Telehealth and Home Telemonitoring Literature Review
A Model of Evidence-Based Structures, Processes, and Outcomes

Structures

- Implement organizational/governmental TH/TM regulations, standards, guidelines, and policies
  - Ethical Guidelines
  - FDA 2015 Regulations of Mobile Health Technology
  - American Telemedicine Association Core Standards for Telemedicine Operations
  - American Telemedicine Association Home Telehealth Clinical Guidelines
  - California Medical Association CMA ON-CALL #3300 January 2015 – Telehealth
  - National Council of State Boards of Nursing Licensure Telehealth Policy
  - NCSBN Position Paper
  - NCSBN Policy Outline
  - American Telemedicine Association Core Standards for Telehealth Operations
  - FDA 2015 Regulations of Mobile Health Technology
  - Ethical Guidelines

- Maintain the iterative TM cycle between patient self-monitoring, data transmission, and data analysis, with feedback to patient
  - Timeliness
  - Timely communication and care coordination
  - Shared decision making and appropriate use of services

- Telehealth (TM) Education/Training
  - Live
  - Virtual

- Disease specific materials tailored to patient
  - Therapy
  - TM curriculum/modules

- Staff competency testing

Processes

- Implement organizational/governmental TH/TM regulations, standards, guidelines, and policies
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Identified Outcomes

- Utilization Management
  - Hospitalization
  - All-cause + Disease specific admission
  - Re-hospitalization
  - Length of hospital stay
  - Emergency room visits
  - Outpatient clinic visits

- Quality and Patient Safety
  - All-cause mortality
  - Stroke event timing
  - Mood tracking, cognitive training, controlled stress response (PTSD)

- Patient Population Specific
  - Photographic imagery
  - Retinopathy screening
  - Diabetic foot imaging
  - Health Knowledge
  - Self-care actions/management
  - Medication usage/adherence

- Health related quality of life
  - Symptom severity and/or functional performance
  - Health related quality of life

- Physiological status
  - BP
  - Heart rate
  - Weight/BMI
  - O2 saturation

- Feasibility Study Outcomes
  - Actual vital signs transmitted versus expected transmissions
  - Adherence/compliance with TM as a whole
  - Patient perceptions and satisfaction with services
  - Number of calls and/or number of interventions

- Business Related Costs
  - Equipment and Installation
  - Wages

- Staff to monitor, consult and provide consultation to TM
- Decreased emergency department/clinic visits, hospital admissions

TH: Telehealth  TM: Telemonitoring

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References


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