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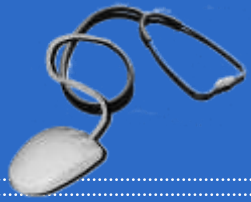




Telemedicine

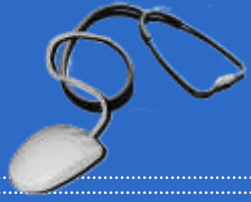
American Telemedicine Association

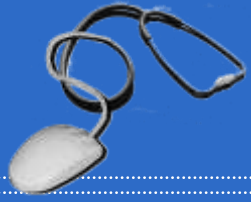




Telemedicine is the use of medical information exchanged from one site to another via electronic communications to improve patients' health status.





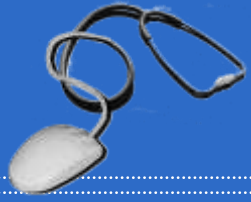


1. Telemedicine Today

2. Applications

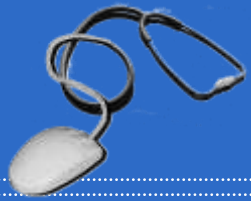
3. Technology

4. Future



1. Telemedicine Today





1. Telemedicine Today

Changing Names

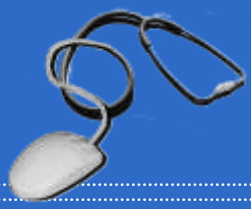
▪ **Telemedicine**

▪ **Telehealth**

▪ **Remote Medicine**

▪ **E-Health**

▪ **Telecare**



1. Telemedicine Today

Fitness



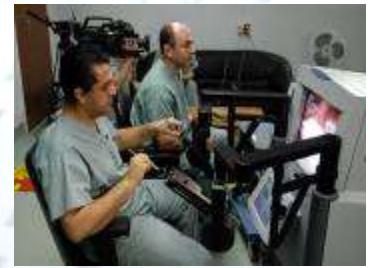
Personal Health



Clinical



Advanced Interventions





1. Telemedicine Today

The many faces of telemedicine...

Networks

Medical centers, health clinics and offices

Specialty services, 2nd opinions, education

Remote monitoring

Personal monitoring

Home telehealth

Point-to-point service provision

Contracted services

Work-at-home

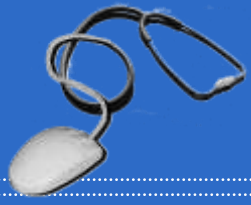
Outsourcing





Direct patient care

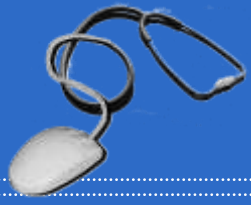
- Psych evaluations
- Medication monitoring
- Inpatient staffings (3-way)
- State Hospital or other hospitals and residential treatment facilities in Phoenix, Tucson and Northern AZ
- Consultation with Indian Health Service, AZ Dept of Corrections
- Cross coverage—emergency & Title 36 commitment evaluations



PAPERLESS OFFICE

- ▶ **E-prescribing (even controlled substances)**
- ▶ **Electronic medical records**
 - **Email**
 - **Texting**
 - **Voicemail**





TELEPSYCHIATRY IS NEITHER NEW NOR NOVEL.

- Telepsychiatry was endorsed by the American Psychiatric Association in 1998





1. Telemedicine Today



The many players in telemedicine...

- Private & public health networks
- National health systems
- Homecare agencies
- Independent diagnostic testing facilities
- Private labs and imaging services
- Wellness services – retail??



