Clinical Safety & Effectiveness
Cohort # 10

Improving Response Time for Secure Health Messaging at the UHS Family Health Northwest Clinic

CENTER FOR PATIENT SAFETY & HEALTH POLICY

UT Health Science Center
SAN ANTONIO

Educating for Quality Improvement & Patient Safety
AIM STATEMENT

To Reduce
Patient Communication Response Time
(Secure Health Messaging - SHM)

by 50%
by May 31, 2012
Secure Health Messaging

- Secure communication channel between patients and providers (Currently Telephone, Web Portal in future)
- Allows established patients to request and process referrals and prescriptions without physically coming to office
  - Helps reduce office visits
- Patient communication note is initiated in EMR by the telephone operator
- Note follows a “workflow” that may involve various stakeholders and touch points to satisfy patient request
Rationale

• Patient Satisfaction
  – Timely completion of
    • Medication refills
    • Patient questions and concerns

• Decreased call volume
  – Repeat calls avoided

• Staff satisfaction

• Improved workflow with pharmacy
  – No more repeat faxes
The Team

Members
– Cynthia Carranco, RN, BSN, JD
– Monika Kapur, MD
– Camerino I. Salazar, MS
– Edward Aguilar
– Lisa Wammack
– Amruta Parekh
– Hope Nora/Leti Bresnahan
– NW Family Health Center Staff
– Quality and Outcomes Staff

Sponsoring Departments
• Community Medicine Associate
• UHS Ambulatory Services
Northwest Family Health Center

- Front Desk/Phone Bank
- Nurses
- Providers
## Project Milestones

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Team Created</td>
<td>January 2012</td>
</tr>
<tr>
<td>AIM statement created</td>
<td>February 2012</td>
</tr>
<tr>
<td>Weekly Team Meetings</td>
<td>2/9/12 – 5/3/12</td>
</tr>
<tr>
<td>Background Data, Brainstorm Sessions,</td>
<td>2/9/12 – 2/29/12</td>
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<tr>
<td>Workflow and Fishbone Analyses</td>
<td></td>
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<tr>
<td>Interventions Implemented</td>
<td>3/15/12 – Ongoing</td>
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<tr>
<td>Data Analysis</td>
<td>5/31/12 – Ongoing</td>
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<tr>
<td>CS&amp;E Presentation</td>
<td>6/15/2012</td>
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</table>
Our Approach

Current State
- Model the current end-2-end business process - People, Processes, Technology
- Identify stakeholders, Activities, Touch Points

Analysis
- Analyze the current business process
- Identify Non Value Add Activities, bottlenecks
- Identify KPI’s (Benchmark). Best Practices, Checklists

Future State
- Identify how people, processes and technology can be better leveraged to optimize the processes.
- Model the new process

Rollout
- Coordinate with various stakeholders to rollout the new processes
- Establish protocol to monitor and tweak the process

Iterative and Incremental
Current State
Figure 1: Swim Lane Process Mapping of Secure Health Messaging (SHM)

A: Patient calls clinic/faxes received
B: SHM generated in Sunrise
C: SHM forwarded to LVN
D: LVN reviews message, may call pt./pharmacy for more information. LVN either fills medication/answers pt. questions or forwards message to MD for review and approval
E: MD review pt. chart/notes/media document and sends back to LVN for completion of task
F: LVN completes the SHM and calls patient back with final decision.

Time
Start
Step 1
Step 2
Step 3
End
Figure 2: Fishbone diagram detailing potential causes for delay in secure health messaging (SHM) process:

- **People**
  - Staffing Capacity
  - Experience/Training
  - Competing Responsibilities
  - Accountability
  - Communication

- **Process**
  - Lack of back-up process/protocols
  - Lack of follow-through
  - Appropriate Documentation
  - Provider time lag (direct pt. care/admin)

- **Call Volume**
  - Type of Calls/Processing
  - Lack of access providers

- **Infrastructure/Environment**
  - Clinic Hours
  - Auto-population/Interface
  - EMR lab integration

SHM = Timeliness
## Call Volume by Type at FHC-NW

<table>
<thead>
<tr>
<th>Month</th>
<th>Calls</th>
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<tbody>
<tr>
<td>February</td>
<td>9,077</td>
</tr>
<tr>
<td>March</td>
<td>10,272</td>
</tr>
<tr>
<td>April</td>
<td>9,781</td>
</tr>
<tr>
<td>May</td>
<td>9,802</td>
</tr>
</tbody>
</table>

![Call Volume by Type at FHC-NW](chart.png)

- Appointments: 24%
- MHM Calls: 22%
- Misc Other: 17%
- SHM: 13%
- Transfer Calls: 7%
- Confirm Appointment: 7%
- Cancel: 4%
- Triage: 4%
- Reschedule: 2%
Analysis
Key Findings

