ASCO’s Quality Training Program

Reducing the admission-to-chemotherapy delay

Parkland Hospital, Dallas
October 4, 2017
Institutional Overview

- Parkland Health & Hospital System, est. 1894.
- 870 bed hospital, 20 community-based clinics, 11 school-based clinics.
- Population served: Minorities and low income/uninsured.
- Teaching hospital for UTSW Medical Center.
- >2,200 cancer cases annually.
Reducing the Length of Stay (LOS) is a high priority objective.

The 14-400 inpatient unit admits 1-2 patients daily for inpatient chemotherapy.

Rooms are reserved for patients ahead of admission.

Initiation of chemotherapy is often delayed -> adds a day to LOS.

Median delay of 6.2 hours between arrival and initiation of chemotherapy in January-February 2017.
# Team Members

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
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<tbody>
<tr>
<td><strong>Project Sponsor</strong></td>
<td>Esmaeil Porsa</td>
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<tr>
<td><strong>Team Leader</strong></td>
<td>Jenny Li</td>
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<tr>
<td><strong>Core Team Member</strong></td>
<td>Thao Pham</td>
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<td><strong>Core Team Member</strong></td>
<td>Sudarshan Pathak</td>
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<td><strong>Core Team Member</strong></td>
<td>Arjun Gupta</td>
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<td><strong>Facilitator</strong></td>
<td>Navid Sadeghi</td>
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<td><strong>Other Team Member</strong></td>
<td>Tiffany Williams</td>
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<td><strong>Other Team Member</strong></td>
<td>Bernard Tawfik</td>
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<td><strong>Other Team Member</strong></td>
<td>Kiauna Donnell</td>
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<td><strong>Other Team Member</strong></td>
<td>Diane Parker</td>
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<tr>
<td><strong>Patient/ Family Member</strong></td>
<td>Tiffany Galloway</td>
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<tr>
<td><strong>QTP Improvement Coach</strong></td>
<td>Prabhjyot Singh</td>
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Unnecessary delay in administration of chemotherapy

**Technology**
- No RN notification when ‘ok to treat’
- Cut off time to start prepping chemo time ends at 530 pm
- RN/MD/PharmD manually checks to see if labs back
- Non-utilization of Engage app
- RN manually checks to see if admit/lab/ok to proceed

**Tasks/Processes**
- Late arrival of patient
- MD not available on floor-conference/clinic
- Fellow waits for attending approval
- Inconsistency in need of labs
- Attending not available
- Patient unaware or does not call for bed
- Patient does not have transport
- Residents don’t know what labs to order
- Incorrectly directed labs: phlebotomy vs unit collect

**Organization**
- Hep screening not done in clinic
- Physician knowledge of chemo parameters
- Unnecessary labs not removed from Oncology Beacon and are ordered

**People**
- Consent not done in
- Chemotherapy orders not entered/signed in
- Pharmacy tech not available, delivering for whole hospital
- Primary oncologist not available

**Resources**
- Patient off floor
- MD unreachable
- HUC away
- RN workload
- Pharmacist handling regular patients, outpatient chemo
- Shortage of IV pumps
Total Delay from Place-In to Chemo Start  Jan-Feb 2017 - X Chart

- UCL = 13.72
- CL = 6.19
- LCL = 0.00

Hours

Patient No.
Total median delay: 6.2 h

Median time from place in to lab draw: 30 mins
Median time from lab draw to ok to proceed: 2 hours
Median time from ok to proceed to order release: 30 minutes
Median time from order release to chemo on floor: 2 hours
Median time from chemo on floor to chemo start: 1 hour
We aim to reduce the time to initiation of chemotherapy from patient arrival for scheduled admits to Parkland Hospital’s 14-400 unit from a baseline of 6.2 hours to 4 hours by October 4, 2017.
Diagnostic Data

Top barriers

- RN workload: 6 votes, 30.0%
- Inconsistency in need of labs: 6 votes, 30.0%
- Non-standard patient arrival: 4 votes
- Non-utilization of Engage app: 3 votes
- MD unavailable: 1 vote

Number of votes: 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20
Percentage: 0.0%, 10.0%, 20.0%, 30.0%, 40.0%, 50.0%, 60.0%, 70.0%, 80.0%, 90.0%, 100.0%
**Action Priority Matrix**

<table>
<thead>
<tr>
<th>Effort</th>
<th>Impact</th>
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<tr>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>High</td>
<td>High</td>
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- **High Impact, Low Effort**
  - Standardize patient arrival time

