Improving Wait Times for GI Oncology Patients at Hartford Hospital Infusion Center

Hartford HealthCare Cancer Institute

December 8th, 2023
Institutional Overview

- Hartford Healthcare in Connecticut has 7 Acute Care Hospitals and 13 Oncology Infusion sites.
- The Hartford Healthcare Cancer Institute has 34 Medical Oncologists.
- All Practices are QOPI certified and our focus aligns with the Vision of Hartford Healthcare of Delivering Personalized Coordinated Care and Improve the health and lives of the communities we serve.

Northwest Region
- HOCC Torrington Medical Oncology & Infusion

Central Region
- HOCC Meriden Medical Oncology & Infusion
- HOCC Plainville/New Britain/Southington Medical Oncology & Infusion

Fairfield Region
- Fairfield Medical Oncology & Infusion
- SVMC Medical Oncology & Infusion

Hartford Region
- Avon Medical Oncology & Infusion
- Hartford Medical Oncology & Infusion
- Manchester Medical Oncology & Infusion

East Region
- Norwich/Backus Medical Oncology & Infusion
- Plainfield Medical Oncology & Infusion
- Waterford Medical Oncology & Infusion
- Windham Medical Oncology & Infusion
Team Members

Project Sponsor: Peter Yu MD
Team Leader: Rajani Nadkarni, MD

QTP Team Members:
- Kelly Brennan, PharmD, BCOP
- Sabra Dunn, RN, MSN, OCN
- Rajvi Patel, MD
- Shannon Pindar, BSN, RN
- Holley Stallings, RN, MPH, CPH, CPHQ

Local Team Members:
- Nina Benvenuto, RN
- Charley Borden, MBA
- Anshu Chen
- Analisa Eichstedt
- Timothy Hong, MD
- Letitia Lewis
- Kelley Richmond, PharmD, BCOP
- Alexis Vasquez, RN
**Problem Statement**

GI Oncology patients receiving chemotherapy at the Hartford Infusion Center experience a mean wait time of 81 minutes from the start of check-in to the start of their first medication, resulting in patient and staff dissatisfaction and inefficient use of resources.
## Outcome Measure: Baseline Data Summary

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure:</td>
<td>Time from check-in to first administered medication</td>
</tr>
<tr>
<td>Patient Population:</td>
<td>GI oncology patients receiving chemotherapy treatment at the Hartford Hospital Outpatient Infusion Center</td>
</tr>
<tr>
<td>Calculation Methodology:</td>
<td>Time in minutes from check-in to treatment start time</td>
</tr>
<tr>
<td></td>
<td>Time Dissection: Time from patient check-in at Infusion Center until first medication was scanned for administration</td>
</tr>
<tr>
<td>Data Source:</td>
<td>iQueue; Epic Reports</td>
</tr>
<tr>
<td>Data Collection Frequency:</td>
<td>Problem statement data collected from all GI oncology patients seen in the Infusion Center between May 1st 2023 and July 18th 2023</td>
</tr>
<tr>
<td>Data Limitations</td>
<td>First medication includes pre-medications so may not reflect time to first chemotherapy drug; Data collected manually</td>
</tr>
</tbody>
</table>
Outcome Measure: Baseline Data

Minutes from Check-In to First Drug Administered for GI Oncology
Patients of Dr. Hong & Dr. Thumar
5/1/23-7/18/23

n = 78
Aim Statement

We will reduce the mean wait time to less than 60 minutes from the start of check-in to the start of the first medication for GI patients receiving chemotherapy at the Hartford Infusion Center by December 2023.
Process Measure: Diagnostic Data

Barriers to Treatment Start Time

- Labs
- Provider
- Pharmacy
- Communication
- Rooming
- Patient
- Nursing/Infusion
- Scheduling

Total Votes

Barrier
### Prioritized List of Changes (Priority/Pay-Off Matrix)

<table>
<thead>
<tr>
<th>High Impact</th>
<th>Ease of Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Streamline communication via common flowsheet to document advance prep steps</td>
<td>Easy</td>
</tr>
<tr>
<td>Unlinking provider &amp; lab visits from chemo infusion visits</td>
<td>Difficult</td>
</tr>
<tr>
<td>Purchase CMP machine</td>
<td>Easy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Low Impact</th>
<th>Difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase physical office space to avoid rooming delays</td>
<td>Difficult</td>
</tr>
<tr>
<td>Date</td>
<td>Description of Intervention</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>10/2 to 10/13</td>
<td>Unlink visits</td>
</tr>
<tr>
<td>10/2 to 10/13</td>
<td>Create advance prep process</td>
</tr>
<tr>
<td>10/2 to 10/13</td>
<td>Educate schedulers, providers, nurses, and medical assistants on new workflows</td>
</tr>
</tbody>
</table>
Materials Developed

**Patient and Staff FAQs**
- A document was created to hand out to patients and to serve as a talking points to the team, when discussing the culture change in appointment scheduling.
- This document outlined the benefit and expectations of the scheduling changes to patients.

**Advance Prep Process**
- RN FTEs reallocated to focus on this process in conjunction with a pharmacist.
- Document created that serves as a guideline and expectations of the advance prep nurse.
- Assigned a daily APP to be the first point of contact for advance prep questions.
- Communication guidelines set and documentation standardization created.