People
- Incorrect & incomplete data entry
- EMR Training
- Staffing

Processes
- Conformance of Protocols
- Lack of checklists, best practices - consistency

Technology
- Missing Data
  - Date of last / next scheduled visit
- Auto population of data
- Integration with labcorp / quest
Future State
Process Improvement

• Our recommendations were centered around people and process that
  – Required minimal investment
  – Were under our control of influence
  – Information could be gathered, reviewed and reported within course timeframe
Intervention: PDSA 1

- Creation of checklist for front desk/phone bank/nurses
- Orientation of staff
- Observation and monitoring of staff
Intervention: PDSA 2 – Development of a front desk/phone bank checklist

- **Phone Number**
  - Daytime
  - Evening

- **Date of Last Visit**
  - Clinic
  - Name of Clinical Provider

- **Comprehensive Message**
  - Med Refills – List Meds
  - Referrals: Specialty/Any Specific Provider
  - Results: Done, Where and When
  - Paperwork: Dropped When

- **Insurance**
  - CareLink or Other

- **Enter correct pharmacy in Sunrise**
Intervention: PDSA 3 – Development of a nursing checklist

- **Med Refill**
  - Meets criteria for automatic refill: Fill Med and notify provider
  - Does not meet criteria: Verify if refill remains
    - Yes: Notify patient/pharmacy
    - No: To provider for authorization

- **Referral**
  - Old/Renewal
    - Name of Specialist/Office/Address/Phone#
  - New
    - Specialty, Reason, Previous Work-up (X-Rays/MRI), Which part of the body

- **Results**
  - Check-in sunrise: Highlight/Paste Results in Note
    - Forward to Provider
  - No Results
    - Verify when/where studies done

- **Triage**
  - Symptoms
  - Duration
  - Over-the-counter meds tried
  - Fever/Chills

- **Paperwork**
  - Dropped When
  - What kind
  - FMLA/DME/Letter
  - Due When

Message Received
Data Analysis

• Specific targets for change will be the first three steps in secure health messaging
• Observed staff
• Statistical Process Control Charts to chart SHM response
Secure health messaging time before and after the process was standardize: Front desk to LVN (Step 1)
Secure health messaging time before and after the process was standardize: LVN to MD (Step 2)
Secure health messaging time before and after the process was standardize: MD to LVN (Step 3)
AIM Statement Goal-Final (14 Days)

- Q: Did the group meet our goal/ AIM statement?
- A: Well...somewhat!

<table>
<thead>
<tr>
<th>SHMS Steps</th>
<th>Pre-Intervention (Hours)</th>
<th>Post-Intervention (Hours)</th>
<th>Difference</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>25.42</td>
<td>17.50</td>
<td>-7.92</td>
<td>31%</td>
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<tr>
<td>Step 2</td>
<td>17.84</td>
<td>16.28</td>
<td>-1.56</td>
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<tr>
<td>Step 3</td>
<td>13.38</td>
<td>12.57</td>
<td>-0.81</td>
<td>6%</td>
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<tr>
<td>Total</td>
<td>56.66</td>
<td>46.35</td>
<td>-10.31</td>
<td>18%</td>
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AIM Statement Goal-Final (Post- 26 Days)

<table>
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<tr>
<th>SHMS Steps</th>
<th>Pre-Intervention (Hours)</th>
<th>Post-Intervention (Hours)</th>
<th>Difference</th>
<th>% Difference</th>
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</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>25.42</td>
<td>21.11</td>
<td>-4.31</td>
<td>17%</td>
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<tr>
<td>Step 2</td>
<td>17.84</td>
<td>17.61</td>
<td>-0.23</td>
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<tr>
<td>Step 3</td>
<td>13.38</td>
<td>12.19</td>
<td>-1.19</td>
<td>9%</td>
</tr>
<tr>
<td>Total</td>
<td>56.66</td>
<td>50.91</td>
<td>-5.75</td>
<td>10%</td>
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18% reduction in time in first 14 days
Went down to 10% in the next 14 days
Worse than the baseline during the month of May
Can you monetize reduction in response time?

Yes you can...

– Amount spent by clinic staff to address pt. complaints...

Assign $ value to Customer Satisfaction
Lessons Learned

- **Staffing Capacity**
  - Lack of a floating pool

- **Sustainability & Accountability**
  - Process redefinition is step 1.
  - Mindset and behavior change over time

- **Process improvement is an ongoing perpetual activity and not a one time event.** Requires continuous feedback and monitoring
Next Steps

- Work in progress
- Processes are now in place (adjust as necessary and appropriate)
- Expand to other health centers
- Share lessons learned and the importance of measurement and tracking performance
Final Conclusions

Did we achieve all the goals we had set for ourselves?

Partially
We have completed the 1st iteration.

Business Process Reengineering (BPR) is an iterative and incremental approach. It requires mindset change and an open collaborative approach to problem solving.
Better has no limit...

-old Yiddish proverb
Thank you!