THE USE OF OBSERVATION assistants (commonly called “sitters”) is a means to provide direct observation of patients for the purpose of providing a safer environment for the patient. Different institutions have different guidelines for the use of sitters (Joint Commission on Accreditation of Healthcare Organizations, 2007, 2009; Nadler-Moodie, Burnell, Fries, & Agan, 2009; University Health System Consortium, 2007). In today’s difficult economic environment, and in our constant efforts to improve effectiveness, a search for different ways to utilize sitters was performed. There are no defined industry standards for the use, efficiency, or financial measurers of sitters (Torkelson & Dobal, 1999; University Health System Consortium, 2007). In today’s difficult economic environment, and in our constant efforts to improve effectiveness, a search for different ways to utilize sitters was performed. There are no defined industry standards for the use, efficiency, or financial measurers of sitters (Torkelson & Dobal, 1999; University Health System Consortium, 2007). The efforts of process improvement for sitter usage in a free-standing, 140-bed acute care hospital receiving 54,000 emergency department visits annually, in suburban Massachusetts is described.

Literature Review

There is no research at this time to support the practice of using sitters, as being cost effective or preventing patient harm. Torkelson and Dobal (1999) noted nurses typically initiate the use of sitters by encouraging the physician to write an order. The authors also stated the use of sitters is typically utilized for patients who are delirious, intoxicated, suicidal, psychotic, or violent (Torkelson & Dobal, 1999). Rausch and Bjorklund (2010) discussed a performance improvement project where a psychiatric liaison nurse educated the staff about alternatives to sitters and implemented these alternatives. This resulted in a reduction of sitter shifts, but the patient fall rate was not reduced significantly (Boswell, Ramsey, Smith, & Wagers, 2001). Morse, Morse, and Tylko (1989) discussed how, after instituting the use of sitters, fall rate was not affected. Boswell et al. (2001) found with the use of sitters there was an increase in the patient fall rate and no significant improvement in patient satisfaction. The use of sitters is widespread in acute care hospitals (Morse, 1996). The popular thought is that a sitter will provide constant observation, thereby reducing harm to the patient (University Health System Consortium, 2007).

Defining the Use of Sitters

During the process of utilization review (Morse, 1996; Torkelson & Dobal, 1999) two categories emerged for patients who would benefit from direct observation. These included patients who were

EXECUTIVE SUMMARY

- Patient safety remains a strategic goal and of societal importance for better health care.
- Direct observation remains an ineffective and expensive means of providing for patient safety.
- The nursing quality team found that using assessment tools helped to objectively categorize which patients are at risk.
- Defining patient volume, actual productive sitter usage, and assessing demand for patients in psychiatric crisis and patients at high risk to fall in the form of average daily census provided an easy-to-translate, familiar unit of measure to compare patient volume to demand and utilization.
- The sitter utilization case was unable to provide correlation of sitter use to decreased fall rates, elopement, or assault behaviors.
- Currently, there is no research to suggest the use of constant observation reduces the risk of patient harm related to their risk for falling or harming themselves.

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assessed to be at high risk to fall (Morse, 1996) and patients in psychiatric crisis (Torkelson & Dobal, 1999). These two categories of patients at risk were chosen to primarily protect the patients from harm, adhere to recent regulatory emphasis on preventing patient falls, and the mitigation of hospitals’ legal jeopardy of elopement for patients being treated involuntarily under our care (patients in acute psychiatric crisis who are at risk of hurting themselves or others).