- **High Impact, High Effort**
  - Universally use ‘Engage’ app to improve communication

- **Low Impact, Low Effort**
  - Release chemo order prior to patient arrival
  - Orientation sheet for residents/ fellows

- **Low Impact, High Effort**
  - Do not repeat ‘clearance’ labs

**Tube chemo: Hazard !!**

**Universally use ‘Engage’ app to improve communication**
Measures

- Patient population: Inpatient chemo on 14-400
- Calculation methodology: Time stamps
- Data source: EMR
- Data collection frequency: Fortnightly
- Data quality: Good, improved by automation
PDSA Cycles

Cycle 1: August 7 - September 4, 2017

Outcome measure:
• Total delay in chemo (hours)

Process measure:
• % patients with a ‘pre-admit note’ and ‘consent’
• Patient arrival time
• % residents/ fellows receiving orientation sheet

Balance measure:
• Track and trend patient satisfaction as it is a lagging indicator
<table>
<thead>
<tr>
<th>Plan for change</th>
<th>Scope</th>
<th>Results</th>
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<tbody>
<tr>
<td>Clarify need of labs on admission to start chemo</td>
<td>Oncology fellows and attendings</td>
<td>24/28 (86%) had pre-admit note</td>
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<tr>
<td>- To be mentioned in note by outpatient oncologist: templates created and distributed</td>
<td></td>
<td>100% consent rate</td>
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<tr>
<td>- Inpatient fellow will leave this as a ‘telephone note’</td>
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<td>- Inpatient fellow ‘pending a place in’</td>
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<tr>
<td>Cut down on ‘late arrival of patients’</td>
<td>Unit Coordinator</td>
<td>Median patient arrival time changed from 12:43 pm -&gt; 8:45 am</td>
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<td>- HUC will call the patient the evening before and ask them to show up at 8 am.</td>
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<td>Prepare and disseminate an inpatient rotation tip sheet for residents, fellows, attendings</td>
<td>MDs</td>
<td>100 % housestaff received orientation sheet</td>
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<tr>
<td>1. General orientation</td>
<td>RNs, pharmacists, MDS</td>
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<tr>
<td>2. QI project details</td>
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<tr>
<td>Awareness about project</td>
<td>Unit coordinator, RNs, pharmacists, MDs</td>
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<tr>
<td>Improve communication</td>
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<td></td>
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<tr>
<td>- Engage app</td>
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QI Project:
Historically, there have been significant delays in starting chemotherapy for scheduled admits, which leads to increased length of stay and costs of care. We are doing a QI project to reduce these delays.

Interventions:

- **List of the week's elective admissions** with names and MRNs is posted on the wall in the rounding room (ask HUC if not)

- **Outpatient oncologist/ fellow** will clearly state in their note the need for `admission labs` prior to chemo.

- **Inpatient fellow** is expected to check chemo admissions **the day before** the admission:
  a) make sure chemo orders are signed,
  b) consent is in place
  c) verify if admission labs are needed,
  d) see if central line/imaging/etc are needed prior to start of chemotherapy,

They will leave a note in the chart **the day before**, tiled as a `telephone encounter` detailing the plan

and

They will **pend a place in order** in the hospital chart **pre-admission** the day before.

- **HUC** will call patients day before admission to ask to report at **8 AM** to 14-400.
- **HUC** will call **ADT at 20309** as soon as patient arrives to floor, and **alert RN and MD**.
PDSA Cycles

Cycle 2: September 5-24 (ongoing), 2017

Major change:

• Resident puts the ‘place in’ order vs the fellow
• Orientation sheet updated
Pre-intervention: 36 patients, median 6.2 hours
Post-intervention: 28 patients, median 3.2 hours

Hours to Chemotherapy From Admission:
Pre, Post-intervention, Jan-Sep 2017, X Chart, 2 Sigma
Conclusions

Over a 6-month period, we reduced the median time from patient arrival to initiating chemo, from 6.2 hours to 3.2 hours.

An additional 4 hours/patient were saved by earlier patient arrival.

Chemotherapy delay can be tackled using classic QI methodology with a multidisciplinary team and investment of key stakeholders.
Sustainability

- Present data to hospital leadership (October 18th)
- Further refine PDSA cycles, e.g., standing delegation orders.
- Expand to patients needing line access/transfusions prior to chemo/outpatient.
Thank you ASCO for a great 6-months
What Questions do you have?

Arjun Gupta

@ arjun.gupta@utsouthwestern.edu

@ guptaarjun90