1996
• Managed by the University of Utah
• Governed by the UETN Advisory Board
• Advisory Council with state-wide representation
• Funded by the state, members & users
• “Open” to any Utah health care provider
  • 50+ member sites; 500+ endpoints & user accounts
Members and Partners

Rural Hospitals/Clinics

Local Health Departments

Association for Utah Community Health (AUCH)

Utah Department of Health

Intermountain Healthcare

Southwest Telehealth Resource Center

Northwest Region Telehealth Resource Center
Mission

Expand access to health care services and resources through the innovative use of technology to Utah and the Intermountain West.
UTN Services

• Telehealth Development
• Network and Security
  • High speed broadband network for healthcare
  • Network management – 24x7 support
  • Security management – HIPAA compliant security, firewalls, secure remote access, proactive monitoring
• Interactive Videoconferencing
  • Live streaming and video-on-demand
Overview of telehealth
Telemedicine

• Derived from the Greek word for ‘afar’
• The use of technology to diagnose and treat patients remotely
• Purpose: to get the **right care** to the **right person** at the **right place** and at the **right time**
• Resulting in early diagnosis and treatment and more efficient care
Telehealth or telemedicine
Telehealth is a tool or means of delivering care

- Interactive videoconferencing (IVC) – synchronous
- Store and Forward – asynchronous
- Remote patient monitoring (RPM)
- mHealth (Mobile Health)
- Patient Portals
  - Patients to interact and communicate with their healthcare providers
Interactive videoconferencing (IVC)

Live, two-way interaction using audiovisual telecommunications technology.
Telemedicine Applications in Utah – Real Time IVC

- Stroke
- Burn
- Adult Speech Therapy
- Mental Health
- Neuropsychology – Alzheimer Clinic
- Wound Care
- Pharmacy
- Interpretive Services
- ENT
- Ortho
- OB
- Dermatology
- Hepatitis
- Cardiology
- Neurosurgery
- Neurology
Healthcare education - IVC

- UU College of Nursing PhD Programs
- UU Medical Students & Residents
- UU Grand Rounds
- UDOH – Asthma Grand Rounds
- URELEND - Utah Regional Leadership Education in Neurodevelopmental Disabilities
Store and Forward

Transmission of recorded health history through an electronic communications system to a practitioner, usually a specialist, who uses the information to evaluate the case or render a service outside of a real-time or live interaction.

- Remote Patient Monitoring (RPM)
- Teleradiology (ubiquitous)
- DM Retinopathy screening
- Teledermatology
- Echocardiography
mHealth – Mobile & Personal Devices

Health care, education, & public health practice via cell phones, tablet computers & other mobile communication devices. Examples: tracking biometric data, targeted text messages, RPM & wide-scale alerts about disease outbreaks.

- Provider to Provider communication
- RPM
- EHR
- Decision Support
- Patients to Provider Communication
- Patient Health Literacy
Questions?
Telehealth Strategies to Bridge the Gaps

• Reduce **health disparities**
  • Access
  • Affordability
  • Chronic disease

• Ameliorate **health care workforce issues**

• Help achieve the **triple aim**

• Care delivery **transformation**
Telehealth - Health Disparities

- Reduce health disparities for aging and underserved populations
  

- Potential to overcome access barriers
  - Patient consultations
  - Improve access to specialist services and ancillary services such as case management, transportation and translation and can assist in providing free or low-cost preventative health services

- Increased prevalence of chronic illness, morbidity and mortality among underserved populations
  - Patient kiosks, websites or portals
  - Remote Monitoring
  - Consumer e-health tools - specialized health information and support

- Reduce costs and burdens for patients
  - Can be more cost-effective
  - Decrease travel
  - Decrease time off work
Telehealth – Health Care Workforce

- Ameliorate issues by
  - Creating efficiencies
  - Extending the reach of existing providers

- Facilitate the provision of evidence-based care
  - Development of relationships among primary care teams and specialists
  - Interprofessional Education Program (IPE) - [http://healthsciences.utah.edu/ipe/](http://healthsciences.utah.edu/ipe/)
  - Remote medical education training

- Language and culturally appropriate
Care Management & Knowledge Networking

- HCH & IHC - Cancer Treatment Planning conferences
- UUHC Project ECHO (Enhancing Community Health Outcomes)
  https://healthcare.utah.edu/echo/
Telemedicine in underserved communities

- **Alaska Federal Health Care Access Network (AFHCAN)** - to improve health care access for Federal beneficiaries in rural Alaska

- **Open Door Community Health Center (ODCHC) Telemedicine Program** - a FQHC with ten satellite clinics that provides services to predominately Medicaid and uninsured patients in northern rural California.

