Patient Safety in the Ambulatory Setting
No News is Not Always Good News
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Background
SAFETY FIRST

SAFETY IS LIKE A LOCK, BUT YOU ARE THE KEY.
Background

- Patient safety was brought to the forefront of public health issues and grabbed the attention of policymakers with the IOM’s 1999 report “To Err is Human: Building a Safer Health System.”

- Despite most of patient care taking place in the outpatient setting (1.2 B visits/yr), most patient safety endeavors and quality improvement undertakings have been widely based on the inpatient side.
  - High stakes of inpatient medicine and the nature of the errors
  - the nature of the patient–provider relationship
    - Far more important on the ambulatory side
    - Gandhi et.al found that 46% of errors involved significant patient factors, with nearly half of these reflecting nonadherence
Historically, there has been very few studies dedicated to patient safety in ambulatory care.

Further complicating this issue:
- how do we decide what are appropriate patient safety interventions, when and how should they be implemented in the ambulatory settings.
Background

Most widely documented ambulatory errors

- **Medication errors**
  - prescriptions for incorrect drugs or incorrect dosages

- **Diagnostic errors**
  - missed, delayed and wrong diagnoses

- **Laboratory errors**
  - missed and delayed tests as well as errors in patient follow-up on test results

- **Clinical knowledge errors**
  - knowledge, skill and general performance errors on the part of

- **Communication errors**
  - doctor-patient communication errors, doctor-doctor communication errors or other miscommunications between parties

- **Administrative errors**
  - errors in scheduling appointments and managing patient records
Purpose
Purpose

- The purpose of this project is to call awareness to the importance of patient safety in the ambulatory setting.

- To specifically create both practical and measurable ways to promote a culture of safety in my primary care continuity clinic:
  - Through medical education - lectures, MMI conferences
  - Assessing the current status of patient safety culture
  - Patient safety reporting mechanism
  - Measurement of frequency and types of errors pre and post
Methods
Methods

- Chart reviewed – 138 charts
- Assessed charts for errors in the following domains:

Table 1 Medical Domains and Definitions

<table>
<thead>
<tr>
<th>Domains</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preventative medicine</td>
<td>Immunization &amp; age appropriate screenings</td>
</tr>
<tr>
<td>Communication to patient of laboratory results</td>
<td>Laboratory, imaging results to patients, diagnostic and medical treatment plans</td>
</tr>
<tr>
<td>Appointments/Follow-up</td>
<td>Ordering and scheduling follow-up visits referrals</td>
</tr>
<tr>
<td>Medication Refills</td>
<td>Appropriate refill, delay</td>
</tr>
<tr>
<td>Equipment</td>
<td>Availability, functioning, maintenance</td>
</tr>
</tbody>
</table>
Methods

- Conducted a brief presentation on what is patient safety:
  - the importance of promoting safety in the ambulatory setting
  - specifically defining medical error and near misses, examples of them
  - how to identify them and when and how to report them.
  - goal to improve the health care and safety of our patients and that punitive action is not the goal

- Monitored with weekly reports
  - Will illicit feedback through survey on its ease of use, why residents have or have not chosen to use the tool
  - Monthly Morbidity and Mortality and Improvement Conference – initially by me and then a team of residents each month
    - Currently, working with patient safety point person to identify cases to present
Methods

Medical Office Patient Safety Survey – adapted from AHRQ

### SECTION A: List of Patient Safety and Quality Issues

The following items describe things that can happen in medical offices that affect patient safety and quality of care. **In your best estimate, how often did the following things happen in your medical office OVER THE PAST 12 MONTHS?**

<table>
<thead>
<tr>
<th>Access to Care</th>
<th>Daily □</th>
<th>Weekly □</th>
<th>Monthly □</th>
<th>Several times in the past 12 months □</th>
<th>Once or twice in the past 12 months □</th>
<th>Not in the past 12 months □</th>
<th>Does Not Apply or Don’t Know □</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A patient was unable to get an appointment within 48 hours for an acute/serious problem ...............</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
<td>□ 6</td>
<td>□ 9</td>
</tr>
<tr>
<td>Patient Identification</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. The wrong chart/medical record was used for a patient .........................................................</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
<td>□ 6</td>
<td>□ 9</td>
</tr>
<tr>
<td>Charts/Medical Records</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. A patient’s chart/medical record was not available when needed ................................................</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
<td>□ 6</td>
<td>□ 9</td>
</tr>
<tr>
<td>4. Medical information was filed, scanned, or entered into the wrong patient’s chart/medical record ........................................................................</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
<td>□ 6</td>
<td>□ 9</td>
</tr>
<tr>
<td>Medical Equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Medical equipment was not working properly or was in need of repair or replacement ......................</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
<td>□ 6</td>
<td>□ 9</td>
</tr>
</tbody>
</table>
## Methods

- **Medical Office Patient Safety Survey** – adapted from AHRQ

### SECTION A: List of Patient Safety and Quality Issues (continued)

How often did the following things happen in your medical office **OVER THE PAST 12 MONTHS**?