The Morse Fall Score tool was used to determine the patients at high risk for falling (Morse, 2009; Perell et al., 2001). It is a valid, reliable tool with an intraclass correlation coefficient of 0.98 (95% CI 0.98-0.99) (Chow et al., 2007), used to determine when a patient is at high risk for falling. The outcome measure for fall safety included an inpatient publicly reportable fall rate, per the guidelines of the Massachusetts Patient'sFirst initiative (now PatientCareLink). The Massachusetts Patient'sFirst initiative, endorsed by the Massachusetts Hospital Association and the Massachusetts Organization of Nurse Executives, is the Commonwealth’s voluntary leadership in transparency by publicly reporting the National Quality Forum nurse-sensitive measures. Forty-eight percent of all patients admitted to the acute care hospital are deemed high risk for fall using the Morse Fall Risk Assessment (Morse, 2009). To mitigate risks for patient falls, the hospital interventions include slippers with traction, above-bed signs, medication reconciliation, and physical-cognitive assessments (Agostini, Baker, & Bogardus, 2001; Chang et al., 2004; Mayo, Gloutney, & Levy, 1994; Juhnke & Hagedorn, 2006; Meddaugh, Friedenberg, & Knisley, 1996; Patterson, Dohn, Bird, & Patterson, 1983).

The second category of patients chosen to be provided with a sitter included patients in psychiatric crisis. The emergency department (ED) is primarily where the need for patient sitters in psychiatric crisis occurs. The triage nurse is the first professional to assess whether a patient is in psychiatric crisis. The use of the SAD PERSONS scale is used by the triage nurse to assess these patients (Juhnke, 1994; Ragaisis, 1997; Stewart, Bowers, & Warburton, 2009). The safety outcome measures for patients in psychiatric crisis include the number of elopements and documented assaultive behavior on the sitter documentation form. To provide a safe environment for the patient at risk, the triage nurse assists the patient to a safe area, where a sitter is available immediately within the ED. Patients in psychiatric crisis who experience suicidal ideation, acute mania, and severe depression may warrant the use of a sitter.

**Electronic Requisition**

At our institution, in order to track the requests for sitters, an on-line sitter request process was developed. This process was implemented in January 2009. The request form (see Table 1) is available via the institution’s intranet. These requests are sent to an electronic database, and are emailed directly to the team members of the staffing office, including the nurse managers and the nursing supervisors. This email and database access is necessary, as these three groups allocate staffing resources and determine staff’s shift assignments. The nurse managers and nursing supervisors coordinate with the staffing office to verify which patients will receive a sitter.

As of March 1, 2009, prior to assigning a sitter, the nurse manager during the day shift for the evening shift coverage and nursing supervisor in the off shifts for night and day shifts coverage, completes his/her clinical assessment to ensure each sitter request has merit and cannot be mitigated with different, non-personnel interventions. The clinical assessment completed includes evaluation of the patient’s mental status, restraint and medication use from the previous shift, and a brief chart review or interview of the patient’s primary nurse. The nurse manager or nursing supervisor then approves or declines the request electronically using the same database as the requesters. The staffing office and nursing supervisors provide feedback either over the telephone or in person to the requesting nursing unit to ensure a closed-loop communication related to each request.

Closed-loop communication is displayed when one clinician provides feedback to another member of the patient care team related to the same command or issues. An example of this is the Joint Commission’s (2009) National Patient Safety Goal to “Improve the effectiveness of communication between caregivers” with the documentation and “read back” of received telephone or verbal orders. Each request is submitted 2 hours prior to the start of the next shift. This permits sitters to be properly acquired and allocated prior to the start of the next shift.

There are times when sitter needs arise after the 2 hour cut-off or during the current shift. Best efforts are made to re-allocate staff to meet the needs of the patients. The nurse manager or nursing supervisor must weigh the cost benefit of removing the staff member to become a sitter versus the safety risks of having a sitter request go unmet. Ninety-nine percent of all actual paid productive sitter hours were requested using this electronic system. The staff is always welcome to contact the supervisor on shift to communicate their immediate concerns. Staff may also be called in to work in urgent circumstances. Calling staff in to work is challenging. The staffing office finds it difficult to locate sitters willing to come back to work for partial shifts.
Cost Containment