1. Telemedicine Today



200 Networks
3,000 sites



50,000 homes

1,000,000 monitors



Telemedicine Communities

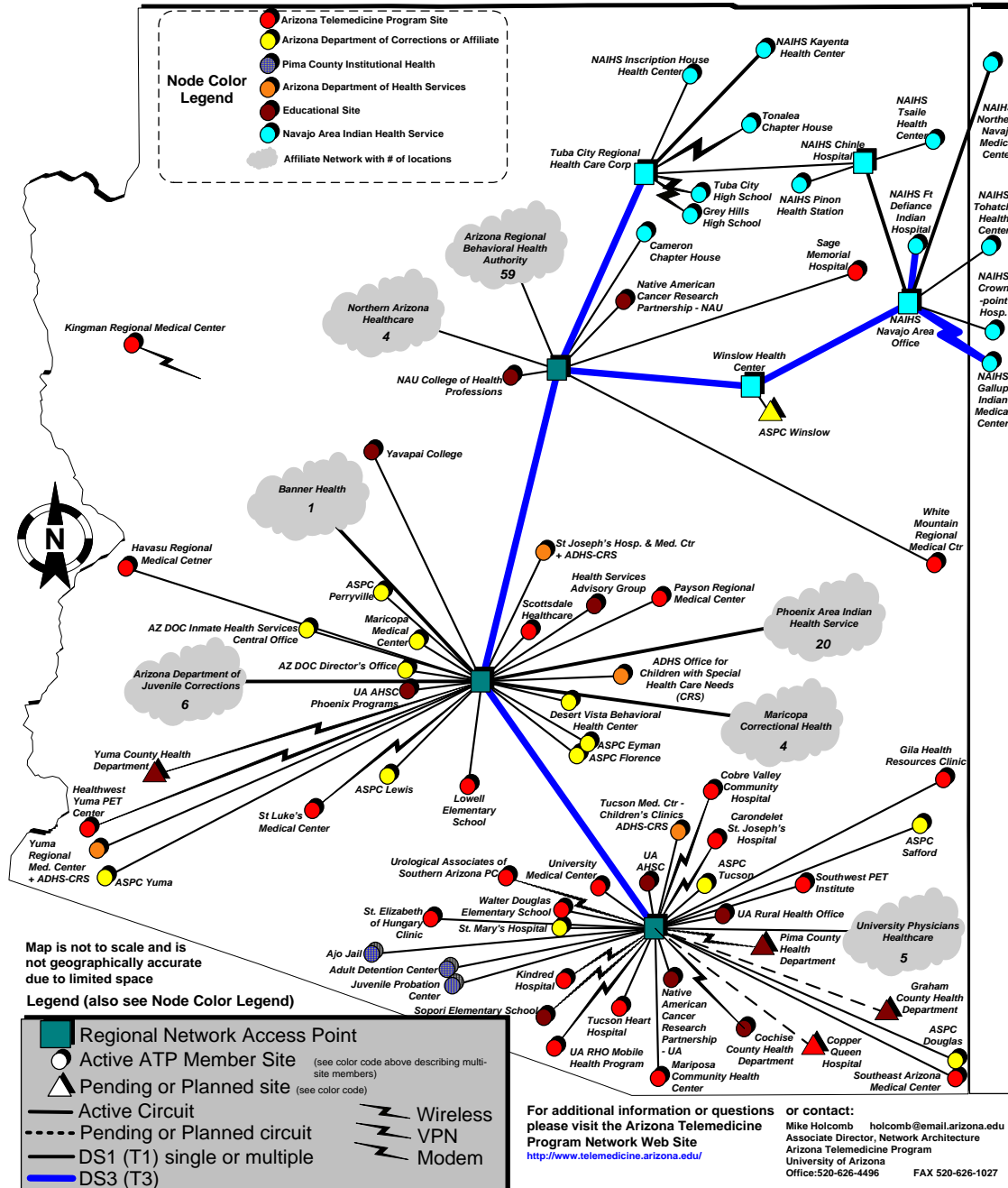
- Ajo, AZ
- Amado, AZ
- Apache Junction, AZ
- Avondale, AZ
- Benson, AZ
- Bisbee, AZ
- Bloomfield, NM
- Buckeye, AZ
- Bullhead City, AZ
- Cameron, AZ
- Casa Grande, AZ
- Chinle, AZ
- Cibecue, AZ
- Cottonwood, AZ
- Crownpoint, NM
- Douglas, AZ
- Eloy, AZ
- Flagstaff, AZ
- Florence, AZ
- Ft. Defiance, AZ
- Ft. Duchesne, UT
- Gallup, NM
- Ganado, AZ
- Globe, AZ
- Goodyear, AZ
- Green Valley, AZ
- Holbrook, AZ
- Kayenta, AZ
- Kearny, AZ
- Kingman, AZ
- Lake Havasu City, AZ
- Laveen, AZ
- Marana, AZ
- Mesa, AZ
- Morenci, AZ
- Nogales, AZ