**RN Pre & Post-Pilot Survey**
- Satisfaction with infusion workflow
- Communication with providers
- Face-time with patients
- Chemotherapy safety
- Perception of patient satisfaction
Change Data

- Check in to first med time decreased from 81 minutes to an average of 53 minutes reflecting a 54% reduction in wait time.
- Linked vs unlinked - Dr. Hong increased his unlinked visits by 39%. Dr. Thumar continued with roughly the same percentage.
- An estimated amount of 12.6 hrs of chair time made available per week equaling 4 patients per week depending on length of treatment.
- Potential revenue increase, with continuing to unlink appointments, in $188,021.6 annually.
- RNs were more satisfied with the workflow for patients who were cleared for treatment prior to their infusion visit.
- RNs reported that they felt they were able to spend more time with their patients and felt less rushed.
- Most patients appreciated the decrease in wait time and understood the initiative.
- Few patients did not like having to have appointments on two different days.
Change Data

Minutes from Check-In to First Drug Administered for GI Oncology Patients of Dr. Hong & Dr. Thumar
10/16/23-11/21/23

n = 56

Minutes

Infusion Visits

Minutes Waited per Visit
Mean = 52
Change Data: Pre/Post Intervention

Minutes from Check-In to First Drug Administered for GI Oncology Patients of Dr. Hong & Dr. Thumar
Pre- and Post-Intervention

UCL: 201.457
CL: 81.361
UCL: 172.239
CL: 52.143

Intervention Start
10/16/2023
## Change Data

### Breakdown by appointment type:

<table>
<thead>
<tr>
<th></th>
<th>Pre-Pilot Data</th>
<th></th>
<th></th>
<th></th>
<th>Post-Pilot Data</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>Mean Wait Time (Minutes)</td>
<td></td>
<td>N</td>
<td>%</td>
<td>Mean Wait Time (Minutes)</td>
<td></td>
</tr>
<tr>
<td>Linked Appointments</td>
<td>70</td>
<td>90%</td>
<td>85</td>
<td></td>
<td>20</td>
<td>36%</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>Unlinked Appointments</td>
<td>8</td>
<td>10%</td>
<td>50</td>
<td></td>
<td>36</td>
<td>64%</td>
<td>49</td>
<td></td>
</tr>
</tbody>
</table>
RN Satisfaction Results

● Overall, do you feel satisfied with the process for treating patients in infusion?
  Pre Pilot: 83.33% NO  Post Pilot: 89% YES

● How often would you say that you are required to reach out to providers for clarification related to your patients’ treatment/plan of care?
  Pre Pilot: 83.3% USUALLY  16.7 % SOMETIMES  0% RARELY
  Post Pilot: 33% USUALLY  67 % SOMETIMES or RARELY

● Do you feel that the dual RN chemotherapy verification process for patients who are unlinked leaves you with more time to provide value added care?
  Pre Pilot: 67 % (Felt time was taken away from patients)
  Post Pilot: 78% YES  11% NEUTRAL

● Do you feel that the process for treating patients who have been unlinked increases satisfaction, safety, and the amount of time spent with patients?
  Post Pilot: 89 % YES  11% NEUTRAL

OVERALL PATIENT SATISFACTION: Increased score from 90% to 91.67% (October to November)
Provider Feedback

- “I feel we are getting less interruptions.”
  - Medical Oncology APPs

- “Overall pilot went well. However, not all patients are agreeable to the change, and we need exceptions for certain patients for unlinking of visits (examples: shorter infusions-30 mins, frail patients, and patients with transportation limitations).”
  - Dr. Hong

- “There has been an improvement in the workflow with implementing an advanced prep process. Standardizing communication to minimize interruptions, or duplicate messages remains an opportunity to improve upon.”
  - Dr. Thumar
Conclusions

- Mean Time for GI Oncology patients of Dr. Hong and Dr. Thumar from check-in to first drug administration was reduced from 81 mins to 52 minutes. Hence our AIM was met.

- We also saw a reduction of time to first drug for other patients receiving chemotherapy during our pilot period (Hawthorne effect)

- We improved staff satisfaction.

- Overall patient satisfaction scores increased.

- We need to continue to optimize process.
Next Steps/Plan for Sustainability

● Continue new process.

● Continue to explore the Pharmacy resource to advance mix certain treatments.

● Identify dedicated personnel to sustain process (advance prep team)

● Optimize Epic messaging/communication from multiple interdisciplinary team members about same question.
Improving Wait Times for GI Oncology Patients at Hartford Hospital Infusion Center

**AIM:** Reduce the mean wait time to less than 60 minutes from time of check-in to start of the first medication for GI patients receiving chemotherapy at the Hartford Infusion Center by December 2023

**INTERVENTION:** Unlink provider & lab visits from chemotherapy infusion visits

Unlinking visits involves separating the provider visit from the chemotherapy visit so that labs can be collected, orders can be reviewed, and chemotherapy can be mixed prior to patients arriving for their infusion visits.

**Preparation for intervention**
- Create workflow to unlink provider/lab visit from infusion visit
- Create advance prep process including re-allocating resources to support
- Create FAQs/talking points for staff and patients and educate team about new workflow & processes

**RESULTS:**
Mean time for GI Oncology patients of Dr. Hong and Dr. Thumar from check-in to first drug administration was reduced from 81 mins to 52 minutes

**CONCLUSIONS:**
- Decreased wait times
- Improved staff satisfaction
- Overall patient satisfaction scores increased

**NEXT STEPS:**
- Continue new process
- Identify dedicated personnel to sustain process (advance prep team)
- Optimize Epic messaging/communication from multiple interdisciplinary team members about same question