- **Project ECHO** - an example of a telemedicine program first implemented in rural and underserved areas of New Mexico. Project ECHO is centered around chronic disease management and creation of “knowledge networks” of community health care providers

- **Virtual Dental Home (VDH) Project** - implemented by the University of the Pacific School of Dentistry, this project focuses on providing free dental services to vulnerable and underserved communities.

- **The Informatics for Diabetes and Education Telemedicine Project (IDEATel)** - a home telemedicine intervention targeted at ethnically diverse, medically underserved diabetic patients in New York.

- **Boston Health Care for the Homeless (BHCHP)** - teledermatology is now used to triage and refer individuals who present with skin conditions
Broadband in underserved communities

• **Healthcare Connect Fund (HCF)** - The Healthcare Connect Fund (HCF) Program provides a 65 percent discount on eligible expenses related to broadband connectivity to both individual rural health care providers (HCPs)... [http://www.usac.org/rhc/healthcare-connect/process-overview/default.aspx](http://www.usac.org/rhc/healthcare-connect/process-overview/default.aspx)
Telehealth - Triple Aim

- **Better Care** will improve Patient Experience
- Providing the right services will improve **Population Health**
- Better Health will lead to **Lower Cost**
Lower-cost services

- Improve access
- Timely - primary and specialty care
- Lower-cost settings: clinics, homes or workplaces
- Decrease in travel
  - Time and expense
- Keep care in local communities
Telehealth – Models of Care

• Specialist to patient across states & institutions
• Specialist to Primary Care
• Multi-disciplinary teams
• Networked healthcare
  • Urgent care - telestroke
  • eICU
• Direct to consumer care
• Virtual care centers
Telehealth - Care delivery transformation

• Home telehealth
• Care coordination and transition of care (discharge planning)
Home telehealth

Why?
• Care Coordination
• Chronic Disease Management
• Patient engagement

How?
• Remote Patient Monitoring
• Interactive Video Conferencing with
  • Care providers & Specialists
  • Interdisciplinary teams
• Health Coaching – motivational training education
Care delivery transformation

• Consumer engagement - wearables
  • Fitbits, Googlefit, Apple watch
Telehealth Services - VA

Travel Reduction Savings

• Clinical Video Telehealth – $34.45 per consultation
• Store and Forward Telehealth - $38.81 per consultation

Patient Satisfaction

• Home Telehealth - 84% mean score
• Store-and-Forward Telehealth - 95% mean score
• Clinical Video Telehealth - 94% mean score

Adam Darkins, Chief Consultant for Telehealth Services
http://www.ihealthbeat.org/articles/2014/6/20/va-study-shows-telehealth-cuts-costs-boosts-care-for-veterans
Outcomes of successful RPM programs

• reduced readmissions by 20 percent.

• reduction of cost equal to 11 percent per patient per month

• 71.2 percent of the patients participating in the program had their blood pressure well-controlled after 12 months versus 52.8 percent of the control group.

• reduce HbA1c levels by a mean of 1.8 points.

• reduced all-cause 30-day hospital readmissions for high-risk patients by 20 percent

Questions?
Telemedicine Challenges & Opportunities

• Technology
• Patient Confidentiality and Security (HIPAA Compliance)
• Reimbursement
• Cross state licensure
• Credentialing and Privileging
• Data management
Technology Challenges & Opportunities

• Proliferation technology
  • Better quality, more affordable, increased mobility
  • More choices

• Consumer-based technologies (Skype, FaceTime, & Apps)

• Plug & Play – ease of use

• Connectivity
  • Bandwidth
  • Cellular service
  • Browser based
Technology Considerations

• Proprietary solutions & interoperability

• Security
  • FDA cleared
    • Medical apps
    • Devices that transmit or interpret data
    • Peripherals, i.e. digital stethoscopes
  • HIPAA compliant - Patient Confidentiality & Security
    • Marketed to healthcare
    • Consents
    • Business Associate Agreements
  • Cloud computing
Reimbursement

States with Coverage for Telehealth Services

(Updated January 2014)
Reimbursement

• Medicare
  • 1997, 2000 – structurally unchanged with a few added sites and services
  • Eligibility requirement
    • Geography
    • Patient location
    • Services
    • Providers

• Utah Third party Payers

• Medicaid
Use of Telehealth and Remote Patient Monitoring in Medicaid

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Rules are under development.