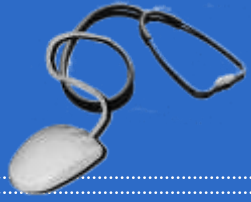
ARIZONA TELEMEDICINE NETWORK

Current and Pending WAN Connections as of May 2006

Telemedicine Communities

- Oracle, AZ
- Page, AZ
- Parker, AZ
- Payson, AZ
- Phoenix, AZ
- Pinon, AZ
- Polacca, AZ
- Prescott, AZ
- Prescott Valley, AZ
- Quartzite, AZ
- Sacaton, AZ
- Safford, AZ
- Salt Lake City, UT
- San Carlos, AZ
- San Luis, AZ
- Scottsdale, AZ
- Sells, AZ
- Shiprock, NM
- Shonto, AZ
- Show Low, AZ
- Sierra Vista, AZ
- Springerville, AZ
- St. Johns, AZ
- Supai, AZ
- Tempe, AZ
- Tohatchi, NM
- Tonalea, AZ
- Tsaile, AZ
- Tuba City, AZ
- Tucson, AZ
- Wellton, AZ
- Whiteriver, AZ
- Window Rock, AZ
- Winslow, AZ
- Yuma, AZ





2. Applications





2. Applications

Growing diversity of applications

- Remote, rural, general medical care
- Hospital based specialty services
- Medical education
- Internet-based health services
- Consumer-sports-wellness care

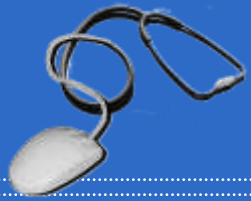




2. Applications

Common Uses

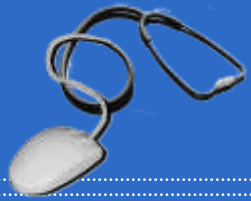
- **Rural clinics**
 - Access to specialists
 - Continuing education
- **Medical centers**
 - Outreach of services
 - Outsourcing



2. Applications

Common Uses

- **Facility-Based Home care**
 - Disease management
 - Patient discharge
- **Disaster Responses**
 - Emergency/trauma care



2. Applications

Common Uses

- **Remote location contracts**
 - Airlines
 - Cruise lines
 - Antarctica
 - Space





2. Applications

Common Uses

- **Direct care for government populations**
 - Armed services
 - Correctional care
 - Veterans
 - Indian health service



Telemedicine Outreach:

