Patient Safety in the Ambulatory Care Setting

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Background

• “Is ambulatory patient safety just like hospital safety, only without the “stat”?"

• Unique aspects of ambulatory care and the need for increased emphasis on patient safety in this environment

• Ambulatory care is technically less complex, but logistically more involved than inpatient care

• Prior work in ambulatory patient safety has largely focused on adverse prescribing events, and diagnostic errors which are less applicable to nursing care

• Gaps remain in the current understanding of patient safety issues in the ambulatory care setting
Three Studies

• 1) Hazard and Near Miss Reporting – Nursing Students
• 2) NP Patient Safety Survey
• 3) Ambulatory Care Survey
Hazard and Near Miss Reporting in Ambulatory Care

- Describe the frequency and types of hazard and near-miss events in the ambulatory setting
- Students in the 1st year of their BS/MS program
- 5 week rotation
- Sites included: clinics, EDs, school-based clinics
Categories of Hazards and Near Misses

- Medication
- Infection
- Procedure/ Treatment
- Fall
- Environmental Hazard/ Safety
- Equipment/ Device
- Other
- Accident (non-fall)
- Laboratory
- Food/ Nutrition
- Patient Disappearance
- Restraint
- Transfusion
Results

• 566 nursing students
• 4 years
• 9,272 reports while in their ambulatory care rotation
• 1,624 Hazards
• 985 Near misses
Reported Hazards and Near Misses by Category

Most commonly reported hazards were related to infection (20.0%).

Most commonly reported near misses were related to medication (19.1%).
Qualitative Analysis

• Coded the open-ended comments using Elder’s taxonomy

• 6 categories:
  1) Administration
  2) Clinicians and Staff
  3) Management and Treatment
  4) Coordination
  5) Charting
  6) Diagnosis
<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration - equipment, facilities, medication, medical chart</td>
<td>Incorrect discharge information transferred to VNS</td>
</tr>
<tr>
<td>Clinicians and Staff – nursing, self, support staff, clinicians</td>
<td>Oxygen not turned on for patients’ mask as ordered</td>
</tr>
<tr>
<td>Management and Treatment – procedural complication, omitted or forgotten</td>
<td>A patient whose sister's sonogram information had been put into her electronic chart as hers</td>
</tr>
<tr>
<td>Coordination – Lab, visit, procedure ordered for wrong patient/ patient name mislabeled/ wrong pt. for visit; referral/ appointment problem</td>
<td>Both “sharps” containers at site were completely full</td>
</tr>
<tr>
<td>Charting – in someone else’s chart, wrong information in the chart</td>
<td>Incorrect discharge information transferred to VNS</td>
</tr>
<tr>
<td>Diagnosis</td>
<td></td>
</tr>
</tbody>
</table>
APN Patient Safety Survey

- To characterize patient safety issues in APN care settings
- 162 registered nurses in APN training
- Adapted the Elder’s survey to capture types of medical errors and preventable adverse events encountered by family practice physicians during office visits
- Participants reported:
  - demographic information
  - indicated types of patient safety issues that they had identified or experienced during their last clinical day caring for patients of three complexity levels (simple, moderate, complex)
- Online survey to identify patient safety issues related to:
  - diagnosis
  - management and treatment
  - clinician and staff problems
  - management of clinical information
  - hazards and near misses
Results

• There were a total of 922 patient safety issues across 489 visits
  • Some visits had multiple patient safety issues
• Respondents reported 500 patient safety issues related to their own practice
  • Most frequent issue was feeling rushed or hurried (N=142, 28.4%)
  • Followed by being interrupted during their encounter (N=135, 27%)
  • Communication problems with their patient (N=86, 17.2%).
Frequency of Patient Safety Issues Related to Diagnosis

- Missed
- Misdiagnosis
- Delayed

Legend:
- Blue: Total
- Red: Symptom Workup
- Green: Prevention Screening
- Purple: Other/ Uncertain
Frequency of Patient Safety Issues Related to Management and Treatment

- **Omitted**
- **Procedural Complication**
- **Incorrect**
- **Delayed**

Legend:
- **Total**
- **Drug or Pharmaceutical**
- **Dose of a Drug or Pharmaceutical**
- **Other Tx/Mgmt**
- **Preventive Services**
Frequency of Patient Issues Related to Management of Clinical Information

- Missing from the chart
- In wrong place in the chart
- Wrong information in the chart
Frequency of Near Miss Events and Hazards during Visits

- Hazards
- Planned Interception
- Unplanned Interception

Categories:
- Procedure/Treatment
- Infection
- Equipment/Device
- Medication
- Fall
- Transfusion
- Accident (non-fall)
- Laboratory
- Restraint

Graph showing the frequency of near miss events and hazards during visits.
Ambulatory Care Survey

• 142 Encounters
• 48 NP students completed the survey
  • Midwifery, Acute Care, Family, Pediatrics, Psychiatry, Women’s Health
  • 1 Male; 47 Female
Frequency of Clinician-related Patient Safety Issues (N=142)

- Felt rushed or hurried
- Interrupted during encounter
- Communication problem with patient
- Felt distracted
- Procedural skill problem
- Clinical judgment problem
Ambulatory Patient Safety Issues Related to Management of Clinical Information

No Issues reported related to Clinical Information “In someone else’s chart”
Frequency of Patient Safety Issues Related to Diagnosis

- Total
- Symptom Workup
- Prevention Screening
- Other/ Uncertain

Missed Diagnosis
Frequency of Ambulatory Patient Safety Issues Related to Management and Treatment

- Omitted Management and Treatment
- Procedural Complication
- Incorrect Management and Treatment

Bar chart showing frequency of safety issues in different categories.
Limitations

• Reporting process is limited by the respondents
  • Over- or under-estimated due to recall bias
  • Students whose responses may not reflect the responses that would be provided by a fully-trained clinician
  • Participation in a patient safety curriculum may have heightened their patient safety mindfulness

• Types of encounters that were the focus of the survey
  • Captured only in relationship to face-to-face visits, leaving events related to telephone calls, triage and follow-up minimally detected

• Inability to differentiate between what had occurred in the present visit or in an earlier visit with a patient
  • Participants reported missed or delayed diagnosis, it was not clear if the APN student missed the diagnosis and the preceptor identified it or if the diagnosis had been missed or delayed from an earlier visit
  • Another analytic limitation related to lack of data on our respondents’ APN specialty or their actual practice setting

• Took place at a single school of nursing in New York City, which may limit generalizability
Conclusion

• Many of the patient safety issues which were identified in this study could be ameliorated by the use of information and communication technologies to help coordinate and streamline the delivery of healthcare services.

• Earlier studies have found that successful patient–clinician communication patterns affect the health status of patients with chronic illnesses,

• Adoption of information technology (IT) may be a pathway for improving access and management of clinical information and ultimately improving patient care.