The Value of Nursing: Implementation of Video Monitoring to Decrease 1:1 Sitter Cost

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Tampa General Hospital
Acute Care Services

- 988 – bed teaching facility
  - 150 Adult and Pediatric ICU beds
  - 59 Rehabilitation beds
  - 39 Operating Rooms and 4 C-Section Rooms
  - Variety of medical-surgical units: Ortho, Neuro, Joint, Oncology, Medicine, Surgery, Cardiac Surgery, Cardiac Medicine, ACE, Trauma, Rehabilitation, Burn Unit, Medical Tele, Surgical Tele, Transplant and Pediatrics
- Magnet designation
- 12 Joint Commission Disease Specific Certifications
- Level One Trauma Center
- Verified Burn Center
Presentation Objectives

• Identify an alternative method of continuous observation care with the use of video monitoring technology.
• Discuss implementation steps and challenges with video monitoring.
• Identify methods to evaluate the effectiveness of video monitoring implementation.

Alternative Methods: Reasons for Sitters

• Confusion / Fall Risk / Agitated 43%
• Pulling out tubes 25%
• Psychiatric Diagnosis 10%
• Self Harm 8%
• Limited mental ability 5%
• Acuity 3%
Alternatives Methods: 1:1 Sitters

- One sitter for 2-4 patients in one room
- Sitter between 2 rooms
- Every 5 minute checks (Covering 3 rooms)
- Family as sitters (Private Room)
- Sitters require a physician order
- Equipment: Bed Alarms, Restraints, Distraction Tools

Alternative Methods: Review of Evidence

- “Using sitters has not been found to be cost-effective in decreasing patient falls because the gains do not offset the direct expense.” HM Tzeng 2008

- “Patient falls increased marginally, 0.0019 for each sitter shift.” “The findings indicate that sitters have a marginal impact on the variables we selected for the model. We are encouraged by the changes in patient satisfaction but are nonplussed by the negative impact on patient falls”. D.J. Boswell 2001
Alternative Methods: Goals and Objective

- Decrease expense of sitters (FTEs)
  - Averaged 38 pts per shift with 21 sitters
  - 88 FTEs / Annual expense 2.1 million
- Increase CNAs for patient care
- Increase availability close observation
- Improve patient outcomes:
  - Falls with injury
  - Self harm

IMPLEMENTATION: EQUIPMENT OPTIONS

<table>
<thead>
<tr>
<th>Video Monitoring:</th>
<th>Use of equipment similar to Security Operations to monitor patients, without being physically present in the room.</th>
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<tbody>
<tr>
<td>View:</td>
<td>Bed or Entire Room</td>
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<tr>
<td>Confidentiality:</td>
<td>Security screens, Recording</td>
</tr>
<tr>
<td>Night Views:</td>
<td>Infrared lights</td>
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<tr>
<td>Additional Options:</td>
<td>Motion detectors, Audible</td>
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<td>Cost:</td>
<td>Variable</td>
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Implementation: Policy, Education, Communication

• Policy
  – Defines use when ordered for:
    • One to one
    • Close observation
    • Sitter
  – Describes responsibilities, handoff, documentation, competency
  – Addresses equipment management

• Education
  – Program:
    • In-service
    • Demonstrated competency
  – Who:
    • 100% competency RNs, LPNs, PCTs, UCs
    • Core and pool

• Communication
  – Security, Risk Management, Therapies (PT, OT)
  – Senior Management and Medical Executives
Implementation: Small Test of Change

- Neuroscience Med-Surg Unit

- Identify location of a monitor tech
  - Nurse’s Station
  - Next to call lights
  - Next to phone
  - Close to Unit Coordinator

- Identify beds
  - Easy access for Monitor Tech
  - Private and semi-private

Implementation: Small Test of Change

- Staff Education
- Address and evaluate concerns and apprehensions
  - Privacy and HIPPA concerns
  - Response time to room
  - Number of patients monitoring at one time
- Documentation requirements
- Report / Handoff
- Maximum time at the monitor
- Coverage when immediate response is necessary
Equipment: 9 or 16 Channel Multiplexer, power supply, cabling and monitor. Integrated Systems of Florida Inc.
Implementation: Challenges

- Monitor tech
  - Response time
  - Focus / Distractions
  - Patient report
  - Length of time at the console
- Evaluation of patient outcomes
- Room response responsibility
- Documentation
- Bathroom observation
- Suicide risk patients
- Consistent accountability (texting, phone use, reading)
- Patient privacy questions

Evaluation: Cost & FTEs

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<tr>
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<th>Before</th>
<th>After</th>
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<tbody>
<tr>
<td>Ave # Pts</td>
<td>38</td>
<td>50</td>
</tr>
<tr>
<td>Ave # Sitters</td>
<td>21</td>
<td>16</td>
</tr>
<tr>
<td>Exp per Pt</td>
<td>$152</td>
<td>$84</td>
</tr>
</tbody>
</table>

- Equipment costs: $160,000
  - (86 beds @12 stations)
- First year savings: $470,000
- FTE Savings: 21
Evaluation: Falls per 1000 Patient Days

Evaluation: Preventing Harm

- Continue with 1:1 for suicidal patients
- Unable to impact “removal of tubes”
- Self medicating
- Early intervention – quick response
  - Falls
  - Patient needs
- Staff alert to occurrences in room
Evaluation Perception: Change in Quality for Past Year

Evaluation: Perception
Patient/Family, Physician & Staff

- Patient / Family
  - Positive and appreciative
  - Improved privacy during family visits
  - Not an option

- Physicians and Staff
  - More CNAs available for all patients
  - Increased availability for observation
  - Less “off service” placement
  - Allegation of inappropriate contact
Evaluation: Perception
Had Enough Time for Patients

Evaluation: Patient Assignment
was Appropriate
Evaluation:
Overall Had a Good Day

Things to Consider

- Overall
  - Unable to measure a change in patient outcomes.
  - Substantial financial measure
- Lose financial gain if expand too far
- Camera in hallway
- Placement of VMT
  - Quick response to room
  - Quick coverage
  - Low traffic with limited distractions
Questions

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References

- Tseng H, Yin C. Using family visitors, sitters, or volunteers to prevent inpatient falls. JONA Vol. 37, No.7/8 July/August 2007; pp 329-334.