Telenursing and Remote Access Telehealth

Bonnie Westra, PhD, RN, FAAN, FACMI
Objectives

• Define telenursing/telehealth and the use in various settings
• Identify populations served by telehealth
• Describe the role of the telehealth nurse
• Explore various types of systems/equipment
• Examine teaching methods
Definitions of Telehealth Nursing

Telehealth nursing is the delivery, management, and coordination of care and services provided via telecommunications technology within the domain of nursing.

(American Association of Ambulatory Nursing 2004)

Telehealth nursing is the use of telecommunications technology in nursing to enhance patient care. It involved the use of electromagnetic channels (e.g., wire, radio, and optical) to transmit voice, data and video communications signals. It is defined as distance communication, using electrical or optical transmissions between humans and/or computers.

(Skiba, D.J. & Barton, A.J., 2000)

Telehealth nursing is the practice of nursing over distance using telecommunications technology.

(National Council of State Boards of Nursing, 1997)
Use of Telehealth

• Home health care - monitoring, education, support
• Nursing home - specialty consultations
• Ambulatory care - specialty consultations
• Hospital consultations - stroke care
• Prison settings – mental health services
• Mentoring – i.e. wound care specialists
• ICU monitoring – neonatal intensive care, cardiac care
• Health promotion – obesity, exercise/fitness
Role of Telehealth Nurse

- Nurse presenter – ambulatory
- Nurse case manager – i.e. diabetes care
- Public health nursing – Text4babies, Text2Quit
- Health coach
- Tele-ICU nursing
- Clinical tele-health coordinator
Example – Nurse Presenter

- Planning telehealth program i.e. specialty consultations in rural clinic/hospital
- Coordinate scheduling patients
- Evaluating and preparing equipment
- Assessing patients
- Presenting patient
- Facilitating remote exam
- Documentation
- Follow up care
Telehealth Methods

• Real-time
  • Telephone-based – limited to education/counseling
  • Web-consults (two-way audio and video)
  • With or without peripheral devices
• Store and forward – images, audio, video
• Combination
Telehealth Equipment

- Phone lines/ internet
- Phone/ computer with or without camera/ microphone
- Cell phones
- Life line
- Sensor Technology
- Peripheral devices

Peripheral Devices

- Blood pressure
- Scales
- Glucose monitoring
- EKG/ cardiac monitoring
- Dermascope
- Otoscopes
- Pedometers
Email consults
m-Health Will Transform Healthcare
Monitoring - eICU Care

Baptist - eICU eight ICUs for a total of 142 beds
4 nurses/ shift – average 19 years experience
Real time vital signs and cardiac monitoring
Entire electronic record
Alerts if any change that could be a problem
Activation of camera and speaker from eICU for visual assessment and communication with the floor staff or patient

http://ram.aetn.org/ark_champions_of_change/baptist_eicu
Mr. Smith’s House is Calling

- Caregiver Alerts
- Voice Prompts
- Floor Sensors
- Safety Features
- Smart Beds
- Video Monitors
- Vital Sign Monitoring
- Medical Condition Monitoring
Smart Homes
Ethical/ Legal Issues

- Competent Care
  - AAACN - Scope and Standards of Telehealth Nursing
  - ATA – Standards and Guidelines
- Devices
  - Center for Telehealth and eHealth Law
- License to practice
Safety Issues

- Assess appropriateness of telehealth for the patients ability and status
- Know equipment
- Evaluate reliability and effective use of equipment
- Infection control
- Information safety
- Compliment with nurse judgment
Benefits and Challenges

Benefits of Telehealth
• Health care access
• Financial return
• Coordination of care
• Quality of care

Challenges of Telehealth
• Expansion of usage
• Technology infrastructure/interoperability
• Financial investment
• Licensure and credentialing
• Reimbursement
• Evaluation/outcomes
Teaching Activities

- Briefing on telehealth - Select a target population i.e. CHF, MCH, other about the use of telehealth
  - Population, technology (ies), benefits, barriers
- Interview 5 older adults about their use of technology, preferences, and willingness to receive care via telehealth
- Simulate telehealth visit using Skype
- Explore nursing roles in telehealth
- Describe regulator issues related to telehealth
- Debate – barriers and strategies for overcoming barriers using telehealth
- Compare telehealth center websites – similarities and differences in services
## Telehealth Jeopardy

- Have students create a Jeopardy game about telehealth

<table>
<thead>
<tr>
<th>Category</th>
<th>What is?</th>
<th>Concept</th>
<th>Resource</th>
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<tbody>
<tr>
<td>Equipment</td>
<td>dermascope</td>
<td>What is a skin surface contact microscope?</td>
<td><a href="http://www.amdtelemedicine.com/">http://www.amdtelemedicine.com/</a></td>
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<td>Nursing roles</td>
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<td>Methods of telehealth</td>
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<td>Populations</td>
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<td>Legal Issues</td>
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Explore Research Funded by AHRQ

http://healthit.ahrq.gov/images/dec08telehealthreport/telehealth_issue_paper.htm

- Describe potential implications for nursing practice related to AHRQ funded research

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<td>Creating Online Neonatal Intensive Care Units (NICU) Networks to Educate, Consult &amp; Team</td>
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<tr>
<td>HIT-based Regional Medication Management Pharmacy System</td>
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<td>Home Heart Failure (HF) Care Comparing Patient-Driven Technology Models</td>
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<td>Implementing Technology to Transform Quality in SE Kern</td>
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<td>Measuring the Value of Remote ICU Monitoring</td>
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<td>Project ECHO (Extension for Community Healthcare Outcomes)</td>
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<td>Technology Exchange for Cancer Health Network (TECH-Net)</td>
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<td>Telewoundcare Network</td>
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<td>Valuation of Primary Care-Integrated Telehealth</td>
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