**NARBHA (Northern Arizona Regional Behavioral Health Authority)-
10 hrs per week**

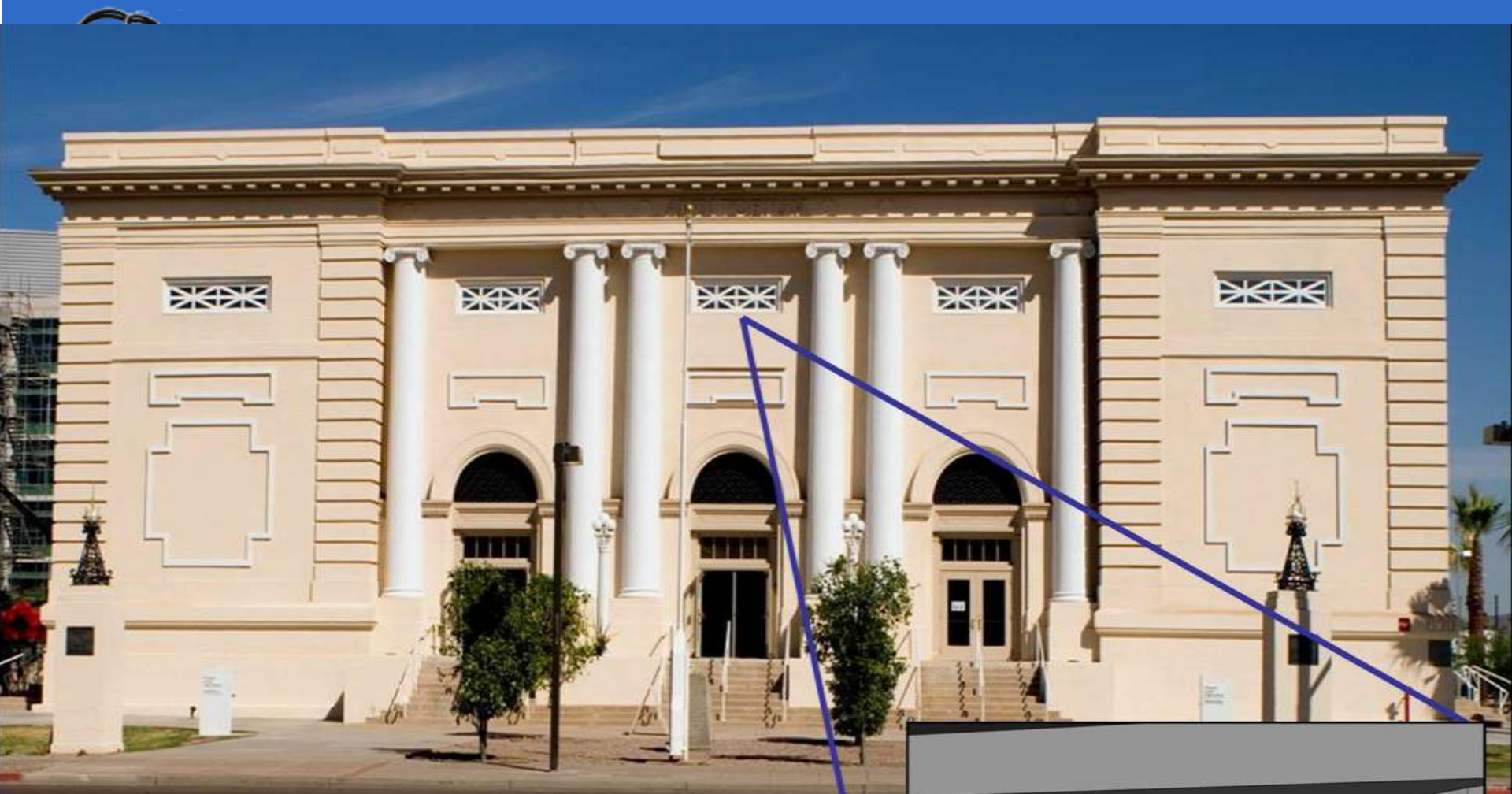
**AZ Dept of Corrections--Lewis Prison, Buckeye, AZ
12 hrs per week**

San Carlos Apache Tribal Wellness Clinic-6 hours per week

**PROFESSIONAL REVIEW COMMITTEE for BANNER ESTRELLA
and ST JOSEPH's HOSPITAL--10 hours per month**

**ARIZONA TELEMEDICINE PROGRAM Clinic with Dr. Schwager,
PhD in Alaska--5 hours per week**



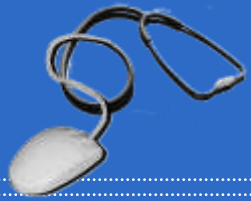


T-Health Amphitheater





Dr. Schwager in Willow, AK along with Patient (actor) in Payson, AZ



ARIZONA TELEMEDICINE PROGRAM CO-THERAPY Clinic with Dr. Herb Schwager, PhD

- 3-way connection
- Therapist in Willow, Alaska
- Patients in Payson, AZ
- Unique Co-Therapy clinic is a national model that improves communication between prescriber and therapist



