**Assessment of a Strategy to improve Electronic allergy records at a Tertiary care hospital (ASSET)**

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**Introduction**
- While medication allergies are abundant in patients’ electronic health records (EHRs), it has been suggested that as few as 6-10% of documented allergies are true allergies that require complete avoidance of a medication.1
- Documenting details about a drug reaction can help clinicians distinguish an allergy from an intolerance or side effect, helping to guide appropriate medication decisions and optimize care.
- **REACT study**, conducted last year at Royal Jubilee Hospital (RJH),
- – Evaluated the accuracy and completeness of allergy records at RJH for patients admitted between Feb 21 – Nov 20, 2016
- – Key results: Nearly two thirds of documented medication allergies did not contain the details about the reaction (excluding NKDA entries), ~50% of allergies are documented by nurses, and inpatient wards were the most common location of allergy documentation
- Previous studies have looked to improve allergy documentation through patient education, or by restricting allergy documentation to pharmacists, but no studies have examined the effect of an educational intervention targeting the primary allergy documenters – nurses.
- We hypothesized that an educational intervention targeting nurses on a medical ward would improve allergy documentation on that ward.

**Study Objective & Outcomes**

**Study Objective:**
To create and implement an educational intervention for nursing staff (RNs and LPNs) on medication allergies and allergy documentation, and to assess whether this intervention improved completeness of allergy documentation compared to what was found in the REACT study.1

**Primary Outcome:**
To determine if the proportion of allergy/sensitivity documentation containing sufficient detail to discern an absolute contraindication from a precaution improves after implementing an educational intervention strategy

**Secondary Outcomes:** (compared before and after the educational intervention)
- Average number of allergies per patient
- Durability of effect after the intervention if indeed an effect is found
- Proportion of allergy entries inputted by nurses on BN
- Proportion of reactions documented as intolerance, allergy or ADR
- Number of documented antibiotic allergies updated (unable to assess)
- Proportion of allergies entered as a drug class or as a single drug (not shown)

**Methods**

**Design**
- Retrospective before-and-after chart review
- **Intervention:** education targeting nurses on a medical ward
  - Nurses were required to sign informed consent forms to participate and attendance was not mandatory

**Inclusion**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Pre-Intervention Feb 23/16 - Nov 30/16</th>
<th>Post-Intervention 1 Nov 6/17 - Dec 10/17</th>
<th>Post-Intervention 2 Dec 11/17 - Jan 12/18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Patients – no.</td>
<td>931</td>
<td>130</td>
<td>133</td>
</tr>
<tr>
<td>Age – ye, mean</td>
<td>66.4</td>
<td>69.5</td>
<td>70.7</td>
</tr>
<tr>
<td>Male sexe – no. (%)</td>
<td>493 (53.0)</td>
<td>55 (42.3)</td>
<td>53 (39.8)</td>
</tr>
<tr>
<td>Allergy entries – no.</td>
<td>991</td>
<td>192</td>
<td>192</td>
</tr>
<tr>
<td>No known drug allergies – no. (%)</td>
<td>547 (54.8)</td>
<td>63 (48.5)</td>
<td>71 (53.4)</td>
</tr>
<tr>
<td>Total entries assessed (excluding NKDA) – no.</td>
<td>1538</td>
<td>255</td>
<td>233</td>
</tr>
</tbody>
</table>

**Results**

**Conclusion**
- After implementation of an educational intervention on medication allergies & documentation for nurses on a medical ward, there was no change to the proportion of complete allergy records (those which contain sufficient information to inform medication-related decisions). However, there was a small but statistically significant improvement in post-intervention period 2 data.
- The most common medication allergies, health profession documenting allergies, and distribution of classification of reactions remained the same pre and post-intervention. Targeting future interventions to the most commonly reported medication allergies may be a strategy to improve documentation.

**Next Steps**
A follow up study to assess if this intervention has improved allergy documentation is planned for Jan 2019.

References available on request