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NURSING ASSESSMENT OF PATIENTS FOR DISCHARGE FROM POST-ANAESTHETIC CARE: A DETAILED ANALYSIS

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Background

Nurses routinely use scoring systems to assess patient discharge from the Post-Anaesthetic Care Unit (PACU). Consistency of use of discharge scores, documentation of early warning signs of deterioration and relationship to safe patient discharge has not been established.

Aim

The aim of this study was to evaluate the relationship between nursing assessment for PACU discharge and patient outcomes.

Methods

- Prospective observational study of post-operative care
- 728 adult patients who underwent an elective surgical procedure requiring anaesthesia, in 3 hospital PACUs from June to October 2012.
- Data included patient characteristics, physiological parameters, clinical nursing care, handover to ward nurse, length of stay in PACU, duration of handover, length of hospital admission and patient outcomes, including any adverse events or complications.

<table>
<thead>
<tr>
<th>Table 1. Patient characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age: Median (IQR)</td>
</tr>
<tr>
<td>Males: n (%)</td>
</tr>
<tr>
<td>Surgical admission: n (%)</td>
</tr>
<tr>
<td>Day surgery</td>
</tr>
<tr>
<td>O/Night</td>
</tr>
<tr>
<td>In-patient</td>
</tr>
<tr>
<td>American Society of Anesthesiologists (ASA) status: n (%)</td>
</tr>
<tr>
<td>1. Normal healthy</td>
</tr>
<tr>
<td>2. Mild systemic disease</td>
</tr>
<tr>
<td>3. Severe systemic disease</td>
</tr>
<tr>
<td>4. Severe systemic disease &amp; constant threat to life</td>
</tr>
<tr>
<td>Charlson Comorbidity Score: Median (IQR)</td>
</tr>
</tbody>
</table>

* Inter-Quartile Range

Results

Patient characteristics:
Patient characteristics are shown in Table 1.

Nursing assessment and documentation:
- Completion of discharge documentation ranged from 81% to 50% for a random selection of 117 PACU documents.
- If a patient was unwell, greater accuracy and completeness of documentation was noted than if the patient had an uneventful PACU stay.
- Vital signs and condition on discharge were commonly completed, while vascular observations and pain score on discharge were often omitted.
- Whether the patient met the discharge criteria was not documented for 194/728 (26.6%) of all patients.
- All ISOBAR elements were included in 73% (n=529) of handovers from PACU to Ward nurse.

Table 2: Comparison of length of handover, PACU stay and hospital stay for patients who had an adverse event (AE) in PACU compared to those who did not.

<table>
<thead>
<tr>
<th>Median (IQR) Length of: 1</th>
<th>No AE: N=672</th>
<th>AE: N=56</th>
<th>P*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handover (mins)</td>
<td>2 (2-4)</td>
<td>4 (3-7)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>PACU stay (mins)</td>
<td>43 (33-59)</td>
<td>100 (72-143)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Hospital stay (days)</td>
<td>0.4 (0.3-1.2)</td>
<td>1.5 (1.0-4.0)</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Adverse events:
- 145 patients experienced an adverse event; 31 in PACU, 89 after PACU discharge and 25 both in PACU and after discharge. The profile of adverse events is shown in Figure 1.
- The overall prevalence of a patient experiencing an adverse event or complication following surgical care was 19.9 per 100 procedures and the 30 day mortality rate was 0.8%.
- Patients experiencing a complication or adverse event required a longer handover time, had a longer stay in PACU and longer hospital admission (Table 2).
- Most patients were discharged from hospital to home (680/728, 93%), 35 (4.8%) were transferred to another hospital and 6 (0.8%) died.

Conclusions/Implications for practice

This study demonstrated a relatively high overall risk of experiencing an adverse event following elective surgery of 19.9%. Previously, the risk of moderate or severe harm following surgery has been shown to be 7.3% (NHS, 2009). If a patient was unwell in PACU this appears to trigger more complete nursing assessment and documentation, a doubling of stay in PACU and longer time spent on handover to Ward nurse and substantially longer hospital admission.

These findings highlight the importance of patient monitoring in the immediate post-operative period, in PACU and continuing on the ward.

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QPS Centre for Quality and Patient Safety Research

References

[Links to references]