Tele Movement Disorder Clinic



02/01/20
AA



Neighbor Physician visiting to use my Telemed equipment (Dr. Hanna Sisley, MD)





Photos of LEWIS PRISON TELEMEDICINE



**AZ Dept of
Corrections--Lewis
Prison
Telepsychiatry 12
hrs per week
serving over 40
patients per week
on average.**





LEWIS PRISON COMPLEX



PHOTO of San Carlos Apache Tribal Wellness Clinic

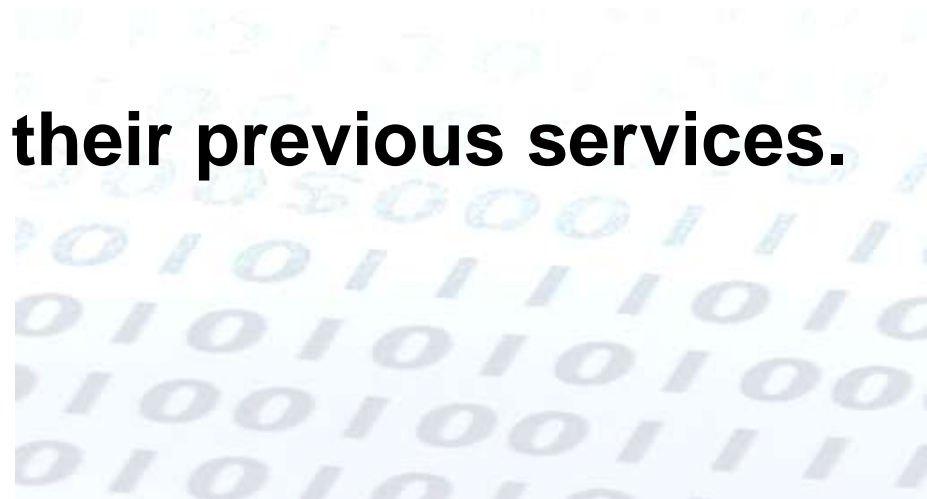
Previously only had 1 Phoenix doctor

****would drive 300 miles out 4 hours per month total**

****Doc was often unable to come**

Newly established Telemed Clinic started serving 6 hours per week

****500 % increase over their previous services.**





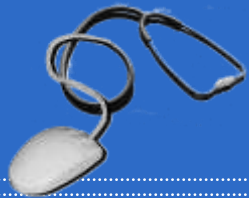
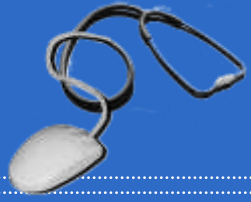


PHOTO of Telemedicine outreach with RBHA's including
****CPSA (Tucson RBHA) and**
****NARBHA (Northern Arizona Regional Behavioral Health Authority)—Showlow, Winslow, Holbrook**

On-Call for Psychiatric Emergencies/Petitions and providing Psych Evals / Depositions with Judge via Telemed



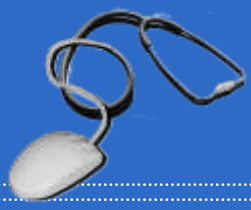


Hearing with Judge to decide if Petition will be approved to continue INVoluntary Hospitalization on patient who has finished 72 hours of Psychiatric Inpatient Observation.





