BACKGROUND

- Patients discharged home from rural hospitals with medication changes are at risk of readmission within 30 days.
- The nationwide rate of unplanned 30-day readmission is 15.2%.1
- Previous studies have analyzed causes of hospital readmissions which include: specific disease state complications, access to care, adverse drug events, etc. Patients with medication discrepancies or medications missing on their hospital discharge summaries are twice as likely to be readmitted to the hospital in comparison to patients without errors.2
- Sanchez et al.3 found pharmacy-led discharge counseling of 401 patients reduced rates of readmission in contacted patients (17.7%) vs. those not contacted (33.9%).
- Hunter Pharmacy Services, Inc. (HPS) provides pharmacist-led post-discharge telephone counseling for three rural Texas hospitals in an effort to reduce 30-day readmissions.

OBJECTIVES

To evaluate the impact of pharmacist medication counseling and disease education through telephone contact 48-72 hours post-discharge.
- Primary outcome is 30-day readmission rates between those counseled vs. those not counseled.
- Secondary outcomes compared the rate of patient-related and hospital-related medication discrepancies.

METHODS

- Patients were contacted by telephone by a pharmacist 48-72 hours after discharge if they met one of the following criteria:
  - Readmitted within 30 days
  - Readmitted due to medication complications or non-compliance
  - Diagnosed with a new chronic disease state
  - Admitted because of complications of a chronic disease state
  - Changes were made to home medications at discharge
  - New medications were started at discharge
  - Patient or doctor requests counseling
  - Patients were not contacted by a pharmacist if they were transferred to another facility or nursing home, or if they were discharged home without any changes to their home medications.
  - A pharmacist spoke with the patient or designated caregiver to review the discharge medication reconciliation and ensure all changes and instructions were understood.
  - If a medication error was discovered during the call, it was designated as a discrepancy. If the error required immediate attention, the patient’s primary physician was contacted.
  - For this study, the 30-day readmission rates were compared from June 2013 to December 2015 between the patients successfully contacted and those unable to be reached.

RESULTS

<table>
<thead>
<tr>
<th>Discrepancies</th>
<th>Patient-related</th>
<th>Hospital-related</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taking medication at home, but was not on med rec</td>
<td>73</td>
<td>18</td>
</tr>
<tr>
<td>Patient not yet started medication</td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td>Patient quit taking medication due to complications</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>Patient taking medication incorrectly</td>
<td>21</td>
<td>3</td>
</tr>
<tr>
<td>Patient unable to get new medication</td>
<td>24</td>
<td>8</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>1</td>
</tr>
</tbody>
</table>

- Across all three hospitals medication discrepancies were found in 45% of all successfully contacted patients.
- Discrepancies were divided into "Patient-related," which were errors caused by the patient’s non-compliance, and "Hospital-related," which were errors caused by inadequate medication reviews and poor communication of instructions prior to discharge.

DISCUSSION

- 1215 total calls were attempted. 890 patients (73.3%) were successfully contacted. 325 patients (26.7%) could not be reached. One reason for unsuccessful contacts was unanswered calls, but a large percentage of unsuccessful contacts were due to incorrect or outdated phone numbers in the hospital electronic medical record. Qualifying patients were notified a pharmacist would be contacting them to go over their medications within a few days. The goal of notifying patients was to increase the likelihood of patients answering when the pharmacist called. The successful contact rate from this study was similar to a previous study where 69.1% of 401 patients were successfully contacted by a pharmacist.3
- The purpose of the discharge counseling program provided by HPS was to reduce hospital readmission rates. However, the participating hospitals did not have readmission data available for the years prior to the counseling program implementation. Therefore, this study compared the readmission data between patients successfully contacted and those not contacted. For patients who spoke to a pharmacist, the rate of readmission was about half compared to patients who were unable to be contacted.
- The most common patient-related medication discrepencies were patients taking medications at home not listed on the medication reconciliation or not starting a new medication as instructed at discharge. The pharmacist addressed these medication discrepancies by updating the medication list and sending via postal mail or email to the patient.
- The most common hospital-related medication discrepancies were patients not receiving proper counseling prior to discharge and discharge instructions that were unclear or conflicting. To address this issue, monthly reports were sent to each facility detailing each call made and the discrepancies found in an effort to improve their discharge process.

CONCLUSIONS

- Patients in the study with unsuccessful contact for counseling post-discharge had the same rate of readmission (15.2%) as the national average. Patients successfully contacted by a pharmacist had less than half the rate of readmission (6.9%).
- Medication discrepancies were found in 45% of all contacted patients. Discrepancies were attributable to either patient or hospital related errors. Current quality improvement processes are in place with the purpose of reducing discrepancies in the future.
- Although the study found the successful contact rate was similar to a previous study, improvement is necessary to increase patient contact. Future steps will include implementing a standardized process to secure correct patient contact information.
- Pharmacist post-discharge telephone counseling reduces 30-day hospital readmissions and helps identify medication discrepancies.

REFERENCES