Embedding Evidence: Clinical Decision Support Strategies

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Background - ColumbiaDoctors

- 1,100 doctors
- ↑↑ Specialists/Primary Care
- 150 practices (40 sites)
- MDs admit to NewYork-Presbyterian Hospital
  - Teaching Hospital for two campuses:
    - Columbia
    - Cornell
- 550 Eligible Providers
- Quality Division: 5 FTEs
- IT Resources:
  - 40 FTEs on financial systems
  - 25 FTEs on clinical systems

Subset of tri-state sites
## Forms of Decision Support

<table>
<thead>
<tr>
<th>Modality</th>
<th>ColumbiaDoctors (Enterprise EHR; Medispan)</th>
<th>NYPH (Sunrise Clinical Manager; Multum)</th>
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</thead>
<tbody>
<tr>
<td>Alerts</td>
<td>Drug-Allergy; Dup Drug; Drug-Condition; Drug-Drug; Drug-Lab</td>
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<tr>
<td>Order Sets</td>
<td>+</td>
<td>+++ (plus embedded MLMs)</td>
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<tr>
<td>Flow Sheets</td>
<td>+++</td>
<td>++</td>
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<tr>
<td>Documentation (semi-structured)</td>
<td>++++</td>
<td>+++++ (plus form-based MLMs)</td>
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</tbody>
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CDS Gaps

- Key EHR Gaps for Accountable Care (Bates, Bitton; Health Affairs 2010)
  - Clinical Decision Support
  - Registries
  - Team Care
  - Care Transitions
  - Personal Health Records
  - Telehealth
  - Measurement (common quality measures)
- Analytics in the middle
- Prediction: These gap solutions are going to be developed as a “service layer” on top of EHRs and Analytics
Advanced Decision Support

Workflow Support = CDS “Ecosystem”

- Documentation
- Alerts
- Flowsheets
- Order Sets
Level 5 Workflow Integration: iCharge
“Point of Work” Decision Support

SCM Custom MLM
iCharge Module in Sunrise
(integrated Charge)
Workflow Integration: iCharge
“Point of Work” Decision Support
Under the Hood: OPEN solutions

Eclipsys Acute Care 5.5
- Provider, Patient, Problems
- Problems

ObjectsPlus

Allscripts EEHR V11.2
- Past Diagnoses, Charge Favorites, ICD & CPT Master
- Provider, Patient, Problems, CPT4, NoteID

UAI

iCharge
What’s Next

• “Combination Therapy” CDS
  – ? Way to address high override rates and/or alert fatigue
  – Need research into the methods for mitigating alert fatigue
• “Point of Work” CDS
• “Cross-platform” CDS
  – Necessitates external engines and external knowledge sources
• Genomics CDS Support
Combining Forms of Decision Support ("Dual Therapy"?)

PBM Reminders embedded within an Order Set
CDS for VBP?

Common Business Rules

Secret “Services” Sauce? Standards (e.g. Infobutton)?

Allscripts  Epic  Nextgen  eCW  Other...
Cross-platform, Genomics Decision Support?