Background
Tufts Medical Center Primary Care – Boston is the front door to Tufts Medical Center
The clinic has 40 doctors, sees 40,000 patients, and generates need for 40,000 test results letters each year

Problem statement
It is impossible to track whether test results letters have been generated, approved, or sent to their patients
The process for creating results letters is not standardized across providers
<60% of patients have PIN for online portal. Providers communicate by phone and snail mail
Patients say they get lab test results in a timely manner

68%

Patient survey and staff interviews
To understand the current process, we conducted interviews with:
• 5 Medical Doctors, 2 Nurse Practitioners, 1 Physician 1 Assistant, 1 Medical Resident, 3 Physician Practice Coordinators (PPCs)
Observations:
Process for generating results letters varies with each provider PPC relationship, often due to:
• provider preferences
• necessity of tailoring language
• fear of letters falling through the cracks
We learned about patients’ preferences and expectations through a 3-question paper survey

Data Collection and Analysis

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Approach: DMADV framework

Define process goals
Measure quality
Analyze current process
Design new process
Verify results

Literature review and benchmarking
We learned inadequate results communication can lead to poor medical outcomes:
• Negative impact on patient safety, clinical decisions, therapeutic options, care experiences and outcomes
• 45% of malpractice claims have a diagnostic error or delay component

Through interviews with other institutions, we learned communicating results through patient portals is the industry standard
And though Tufts Primary Care does not utilize its portal and patients may not know it exists, we learned 38% of patients would like online communications

Data Collection and Analysis

EMR data
Despite significant data linking challenges, we were not able to measure past rates of communication:
• Rates of timely communication vary significantly across providers
• Some PPC’s start <30 letters per month, while one starts >120
• When letters are generated, 52% are started within 3 days
• 11% of labs are ordered outside of office visits; communication is much less consistent for orders outside of office visits

Communications are generated within 14 days for only 77% of labs and 32% of radiology

Recommendations
Short-term recommendations
Create a standard process focused on results communication and roll it out across the practice
Increase use of the online portal for test result communication
Generate a weekly list to catch missed results communication
Track results communication on a regular basis through a management dashboard

Sample weekly report of missed communications

Patient Name
PPC Name
Provider Name
Patient Name
MRN
Order Date
# letters ordered
# results
Days elapsed
% created overall
% created by PPC

<table>
<thead>
<tr>
<th>Patient Name</th>
<th>PPC Name</th>
<th>Provider Name</th>
<th>Patient Name</th>
<th>MRN</th>
<th>Order Date</th>
<th># letters ordered</th>
<th># results</th>
<th>Days elapsed</th>
<th>% created overall</th>
<th>% created by PPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient 1</td>
<td>PPC 1</td>
<td>Provider 1</td>
<td>Patient 1</td>
<td>MRN1</td>
<td>11/1/2018</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>75%</td>
<td>65%</td>
</tr>
</tbody>
</table>

New results communication process flow

Longer-term goals
• Adapt and refine results communication process for radiology tests
• Generate a report of results arriving from the lab each day
• Support use of the portal with additional IT resources

Sample biweekly management dashboard

<table>
<thead>
<tr>
<th>PPC Name</th>
<th>Provider Name</th>
<th># letters</th>
<th>% within 3 days</th>
<th>% created overall</th>
<th>% created by PPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPC 1</td>
<td>Provider 1</td>
<td>69</td>
<td>78%</td>
<td>85%</td>
<td>83%</td>
</tr>
<tr>
<td>PPC 2</td>
<td>Provider 2</td>
<td>59</td>
<td>67%</td>
<td>73%</td>
<td>71%</td>
</tr>
<tr>
<td>PPC 3</td>
<td>Provider 3</td>
<td>50</td>
<td>64%</td>
<td>75%</td>
<td>83%</td>
</tr>
<tr>
<td>PPC 4</td>
<td>Provider 4</td>
<td>15</td>
<td>67%</td>
<td>67%</td>
<td>73%</td>
</tr>
</tbody>
</table>