The financial labor cost of the sitters is expensed to a central cost center account. The use of sitters is written on individual employee payroll time sheets and tracked via the electronic database described previously. The unit utilizing the sitter is not financially impacted. The sitter hours are not included in any nursing productivity ratios (e.g., hours per patient day). Though the cost of the sitter program is budgeted for each fiscal year, the institution did not have a reliable method for spreading the expense to individual units or time periods. The centralized cost center permits one manager to oversee the costs instead of each of the individual unit managers overseeing the institutional expense for this service of observation assistants. Some of the nurse managers perceived the sitters as an extra resource for their unit, without an attributed cost to their unit budget. The disadvantage of this process is the unit nurse manager does not have a budget impetus to provide a critical evaluation of the sitter requests.

The manager responsible for the sitter budget recognized the need for sitters exceeds the number of employees hired into the sitter job description budgeted full-time equivalents; other staff are allowed to act in this role. However, education about how to fulfill the obligation of the role as sitter for these other disciplines was not consistently provided, and the hourly rates of the majority of these different employees were substantially greater than the average rate of pay for a sitter when acting in the role. Therefore, in collaboration with the human resources department, notices went out to all employees who, over the previous 12 months, had been paid from the sitter cost center. In this notice, each employee was offered the opportunity to continue working in this job category, on the condition they apply for a per diem position as a sitter, receive mandatory education (Tzeng, Yin, & Grunawalt, 2008), and accept the average rate of pay for a sitter when acting in the role. Thirty-eight of 42 employees accepted this offer. Employees refusing the pay rate did so because of insufficient compensation.

The new pay scale was fully implemented March 1, 2009. All relevant labor laws were strictly considered and obeyed when making these offers. Employees

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**Table 1. Observation Assistant – Sitter Request Form**

<table>
<thead>
<tr>
<th>Please complete this form 2 hours before the beginning of the next shift. Please complete all sections of this form in full.</th>
</tr>
</thead>
</table>

**Patient Information:**
- Patient’s First Name: ____________________________
- Patient’s Last Name: ____________________________
- Gender: ____________________________
- MR #: ____________________________
- Account#: ____________________________
- Nursing Unit: ____________________________
- Room #: ____________________________
- Precautions: ____________________________

**Requestor Information:**
- Requestor’s First Name: ____________________________
- Requestor’s Last Name: ____________________________
- Requestor’s Credentials: ____________________________
- Shift to be covered by this request: ____________________________
- Date: ____________________________

**Observation Assistant – Sitter Criteria:**
- Is there an order for this sitter?: ____________________________
- Ordering practitioner’s name: ____________________________

**Patients in Crisis:**
- Is the patient in crisis?: ____________________________
- Is the Section 12 complete?: ____________________________
- Physical restraints used: ____________________________

**Patients at High Risk to Fall:**
- Morse Fall Score: ____________________________
- Techniques used prior to sitter use: ____________________________
- Check all that apply:
  - □ None
  - □ Falling Star Program
  - □ Slippers
  - □ Distracting Tasks
  - □ Hallway Placement
  - □ Yellow Wrist Band
  - □ Bed Alarm
  - □ Pressure Alarm
  - □ Bed in Lowest Position
  - □ Pain Assessment
  - □ Level of Consciousness Assessment
  - □ Q 15 Minute Checks
- Clinical Comments: ____________________________
Figure 1.
Data Tracking Form