- ***Is the connectivity secure?***
- ***Is “face to face” necessary at any point?***
- ***Do patients of various cultures accept this technology?***
- ***Is connectivity “flawless”?***
- ***How do you complete notes and prescriptions on patient visits?***
- ***Does this technology have limitations?***
- ***Are there patients/diagnostic groups not appropriate for TelePsychiatry?***
- ***What is the status on reimbursement?***
- ***Are there specific “techniques” the provider must master in order to be optimally effective?***



Telemedicine Quality of Care

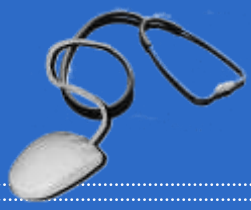
▶ Studies demonstrate that telepsychiatry is equivalent to FTF for:

- Assessment
- Diagnoses
- Therapeutic alliance
- Treatment adherence
- Clinical outcomes



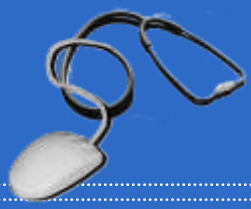
Quality of Care vs. F2F

- **86% said quality of medical care via telemedicine is same as or better than in person.**
- **Better: 7 (9%)**
- **Same: 58 (77%)**
- **Not as good: 11 (14%)**

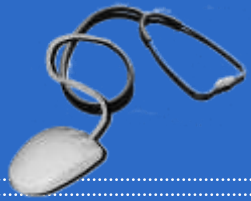


Rapport Building

- ▶ **Project body language and facial expression**
- ▶ **Eye contact**
 - **Natural camera angle**
- ▶ **Reassure regarding confidentiality**
- ▶ **Avoid videotaping**
- ▶ **Scan provider setting for patient, describe what you (and they) see**
- ▶ **Acknowledge difficulties**
- ▶ **Emphasize the positive**
- ▶ **Familiarize with equipment**



- •Client pride in cutting-edge, “big-city” technology
- •Increased professionalism in staff
- •Focuses attention of participants
- •More respect for appointment times
- •Lower no-show rate
- •Encapsulates time
- •Increases continuity of care
- •Promotes team approach



Clinical Benefits (cont.)

- **Patient-therapist bond**
- **Increased sense of distance & safety**

Trauma and abuse victims

Paranoid, psychotic patients

Anxious patients

“More relaxed, can talk better”





AZ's Health Information Exchange at a Glance

- **Live September 29, 2008**
- 3 record types
 - Discharge Summaries (3 Hospital Systems)
 - Medication History
 - Laboratory Test Results



View Record

Patient Records > Patient Record Viewer Logged In: Kelly, Mary [Log out](#)

Sort By: Date of Service ↕ Close All Popups [?](#)
Help

SMITH, BOB ✖
Lab Report
11/1/2001 12:00:00 AM

SMITH, BOB ✖
Discharge Summary
5/11/2002 12:00:00 AM

SMITH, BOB ✖
Medication History
5/11/2002 12:00:00 AM

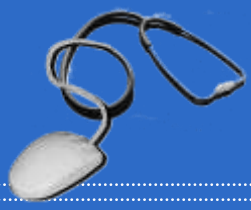
Patient Name: **SMITH, BOB** MRN: **06264410** DOB: **5/15/1970** Gender: **M**

Discharge Summary

Created On: May 11, 2002

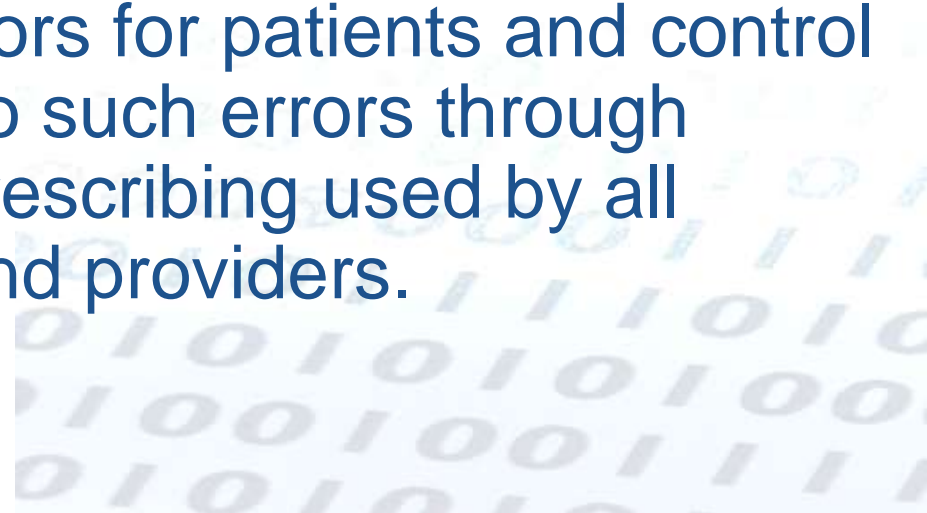
Patient: BOB SMITH , Sr	MRN: XXXXXXXX
Birthdate: May 15, 1970	Sex: Male
Guardian: Kenneth Ross 17 Daws Rd. Blue Bell, MA, 02368 tel:(888)555-1212	Next of Kin: Henrietta Levin tel:(999)555-1212

