CURRENT STATUS AND FUTURE OF
TELEMEDICINE AND E-HEALTH
The use of advanced telecommunications technologies to exchange health information and provide healthcare services across geographic, time, social and cultural barriers (J. Reid)

Telehealth is more than just video-conferencing and encompasses health information exchange and a spectrum of health information technologies

It is simply the delivery of health services at a distance (A. Darkins)
SO WHAT IS E-HEALTH?

- Healthcare practice supported by electronic processes and communication
- Includes Electronic Health Records (EHR), Computerized Physician Order Entry, and e-Prescribing
- Health Information Exchange (HIE)
Health Information Exchange and Telemedicine: A Complimentary Piece of the Puzzle
HOW IS TELEHEALTH & E-HEALTH USED?

- **Clinical ("Telemedicine")**: Consultation, Direct patient Care, Case Reviews
- **Educational**: Providers, Students, and Patients
- **Research**: Community-based Participatory, Outcomes driven
- **Administrative**: Strategic planning, Operations
- **Sharing Health Information/Health Information Exchange (HIE)**
- **Enhanced Disaster Response**
“BACK TO THE FUTURE”
MAJOR PUBLIC HEALTH ISSUES IMPACTING OUR RURAL COMMUNITIES AND THEIR ECONOMIC DEVELOPMENT

Gaps in Access to Health Services In Rural Areas Worldwide

- Hepatitis C
- Behavioral Health
- Diabetes
- Asthma
- Cancer
- Oral Health
- Cardiac and Stroke Care
- Infectious Disease
Maternal Fetal Medicine-High Risk Pregnancy
Capturing an image and **storing** it to then be **forwarded** for review by a medical specialists

Examples include teleradiology, tele-pathology, tele-dermatology, and tele-ophthalmology (retinal scans)
Video Phone/Computer-based video
Family Visitation
School Based Health Centers
Tele-Neurology
Tele-Stroke
Telehealth Toolkit

Smart Phones
- Desktop IP Based
- Small Conference Room IP Based (H.323)
- Cloud-based Video Conferencing
• Two Way Interactive Consultation with Doctor
• Include Family Members anywhere in World
• Physician Notes and Treatment data Maintained securely for Physician referral
• Vital Signs Monitoring Including Threshold Management
• Designed, Built and Equipped for Specific Needs of Medical Facility
VITALS MONITORING

- Non-invasive Blood Pressure Cuffs
- Pulse Oxymetry Sensors
- Weight Scales
- Temperature Probe
- Electrocardiogram Leads
- Glucose Meters
- Fluid Status Meter
- Prothrombin Meters

Connects through:
- Wireless Cellular Phone Line
- Internet Connect

Available in Many Languages
- English
- Spanish
- French
- German
- Arabic
- Portuguese
- Many More
Remote Observation. Your Doctor Monitors You at Home!
EPISODIC DEVICES

Measure your heart rate, or pulse.
Measure the oxygen level of your blood.
Listen to your heart.
Listen to your lungs.
Listen to your abdomen.
Look into your mouth and throat.
Look into your ears.
Look into your eyes.
Examine your skin.
Take your temperature.
EPISODIC DEVICES

Home Exams:
- Heart
- Lungs
- Ears
- Skin
- Throat
- Eyes
- Temp.
Remote Monitoring

The “Smart Band-Aid”
CONSORTIUM APPROACH

- Modular Healthcare facilities designed in size and scope of services specifically for the need.
- From Large hospitals to small clinics
- Cost effective, Quickly deployable and connected

60 Bed Complete Hospital
- Build in 14 Weeks
- All Diagnostics
- Telemedicine Ready
- All Disposables
NEW RELATED TECHNOLOGY
INSTANT PATHOGEN TESTS

- One Time Tests For:
  - Anthrax
  - Zika
  - Dengue
  - Chikungunya
  - Malaria

- Working On:
  - Ebola
  - MERS
  - SARS
  - Lyme
“Google Glass”

Tele-mentoring, Tele-Supervision, Teaching & Training
Survey Results: Telemedicine

- Rural population sees telemedicine as the only potential for improving healthcare
- 79% of patients who used telemedicine believed it was as good as in-person
- 38% believed they would have had to travel over 40 miles for in-person service
- Currently there are organizations that wish to provide telemedicine services to those in need but lack technical expertise and need for coordination
HEALTHCARE CONNECT FUND

- Part Of The FCC Universal Service Fund
- Previous Program brought $15 million to N.M. Healthcare Provider Organizations
Current Program:
- Administration Managed by N.M. Telehealth Alliance
- Under the consortium name:
  - “Southwest Telehealth Access Grid (SWTAG)”
- The SWTAG Consortium does 95% of the paperwork for its members and manages all disputes with the FCC & USAC
- SWTAG charges 6% of whatever subsidy is awarded by the FCC
- In the end, Our members net a 60% subsidy against their cost of connectivity
SOUTHWEST TELEHEALTH ACCESS GRID (SWTAG): A “NETWORK OF NETWORKS” THAT CAN SUPPORT BOTH TELEHEALTH AND HIE
What Is Covered:

- Upfront charges for deployment of new or upgraded network facilities;
- Certain broadband facilities owned by health care providers;
- Network equipment necessary to make broadband service functional (e.g., terminating router);
- Equipment necessary to manage, control, or maintain broadband service or dedicated health care broadband network.
So Why Aren't We Doing Better

The 35% Cash Match Is Still The Major Roadblock to Doing More

Rural Schools Can Qualify for 90+% Subsidy
Rural Clinics Only Get 65%

A Pool Of Funds To Assist With The Cash Match For Rural Hospitals and Clinics Could Magnify Federal Funds Brought Into The State and Expand Broadband Coverage Greatly
**Who is eligible:**
- Must be Not of Profit or Public.
- Must be in a Federally designated Rural Tract
- Must be one of following types:
  - Post Secondary Inst offering Health Education
  - Community Health Center
  - Local Health Depts. Or Agencies
  - Community Mental Health Center
  - Not for profit Hospitals
  - Rural Health Clinics Emergency Depts. For Rural Hospitals
  - Consortia of the above
  - Data Centers
  - Admin. Offices
Together we have opportunities to integrate Telehealth and HIE in a manner that can provide platforms for greater continuity in collaborative efforts within our state

- Clinical service and consultation
- Public Health
- Education and training
- Research
ANTICIPATED OUTCOMES:

- Improved access to clinical care
- Improved health outcomes
- Decreased costs
- Reduced duplication of services
- Increased federal funding contributions
- Improved education and training capabilities
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