<table>
<thead>
<tr>
<th>Medication</th>
<th>Daily</th>
<th>Weekly</th>
<th>Monthly</th>
<th>Several times in the past 12 months</th>
<th>Once or twice in the past 12 months</th>
<th>Not in the past 12 months</th>
<th>Does Not Apply or Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. A pharmacy contacted our office to clarify or correct a prescription...</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
<td>□ 6</td>
<td>□ 9</td>
</tr>
<tr>
<td>7. A patient’s medication list was not updated during his or her visit...</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
<td>□ 6</td>
<td>□ 9</td>
</tr>
</tbody>
</table>

### Diagnostics & Tests

| 8. The results from a lab or imaging test were not available when needed... | □ 1   | □ 2    | □ 3     | □ 4                                | □ 5                                | □ 6                      | □ 9                         |
| 9. A critical abnormal result from a lab or imaging test was not followed up within 1 business day... | □ 1   | □ 2    | □ 3     | □ 4                                | □ 5                                | □ 6                      | □ 9                         |

### SECTION B: Information Exchange With Other Settings
Methods

Excerpt from Survey:

- Most health care for a patient takes place in the ambulatory setting
  - Strongly Agree  Agree  Neutral  Disagree  Strongly Agree

- Most errors in healthcare occur in the inpatient setting
  - Strongly Agree  Agree  Neutral  Disagree  Strongly Agree

- What are some examples of patient safety error that may occur in the ambulatory setting?

- What are challenges to implementation of efforts to translate evidence into practice?
Results
Preliminary Results

Categories of Medical Error and Frequency of Harm

- Appts & F/u 30%
- Communication 28%
- Medication 22%
- Equipment 6%
- Preventative 14%
Table 2 Categories of Medical Error and Frequency of Harm

<table>
<thead>
<tr>
<th>Domains</th>
<th>No. of errors (% total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preventative medicine</td>
<td>8 (14)</td>
</tr>
<tr>
<td>Communication to patient of laboratory results</td>
<td>15 (28)</td>
</tr>
<tr>
<td>Appointments/Follow-up</td>
<td>17 (30)</td>
</tr>
<tr>
<td>Medication</td>
<td>12 (22)</td>
</tr>
<tr>
<td>Equipment</td>
<td>4 (6)</td>
</tr>
<tr>
<td>Total for Medical Domains</td>
<td>56 (100)</td>
</tr>
</tbody>
</table>
## Preliminary Results

### Table 3 – Examples of Errors

<table>
<thead>
<tr>
<th>Domains</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preventative medicine</td>
<td>Patient age 68 with multiple co morbidities not offered/ordered the pneumovax</td>
</tr>
<tr>
<td>Communication to patient</td>
<td>Provider switched to another BP med and d/c in the system but did not inform patient and patient became hypotensive light headed</td>
</tr>
<tr>
<td>Appointments/Follow-up</td>
<td>Delayed diagnosis in following on consultants reports</td>
</tr>
<tr>
<td>Medication</td>
<td>Patient re-ordered Hep B series when received series 1 yr ago, patient re-ordered potassium supplements while on Spironolactone and Lisinopril, no labs in months, K+7</td>
</tr>
<tr>
<td>Equipment</td>
<td>Only one functioning EKG on another floor when needed stat EKG</td>
</tr>
</tbody>
</table>
Preliminary Results

- **Patient Safety Reporting Tool** – via verbally and an anonymous box. 4 residents have submitted 4 instances of errors/near misses.

- **Pre Medical Office Survey on Patient Safety** - 28 responses
  - Most common themes as answer to “What are some examples of patient safety error that may occur in the ambulatory setting?”
    - Delayed diagnosis, miscommunication on medication, misdiagnosis, no answer
  - “What are challenges to implementation of efforts to translate evidence into practice?”
    - Culture, technology, lack of staff in place, patient population
Most health care for a patient takes place in the ambulatory setting.

Most errors in healthcare occur in the inpatient setting.
Conclusion
Conclusions

- Appointments/follow-up, communication and medication errors were the top 3 domains where medical errors were examined.
- These areas should be prioritized when addressing the safety concerns in this particular clinic, consistent with prior studies as areas of concern.
- Although medication errors are often sited as the most frequent type of error.
Conclusions

- Improvement in patient safety in the ambulatory setting will continue to be a challenge.
  - Clinics are high-volume, busy, often understaffed in resource-poor areas.

- It should become more of a research priority and supported for academic pursuit.

- Each clinic practice needs an individualized safety protocol but there are common areas of deficiencies where solutions are generalizable.
Limitations

- To the project: itself switching institutions midstream and learning new systems and areas of need, key players
- Small sample size
- Charts chosen: not entirely random based on patients scheduled in the last 2 months in clinic
- Weariness of chart reviewer and only one reviewer
- Cultural change
Next Steps

- Continue with education on the importance of patient safety across all areas of patient care
  - During their continuity clinics
  - Plan to expand to noon conference and to the ambulatory conference didactics day – all residents rotate through
- Continue project-surveying residents
- Continue manual chart review of records now, at half way point and at the end of the year
- Pocket cards
- Expand my work team
Next Steps

☐ Apply to AHRQ for funding using initial preliminary data to expand project

☐ Submit abstract of preliminary to Georgia ACP faculty competition in October, SGIM, and my local Patient Safety Conference

☐ Submit Call to Action to Kevin MD or NPA Blog

☐ Implement a functional online reporting system for the outpatient setting

☐ Other research areas to explore - if practice type i.e. an ACO vs a PCMH lends facilitate better patient safety
Final Thoughts

“The best way to get a good idea is to get a lot of ideas.”
“There is a right thing to do with regard to quality of care: improve it. If that takes courage, so be it.”

Donald Berwick
References