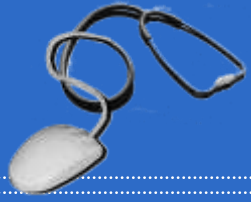




Governor's May 2008 ePrescribing Executive Order

- Collaborate with Arizona Health-e Connection (AZHEC) and its **EAzRx initiative** to make Arizona a leader in e-Prescribing practices
- Implement methods to reduce medication errors for patients and control costs related to such errors through increased e-Prescribing used by all health plans and providers.



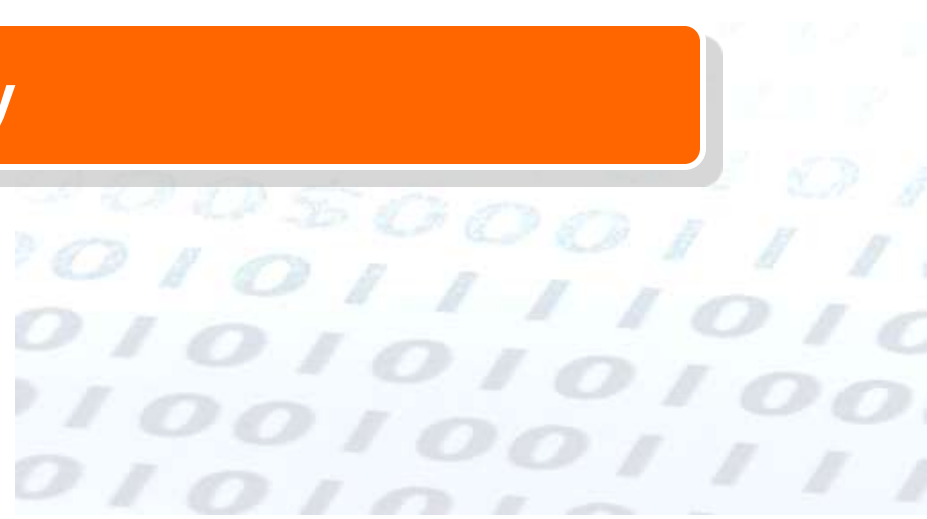


ATP Collaboration with Phoenix SUNS to provide Athlete Outreach to remote hospitals/clinics across Arizona



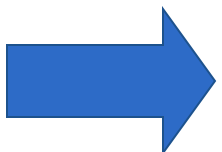


3. Technology





3. Technology



IMAGING EVOLUTION

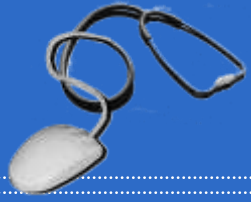




3. Technology

Videoconferencing





3. Technology

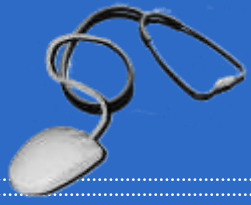
Store and Forward



**Dermatology
Camera**



Image



3. Technology

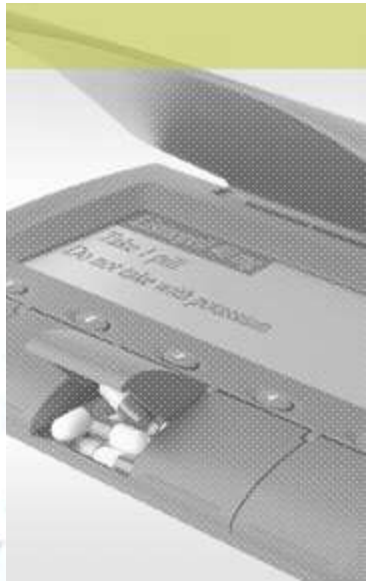
Three types of modalities for home telehealth...

