

Telemedicine Update

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EXHIBIT J Health Care
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Entire exhibit provided.
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University of Nevada
School of Medicine

NRHP Consortium



Tele Radiology Project

- Project active since 1980's
- Project has evolved from several hours for downloads to seconds.
- Complexity of films has also increased requiring the need for additional bandwidth
- Over 430,000 studies (for a total 21 million images) per year are done for just eight of the rural hospitals. This does not count rural hospitals with independent contracts.

University of Nevada School of Medicine and NRHP Partnership

A key partnership

- Support 30 port Video bridge
- Support recording capacity for classes, meetings and ECHO
- Support single point and multi-point classes and ECHO courses
- Supports current Mental Health point to point sessions.
- Worked to develop current connectivity



UNSOM and NSHE SCS

- Support of Nevada System of Higher Education System Computing Services has been key to any projects and development of projects to this point
- Support of education and past telemedicine applications
- Limited last mile connectivity issues have become an big barrier.
- First T-1 lines and now.



Definition of Telemedicine and Telehealth (American Telemedicine Association)

- Formally defined, **telemedicine** is the use of medical information exchanged from one site to another via electronic communications to improve a patient's clinical health status. Telemedicine includes a growing variety of applications and services using two-way video, email, smart phones, wireless tools and other forms of telecommunications technology.
- **Telemedicine** is not a separate medical specialty. Products and services related to telemedicine are often part of a larger investment by health care institutions in either information technology or the delivery of clinical care. Even in the reimbursement fee structure, there is usually no distinction made between services provided on site and those provided through telemedicine and often no separate coding required for billing of remote services.
- **telemedicine** and **telehealth** are often interchangeable terms, encompassing a wide definition of remote healthcare. Patient consultations via video conferencing, transmission of still images, e-health including patient portals, remote monitoring of vital signs, continuing medical education, consumer-focused wireless applications and nursing call centers, among other applications, are all considered part of telemedicine and telehealth.
- While the term **telehealth** is sometimes used to refer to a broader definition of remote healthcare that does not always involve clinical services, ATA uses the terms in the same way one would refer to medicine or health in the common vernacular. Telemedicine is closely allied with the term health information technology (HIT). However, HIT more commonly refers to electronic medical records and related information systems while telemedicine refers to the actual delivery of remote clinical services using technology.



Renown Health

R-TeleMed

- R-TeleMed the main Telemedicine project of Renown and a partnership between HealthIE Nevada, Nevada Health Centers, Nevada Hospital Association, Nevada Rural Hospital Partners, Renown Health, University of Nevada School of Medicine and independently practicing physician specialists based in Reno, Nevada. It allows highly skilled physician specialists in Reno to consult on the evaluation, diagnosis and treatment of patients in outlying areas



R-TELEMED PARTICIPATION

- HGH – goes live April 1
- SLMC – seeing only a couple patients a week; they have a new telemed coordinator
- CVMC – Renown is now piloting a diabetes treatment program and other consultations
- BMGH – has signed the contract with Renown, they have Board approval to purchase the equipment.
- PGH – pending
- MGGH – pending
- Renown has several active sites in the Sierra's.



Banner iCare

- Patients at Banner Churchill Hospital in Fallon have a team of doctors and nurses. Some take a patient's temperature and see her in the same room. And others monitor her vitals and care for her in a completely different state, even a different country. Banner Churchill now offers telemedicine called Banner iCare. John D'Angelo is the CEO at Banner Churchill. "It allows our physicians to get some sleep at night. The intensivists who are remotely located can write orders. If the patient had a cardiac arrest, we could run the code as we call it. So it's really just a safety factor."
- The remote doctors work in California, Arizona, Colorado, even Tel Aviv, Israel. They are critical care licensed nurses and intensivist doctors who are licensed to practice in Nevada. They come into a patient's room via a video monitor. Patients and doctors can both see each other and talk to one another. Patients are liking the system. Alysia Sherwood is a Banner iCare nurse. "People are a lot more technology savvy now especially with Skype and FaceTime."
- The idea is to keep critically ill patients close to home. "Without this program we might transfer a lot of our patients who could stay here because they need a little higher level of critical care."
- It actually took an act of the Nevada legislature to allow telemedicine in the state. SB 327 changed Nevada law so doctors don't have to be able to physically examine patients. Besides keeping patients close to home, hospital leadership believes telemedicine is the future of critical care medicine and actually allows doctors to get to patients quicker. Dr. Zahid Virk is a Banner iCare doctor. "We respond immediately, within minutes, or 5, 6 seconds. We come in the room. So we can come into the room with the camera just like you were at the bedside."
- For more information about this technology, visit www.bannerhealth.com
- 2 News January 15, 2014





- TeleStroke Network at Northern Nevada Medical Center (NNMC) gives patients throughout the region access to acute stroke specialists, including neurologists, at any time of day. The TeleStroke Network, part of NNMC's Primary Stroke Center, is focused on reducing the detrimental effects caused by stroke. Using secure, two-way video and audio consultation, along with image-sharing technology, the medical staff at participating hospitals, patients and their families will have immediate access to stroke experts.

Northern Nevada's Tele-Stroke

- SLMC – live
- BMGH – live
- BCCH – is in process
- Other hospitals in discussion



Nevada Health Centers' Inc.

- Participation in Project ECHO and exploring Telemedicine



Misc. Telemedicine Projects

- Northeastern Nevada Regional Hospital
 - Current tele-psychiatry
 - Tele-stroke project to go live June-July 2014
 - Other applications in development
- William Bee Ririe Hospital
 - Telemedicine support with University of Utah specialists (limited)



Pediatric Sexual Assault Project

Supported by State of Nevada Child Protective Services

- Dr. Kristen MacLeod (Reno) pediatric sexual assault fellowship trained Physician and a rural Nurse Practitioner
- Coordinated University of Nevada School of Medicine
- Partners (Law enforcement, Reno CARES program, District Attorney, CASA, State of Nevada Child Protective Services, Morning Star Family Health Center)
- 22 Consults since Jan. 2012 (3 pending consults)



UNLV and CIS Tele counseling Program

- Counseling sessions between supervised graduate interns and students in Elko, Lander and Humboldt counties.
- Coordinated with University of Nevada School of Medicine Outreach Office.
- Project has been going for over 4 years



Department of Health and Human Services (DPBH)

- Tele-Psychiatry Supports:
- Today Rural Counseling and Supportive Services have eight satellite, four sub-satellite and two itinerant clinics that provide mental health services to more than 4,577 consumers throughout the 76,391 square miles of Nevada with the exception of Washoe County, Clark County, Lincoln County and parts of Nye County. Satellite Clinics provide all services offered by Rural Counseling and Supportive Services. Sub-satellite clinics offer many of the same services with itinerant Clinics providing services less frequently.



University of Nevada
School of Medicine

University of Nevada School of Medicine

- Tele-Psychiatry
- Offered for General, Adult and Children
- Limited due to workforce
- Provide services to State of Nevada Rural Counseling and Supportive Services
- New Pediatric Fellow program to begin July 2014
- Services to expand when new faculty are hired



Barriers to Greater Implementation

- Cost of equipment
- Cost of digital services needed to support applications
- Equipment costs (telemedicine equipment and diagnostic equipment)
- Lack of primary care providers
- Lack of urban specialists
- Reimbursement rates (Medicaid, Medicare)
- Private insurance reimbursement (requirement)
- Legislative barriers
- Availability of bandwidth at affordable costs (need for NHA project)