<table>
<thead>
<tr>
<th>FY '09</th>
<th>Hours</th>
<th>Dollars</th>
<th>OT $</th>
<th>% OT $</th>
<th>Monthly Ave Cost</th>
<th>YTD Ave Cost</th>
<th>Fall Risk Hours</th>
<th>Crisis Risk Hours</th>
<th>In-patient Fall Rate</th>
<th>ADC (Less Nursery)</th>
<th>ADV (ED)</th>
<th>Actual Sitter ADC</th>
<th>Demand for HRF</th>
<th>Demand for Crisis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct</td>
<td>1,882</td>
<td>27,404</td>
<td>6,293</td>
<td>23%</td>
<td>14.56</td>
<td>14.56</td>
<td>704</td>
<td>1,178</td>
<td>0.14</td>
<td>101</td>
<td>142</td>
<td>2.5</td>
<td>24</td>
<td>2.1</td>
</tr>
<tr>
<td>Nov</td>
<td>3,010</td>
<td>46,560</td>
<td>11,089</td>
<td>24%</td>
<td>15.40</td>
<td>15.05</td>
<td>872</td>
<td>2,138</td>
<td>0.11</td>
<td>93</td>
<td>143</td>
<td>4.2</td>
<td>30</td>
<td>3.9</td>
</tr>
<tr>
<td>Dec</td>
<td>2,277</td>
<td>34,388</td>
<td>7,992</td>
<td>23%</td>
<td>15.10</td>
<td>15.09</td>
<td>856</td>
<td>1,421</td>
<td>0.58</td>
<td>97</td>
<td>142</td>
<td>3.1</td>
<td>29</td>
<td>2.5</td>
</tr>
<tr>
<td>Jan</td>
<td>3,279</td>
<td>51,151</td>
<td>17,411</td>
<td>24%</td>
<td>15.60</td>
<td>15.25</td>
<td>1,889</td>
<td>1,178</td>
<td>0.14</td>
<td>97</td>
<td>152</td>
<td>4.4</td>
<td>63</td>
<td>2.5</td>
</tr>
<tr>
<td>Feb</td>
<td>2,414</td>
<td>38,096</td>
<td>11,522</td>
<td>30%</td>
<td>15.78</td>
<td>15.35</td>
<td>1,267</td>
<td>2,138</td>
<td>0.11</td>
<td>93</td>
<td>154</td>
<td>3.6</td>
<td>47</td>
<td>2.2</td>
</tr>
<tr>
<td>March</td>
<td>2,182</td>
<td>29,830</td>
<td>5,151</td>
<td>17%</td>
<td>13.67</td>
<td>15.11</td>
<td>917</td>
<td>1,265</td>
<td>0.58</td>
<td>97</td>
<td>148</td>
<td>2.9</td>
<td>31</td>
<td>2.2</td>
</tr>
<tr>
<td>April</td>
<td>2,387</td>
<td>32,443</td>
<td>6,231</td>
<td>19%</td>
<td>13.01</td>
<td>14.39</td>
<td>1,608</td>
<td>1,740</td>
<td>0.32</td>
<td>97</td>
<td>150</td>
<td>3.3</td>
<td>29</td>
<td>2.5</td>
</tr>
<tr>
<td>May</td>
<td>2,912</td>
<td>37,751</td>
<td>3,292</td>
<td>9%</td>
<td>12.96</td>
<td>14.62</td>
<td>1,107</td>
<td>1,806</td>
<td>0.19</td>
<td>100</td>
<td>158</td>
<td>3.9</td>
<td>37</td>
<td>3.2</td>
</tr>
<tr>
<td>June</td>
<td>2,182</td>
<td>29,830</td>
<td>5,151</td>
<td>17%</td>
<td>13.01</td>
<td>14.39</td>
<td>1,265</td>
<td>1,740</td>
<td>0.28</td>
<td>99</td>
<td>153</td>
<td>4.7</td>
<td>59</td>
<td>3.2</td>
</tr>
<tr>
<td>TOTALS</td>
<td>23,691</td>
<td>340,998</td>
<td>76,372</td>
<td>22%</td>
<td>13.01</td>
<td>14.39</td>
<td>10,103</td>
<td>13,589</td>
<td>0.26</td>
<td>97</td>
<td>149</td>
<td>3.6</td>
<td>39</td>
<td>2.7</td>
</tr>
</tbody>
</table>