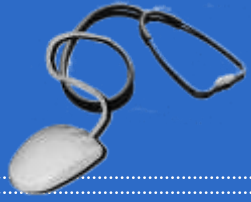




3. Technology

o PERS & Medication Minders





3. Technology



Single Vital
Sign Monitoring
Units

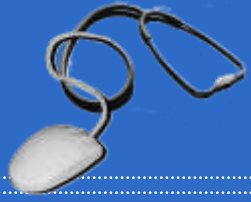


3. Technology



**Multiple Vital Sign
Data Units**





Registration and Check-in Today

Inconsistency

Patient lines

Data Errors

Staff turnover

Frustration

High cost

Pressure

Wrong Insurance

Duplicate Records

Co-Pay Collections

Delayed Payment

Incorrect Address

Resources focused on Admin

Balance Due

Returned mail



- Patient Registration

- Appointment Check – In
 - Verify Demographics
 - Insurance
 - Contacts
 - Co-pay
- Forms
- Billing – Balance & Payment
- Co-Pay
- Wayfinding
- Surveys
- Education - Messaging





Self Service Vital Signs

- Reduce Cost
- Add to check-in
- Serve Chronic





4. Future



Issues

Reimbursement

Establishing business models

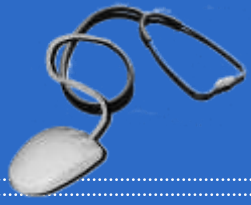
Relationship with health informatics

Internal vs. external records

Licensure

Provider Fear, Resistance & Acceptance





Thank You

American Telemedicine Association

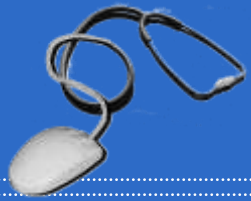
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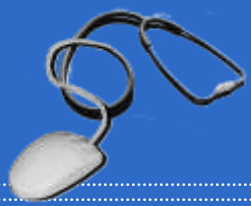
Links

- 1) **new guidelines for Telemental Health**
- 2) **new paper on Evidence Based Practice for TeleMental Health.**

These 2 documents have been crafted over past 5 years

****now available for free at the ATA website (American Telemedicine Association).**

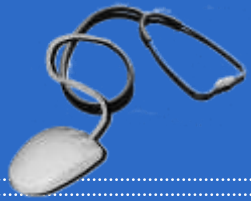




Web Links:

<http://www.americantelemed.org/files/public/standards/PracticeGuidelinesforVideoconferencing-Based%20TelementalHealth.pdf>

<http://www.americantelemed.org/files/public/standards/EvidenceBasedTelementalHealthWithCover.pdf>



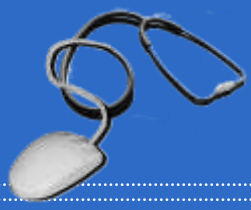
<http://www.americantelemed.org/i4a/pages/index.cfm?pageID=3326>

Here is the link to the annual ATA meeting in May in San Antonio.

+ The TeleMental Health SIG (special interest group) will have a series of meetings on the latest developments in this field.

+ It is a great way to meet and interact with the leading experts in Telemedicine field.





How patients access services

- Go to website

www.telemedicine.arizona.edu

www.telebehavioralmedicine.com

www.swTRC.org

- Call Sue Sisley, MD office (480) 922-9015
- Email Sue Sisley, MD at suesisley@aol.com
- Text Dr. Sisley's cell at (480) 326-6023

