Improving Documentation Through an Electronic Health Record Initiative

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Local Problem & Proposed Solution
Problem: Paper based Specialty Clinic workflow is Inefficient, Costly & a Barrier to Optimal Care

- Dictated Specialist notes not available to view for 24 hours or more
- Transcription process alone averaged 10 hours
- Transcription Costs exceeded $1.6M Annually
- Limited access to medical records for providers & families
- Patient safety concerns with essential patient information in multiple locations

“How can I provide great care for this child when I cannot see what happened earlier today in Cardiology Clinic”
(An ED Physician)
Baseline Measurements: Provider Note Availability & Transcription Statistics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Baseline FY 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Transcription Volume</td>
<td>246,027</td>
</tr>
<tr>
<td>Annual Transcription Expense</td>
<td>$1,690,334</td>
</tr>
<tr>
<td>Note Availability</td>
<td>24-72 Hours</td>
</tr>
<tr>
<td>Transcription Processing Time</td>
<td>10.4 Hours</td>
</tr>
</tbody>
</table>
# The Solution

## Implementation of Ambulatory EHR & Voice Recognition for all Specialty Clinic Providers

### Goals

- Patient Information is Legible & Organized
- Patient Safety is Improved Through Integrated Alerts
- Decrease Regulatory & Compliance Risks
- Quality Experience Maintained or Improved for Patients & Families
- Chart Auditing & Data Mining is Improved
- Reliance on Transcription is Minimized & Costs Reduced
- Specialist Input is Quickly Available

### Scope of Initiative

- 450 Specialty Providers
- 40 Specialties
- 7 Regional Outpatient Centers
- 17 Hospital Clinics
- 15 “Pebbles”
- 5 Waves
- 8 Months Duration
Previous Dictation Process

Dials the phone

1. Enters dictation number
2. Enters patient encounter number
3. Dictates note
4. Logs into transcription system
5. Accesses the dictated note
6. Transcribes note
7. Saves note in dictation system
8. Reviews document
9. Transcribes changes
10. Saves changes
11. Logs into transcription system
12. Accesses the dictated changes

Change Needed

- YES: Dictates changes

- NO: Signs note

Note available

Could take several days

Provider
- Transcriptionist
- System
Current Documentation Process

1. Logs into System
2. Selects a patient from their list
3. Clicks cursor into the dictation field
4. Begin speaking
5. When note is complete click "sign"
6. Logs out of the system

WORK-FLOW CHANGES:
- Old Process: 19 Steps
- New Process: 6 Steps

Once signed the note is immediately visible to all users
Implementation Strategy

• Bear Institute - Children’s Lean collaboration
  – Multi week evaluation of people/process/technology
  – Included workflow, staffing assessment & recommendations

• Significant engagement in design, testing, go-live support

• Major Technology Improvements
  (Virtual Desktop Infrastructure, tap & go access, new devices, etc.)

• Comprehensive clinician training for both EHR & voice recognition

• 5 waves July ‘15 to February ‘16

• 450 Providers, 43 Locations

• Hired 37.5 FTEs to Support Specialty Clinics

• 50% → 33% → 25% → 25% visit reduction over 4 weeks with each wave
How Health IT was Utilized
Solutions Within Ambulatory EHR Initiative

- Ambulatory EHR with Voice Recognition
- Provider Letters, e-Prescribe, Quick Orders & Ambulatory Organizer, Patient Portal
- Scheduling, Registration, Enterprise Master Patient Index (EMPI)
- Document Imaging, e-Signature at registration
- Meaningful Use Reporting
- Kids Health™ Patient Education
- Extension of VDI & Tap & Go to improve performance
Signing Dynamic Documentation

You can edit the document by typing in text or using Dragon.

Most sections and subsections contain icons to remove defaulted sections or add additional free text.

The X icon located to the right of the section or subsection title can be used to remove the section from the note.

The bent arrow icon can be used to insert free text.

The double arrow icon refreshes the section in the event the information has been updated.

When done, sign the note.
Value Derived
Improved Quality of Care

“How can I provide great care for this child when I cannot see what happened earlier today in Cardiology Clinic”

(An ED Physician)

• Notes are immediately visible by all clinicians
• Patient discharge material is legible and organized
• Improved documentation compliance
• Notes are searchable – structured data - clinicians are able to see all references to a specific disease process or treatment
Number of Ambulatory Transcriptions

Wave 1 Go Live June 2015
Wave 5 Go Live November 2015
Transcription Cost

- **Wave 1 Go Live**
  - June 2015

- **Wave 5 Go Live**
  - November 2015
## Post Implementation Evaluation

<table>
<thead>
<tr>
<th>Metric</th>
<th>Baseline FY2015</th>
<th>Result FY2016</th>
<th>Result FY2017</th>
<th>% Total Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Transcription Volume</td>
<td>246,027</td>
<td>89,862</td>
<td>18,728</td>
<td>93.4%</td>
</tr>
<tr>
<td>Annual Transcription Expense</td>
<td>$1,690,334</td>
<td>$357,137</td>
<td>$104,800</td>
<td>93.9%</td>
</tr>
<tr>
<td>Note Availability</td>
<td>24-72 Hours</td>
<td>Immediate</td>
<td>Immediate</td>
<td>100%</td>
</tr>
<tr>
<td>Transcription Processing Time</td>
<td>10.4 Hours</td>
<td>0 Hours</td>
<td>0 Hours</td>
<td>100%</td>
</tr>
</tbody>
</table>
Keys to Successful Adoption

• Market the value to the physicians
  – Notes are immediately available to other care providers
  – Less time required to create note than transcription
  – Structured data that can be pulled into other notes, discharge documentation and patient education materials
  – Product is easy to use – requires very little training
Future Advancement
Future - Improve Adoption & Further ROI

• Operative notes are not fully automated: opportunity to decrease transcription of remaining 10% dictated notes
  – Utilized system report to identify non-users
  – Evaluating non-user note types to determine if changes need to be made to increase utilization
  – Schedule 1:1 education with non-users
  – Monitor reports for increased adoption
• Implement cloud based voice recognition for improved performance, accuracy & availability
• Explore mobile voice recognition tools for continued advancement
Questions