Key: FY '09: Lists the months of Fiscal Year 2009
Dollars: These are the total dollars spent on productive time
OT$: These are the total dollars of overtime spent on productive time
% OT$: These are the percentage of overtime dollars for the total dollars spent on productive hours
Monthly Ave Cost: These are the current months total productive dollars divided by the total productive hours
YTD Ave Cost: These are the year to date average cost (i.e. year to date total productive dollars divided by total productive hours)
Fall Risk Hours: These are the total number of hours sitters were used to directly observe patients at high risk to fall for the current month
Crisis Risk Hours: These are the total number of hours sitters were used to directly observe patients in psychiatric crisis for the current month
In-Patient Fall Rate: These are the fall rates per the Massachusetts Patients First initiative for the current month
ADC (less nursery): This is the average daily census, less the patients in the nursery for the current month
ADV (ED): This is the average daily visits for the emergency department for the current month
Actual Sitter ADC: This is the average daily census for actual productive sitters for the current month (i.e. total productive sitters hours divided by # days in the month)
Demand for HRF: This is the average daily census for patients who are deemed high risk for fall per the Morse Fall Scale
Demand for Crisis: This is the average daily census for patients who are deemed psychiatric crisis per the ED's log
assigned as sitters were required to attend a 30-minute program that reinforced their job description and performance expectations. In Figure 1, the “Monthly Average Cost” was reduced in the first month (March) by approximately 13.4% or $2.11. The combination of the pay rate change and increase use of per diem staff to decrease the use of overtime was effective in reducing the average hourly cost, thereby reducing the “Year to Date Average Hourly Cost.” The Year to Date Average Hourly Cost was reduced from its peak in February of $15.35 to $14.12 by fiscal year end for an 8% reduction.

Data

“If you can’t measure it, you can’t manage it” is a commonly stated idiom attributed to Peter Drucker. To make better management decisions, there was the need to know where the sitter resources were being used. From the electronic data base of requests, Table 2 includes the results of the electronic requests.

The data provided by the front-line staff led to the need to determine how many patients were assessed to be high risk for fall according to the Morse Fall Score as well as the number of patients presenting a psychiatric crisis. By having a better understanding of how the front-line staff were utilizing non-labor fall prevention resources and interventions to mitigate the patients’ risk for fall and the efficient use of sitter resources (see Figure 1). An audit tool was developed to track the account numbers (unique hospital visit; episode) of patients with assessments that displayed the patients as high risk for fall in hours. This monthly report provided the number of patient days a patient was assessed for high risk to fall according to the Morse Fall Scale. The ED keeps a manual log of all patients who require psychiatric evaluation and were evaluated by the psychiatric team. All patients who arrive to the ED in psychiatric crisis receive an evaluation by psychiatric services.

Industry Measures

The utilization of hours and dollars to compare to assessed demand, fall rate outcomes, and patient volume can be found in Figure 1.

When looking for industry comparable metrics, a decision was made to use average daily census (ADC) as a common measuring unit. This allows for a high number of worked sitter hours to be placed into a manageable, easy-to-understand number. It also allowed comparison to the number of actual patients in the hospital receiving care. Using the 24-hour clock made it a more realistic way to examine the full need, but we also used the average breakdown by shift demand to spread accordingly.

By using the constructed ADC to modify figures, it provided a standardized tool to compare utilization month over month. To obtain the ADC for actual hours worked, divide the actual hours worked by 24 and then divide that number by the number of the days in the month. To obtain the ADC for the “demand hours,” or hours of assessed patient need using the Morse Fall Score for those at high risk to fall or the SAD PERSONS tool for psychiatric crisis, divide the actual hours of assessed need by 24, and then divide that number by the number of the days in the month.

Results

The safety outcome measure for patients in psychiatric crisis included the number of elopements and documented assault behavior, which would also be displayed in the ADC construct as well as the actual number of occurrences. There were no elopements or assaultive behavior documented for patients in psychiatric crisis with a sitter. There were no elopements of patients at the hospital during fiscal year 2009 that were diagnosed with psychiatric issues or being cared for involuntarily. Therefore, the added expense of sitters is not warranted or justified as the same outcomes were obtained for the same patient population without a sitter.