- **Authorized Provider** means a provider in compliance with requirements as specified in this manual, refer to Chapter 3, *Provider Participation and Requirements*.

- **Covered services** may be delivered by means of telemedicine, as clinically appropriate. Services include, but are not limited to, consultation services, evaluation and management services, mental health services, and substance use disorder services.

Credentialing & Licensure Portability

Credentialing

• CMS requires facilities receiving telehealth specialty consults to credential all providers

Licensure Portability

• Physicians must be licensed in the state where the patient is for the consult.
Questions?
Future Trends

Blockbuster ➔ Red Box ➔ Netflix ➔ Smart TV

Hospital ➔ Clinic ➔ Kiosk ➔ Home ➔ Anywhere
Future Trends

• Democratization of health care with patient engagement
• mHealth expansion
• Consumer apps
  • DIY (do it yourself)
  • Point of care diagnostics (UA, Strep, Otoscope)

“The Patient Will See You Now: by Eric Topol
Future Trends

• Medical apps
  • FDA approved
  • Certification of apps to prescribe

• Integration of mobile apps with EMR
  • Epic Systems is set to open its own app store
  • Cerner, free iTunes app
Future Trends

• Direct to Consumer Models
  • Benefit through an employer
  • Health insurance policy
  • Established primary care practices
  • Health systems as a service for their own patients.
  • ATA estimates that this year over 800,000 consultations will be provided to consumers via online sites.
• Services are delivered using a combination of modes
  • synchronous (live, two-way) technologies such as web cams and telephones
  • asynchronous (store-and-forward) technologies such as online questionnaires and secure emails.
Future Trends

New generation of private telemedicine kiosks are popping up at Kaiser Permanente, Rite Aid pharmacies, and Mayo Clinics
Future Trends

Virtual clinics

• ‘Benefited’ Companies reduce absenteeism

• Companies such as Doctor on Demand, HealthTap, LiveHealth Online, MDLIVE, and Teladoc
  • audio and video conferencing between doctors and consumers
  • services - two-way video, email, mobile apps and, in some states, the ability to write most kinds of prescriptions
  • physical kiosks - request appointments, obtain lab results, and hold brief, in-person consultations with practitioners.

Future Trends

• Virtual Clinics
  • Payers like Aetna, Anthem, and Cigna are embracing telemedicine too.
  • Walgreens patients see a doctor and get a prescription without leaving home
  • Target partners with Kaiser
  • Qualcomm encouraging staff to use mobile care, including phone calls and video conferencing, instead of only in-person visits, to discuss care options with healthcare professionals.
  • Rent-A-Center claims to have slashed its healthcare spending by about $1.3 million in 24 months since enabling its employees to speak with practitioners over the phone and the Internet.
  • Penske Truck Leasing said it saved over $300,000 in 12 months after doing the same.
  • Boeing in 2011 alone, 30% of those who used telemedicine for a second opinion saw a diagnosis change, and 59% experienced a change in treatment

Future Trends

• Home sensors
• Data Management
  • Decision support
  • Vendors to manage data
  • Data Scientist
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Telehealth Development
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Resources

- Utah Telehealth Network – [www.utn.org](http://www.utn.org)
- Telehealth Resource Centers - [www.telehealthresourcecenter.org/](http://www.telehealthresourcecenter.org/)
- American Telemedicine Association - [www.americantelemed.org/home](http://www.americantelemed.org/home)
- Center for Telemedicine and e-Health Law - [ctel.org/](http://ctel.org/)
- Utah Reimbursement – [www.utn.org/support/development/reimbursement.shtml](http://www.utn.org/support/development/reimbursement.shtml)
Resources


• UT Medicaid Telemedicine (page 47, 8-4.2) https://medicaid.utah.gov/ Documents/manuals/pdfs/Medicaid%20Provider%20Manuals/All%20Providers%20General%20Information%20Section%201/AllProvidersGeneralInfo_Section_1.pdf
Open Discussion