Medication reconciliation completed by pharmacy on admission from the ED

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BACKGROUND
- In most facilities, the RN completes the patient’s comprehensive medication history. The RN may multi-task because of pressing patient care issues and may not have time to investigate every medication. Medication history and reconciliation is inconsistent in performance, providing an inaccurate/incomplete picture to the M.D.
- 54-67% of all admitted patients have at least one discrepancy1
- 30-70% variance between medication patients were taking prior to admission and their admission medication orders (primarily due to errors with medication history)2, 3
- 36% of patients had errors in admission orders (primarily due to errors with medication history)4
- Cost of a preventable Adverse Drug Event = $4,800-$10,700 per event5

PURPOSE
This quality assurance study assessed the accuracy of medication histories entered into the EHR on patients being admitted to the ED. The study put Certified Pharmacy Technician (CPhT) in the ED for medication history and reconciliation. The goal of the program was to improve accuracy, reduce errors, improve regulatory compliance, increase cost savings, and improve Physician and Nursing satisfaction.

METHODS
- Completed in the ED at an urban Level 1 trauma center
- Prior to pilot study, a random group of 50 admitted patients with medication histories done by RN staff was assessed over 1 week for accuracy to be compared with the results
- Number of total inaccuracies on medication lists were totaled for each patient studied
- CPhTs, overseen by pharmacists, gathered information about patients’ home med
- CPhT ED Coverage:
  - M-F 0700-2330
  - S&S 1000-2030
- ED Pharmacist (RPh) Coverage:
  - Daily 1100-2130
  - Avg histories done by each CPhT = 24/day
  - Avg time to complete med history = 20 min

RESULTS

<table>
<thead>
<tr>
<th>Data Collection Description*</th>
<th>Pre-Pilot Result n=50</th>
<th>Post-Pilot Result n=50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total home medications, #</td>
<td>436</td>
<td>421</td>
</tr>
<tr>
<td>Home med list accuracy (Inaccuracies/Total # meds)</td>
<td>19%</td>
<td>99.5%</td>
</tr>
<tr>
<td>Types of Inaccuracies n=355 n=2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Omitted medications, #</td>
<td>188</td>
<td>0</td>
</tr>
<tr>
<td>Incorrect medications, #</td>
<td>135</td>
<td>1</td>
</tr>
<tr>
<td>Incomplete medications, #</td>
<td>28</td>
<td>1</td>
</tr>
</tbody>
</table>

Significant increase in Nursing and Physician satisfaction:
- 20 min for direct patient care given back to RN per medication reconciliation completed
- “Absolutely vital part of patient safety and good communication”; “I can’t imagine running the ER without them.”

REFERENCES

*Definitions: Accuracy = no omissions; no incomplete medications; no incorrect medications, doses, routes and frequencies; Omitted = medications left off the home med list; Incorrect = meds that are not what the patient is taking; those that are identical but should not be present and those that are extra; Incomplete = number of missing components on the home med list.

CONCLUSION
- Medication reconciliation completed upon admission from the ED is most accurately completed by pharmacy
- Along with improved accuracy, this gives back significant time and energy to ED nurses to focus on direct patient care
- 2016 study shows that for every $1 invested in pharmacist time for medication reconciliation, $12 is saved6
- Cost data applied from 1 trial to SMC ED = a cost avoidance of $1.84 million/year6
- Using certified pharmacy technicians to complete medication histories and pharmacists to review and reconcile medications is a safe, efficient, and cost effective strategy.

 enfer correspondent