Figure 1 contains the summary for the remaining results that

<table>
<thead>
<tr>
<th>Table 2. Summary Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sitter request approval rate: 90%</td>
</tr>
<tr>
<td>Percent of requests with MD order: 85%</td>
</tr>
<tr>
<td>Nature of request: Psychiatric Crisis 56% and High Risk to Fall 44%</td>
</tr>
<tr>
<td>Discipline completing the questionnaire: RN 60%, Unit Coordinator (secretary) 35%, Other 5%</td>
</tr>
<tr>
<td>Requests by shift: Day 36%, Evening 27%, Night 37%</td>
</tr>
<tr>
<td>Requests by department/unit: ED 55% and Inpatient 45%</td>
</tr>
</tbody>
</table>
Direct observation remains an ineffective and expensive means of providing for patients’ safety requiring rapid human intervention.

Conclusion

Patient safety remains a strategic goal and of societal importance for better health care. Direct observation remains an ineffective and expensive means of providing for patients’ safety requiring rapid human intervention. The reported hospital is currently deliberating the discontinuation of sitter use. Each health care organization has the option to define which patients will be provided with sitters.

The nursing quality team found that using assessment tools helped to objectively categorize which patients were at risk. This was viewed as a good starting point. Providing the development of formal educational programs for sitters was vital for describing expectations of sitters and their understanding of the role behaviors. Costs were reduced on an average hourly basis by requiring staff acting in the role to accept the pay rate. Increasing the use of per diem staff to reduce overtime also decreased the average hourly pay rate. By defining patient volume, actual productive sitter usage, and assessed demand for patients in psychiatric crisis and patients at high risk to fall in the form of average daily census provided an easy-to-translate, familiar unit of measure to compare patient volume to demand and utilization. It is recommended sitter utilization be characterized in the average daily census construct for industry comparison.

The sitter utilization case was unable to provide correlation of sitter use to decreased fall rates, elopement, or assault behaviors. There was no relationship between ED or inpatient volume and actual sitter use. Currently, there is no research to suggest the use of constant observation reduces the risk of patient harm related to their risk for falling or harming themselves. Further research is needed to determine need to curb sitter expenses from the staffing office personnel, the percent of overtime paid was reduced dramatically. In the first 5 months of the fiscal year, the percent of total dollars expended to sitters as overtime was 26.8%. After the previously described interventions were implemented, the average dollar overtime percentage was 15.6% for the last 7 months of the fiscal year. This was a 42% reduction in the dollar percentage of overtime. Subsequently, this reduced the “Monthly Avg Cost” (the average hourly cost per calendar month). The average hourly rate was $15.29 for the first 5 months of the fiscal year. The last 7 months of the fiscal year, after the interventions to reduce the percentage of overtime costs and the required pay rate change, the average hourly rate was $13.40. This was a $1.89 decrease in the hourly rate or 12.4% reduction in the average hourly cost for sitter use.

The total cost has increased. The “Actual Sitter ADC” for the first 5 months of the fiscal year was 3.56 ADC. The last 7 months of the fiscal year the Actual Sitter ADC was 4.18, a difference of 0.62 ADC or a 17.4% increase in ADC. There were no correlates between the ADC (Less Nursery), ADV (ED), Demand for Per diem Sitters, and the general heightened awareness of the volume, actual productive sitter use. Currently, this information does prove useful in displaying the results of the nursing quality team’s interventions described previously, but it does not provide evidence the use of sitters improves patient outcomes.
the true effectiveness of direct observation as a mitigating tool to prevent falls or self-harm to patients in psychiatric crisis (Morse et al., 1989; Rausch & Bjorklund, 2010).

REFERENCES


