Project Title: Patient Navigation in Harris Health System Lung Cancer Patients

Presenter’s Name: Maria Daheri RN and Aparna C Jotwani MD

Institutions: Harris Health System & Baylor College of Medicine

Date: December 9, 2022
Problem Statement

• Harris Health System (HHS) is an integrated safety net health system, and the third largest safety next system in the country
• The Baylor College of Medicine Dan L Duncan Comprehensive Cancer Center, The University of Texas MD Anderson Cancer Center and HHS partner to care for the underserved cancer patients in Harris County
• New Lung Cancer patients often have delays from their diagnosis to treatment initiation.
Institutional Overview
Team Members

QTP Leaders
Maria Daheri RN
Aparna Jotwani MD
Grace Campbell PhD

Working Group
Jane Monteleagre PhD
Susan Parker
Martha Mims MD PhD
Hilary Ma MD
Amy Smith
Tejal Patel MD

Extended Team
Elizabeth Guy MD
Rosa Estrada Y Martin MD
Kathryn Crary
Candace Jones
Tenisha Granville
Annie Titus
Maria Jibaja-Weiss PhD
Monique Jones
Kim Douglas
Maria Rangel
Our initial process started by mapping out the steps it takes for a new cancer patient to transition from diagnosis to treatment initiation.

As you can see, The process for an either established HHS patient or new to system patient to start treatment for cancer is multi-step.
Cause & Effect Diagram

- **Patient**
  - Performance Status
  - Cultural Expectations
  - Medical Comorbidities
  - Nutrition Level
  - Occupation Inflexibility
  - System Supportive Services
  - Patient Support Present

- **Access to Care**
  - Insurance
    - Gold Card
    - Low Income
  - English comprehension
    - Interpretation

- **Smith Clinic**
  - Transportation
  - Family Care Size & Responsibilities
  - Level of Achievement
  - Ability to Read
  - Education

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Initiate Treatment
## Diagnostic Data

### Table 1. Harris Health lung cancer patients at Ben Taub Hospital, 2020.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Number (total n=149)</th>
<th>Days to treatment, average (range)</th>
<th>Days to treatment, average (range)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Diagnosed outside of Harris Health</td>
<td>Diagnosed within Harris Health</td>
</tr>
<tr>
<td>IA, IB</td>
<td>19</td>
<td>142 (99 – 175)</td>
<td>98 (0-190)</td>
</tr>
<tr>
<td>2A, 2B</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3A, 3B, 3C</td>
<td>24</td>
<td>68 (10 – 180)</td>
<td>71 (4 – 256)</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4A 4B</td>
<td>89</td>
<td>29 (9 – 96)</td>
<td>36 (4-163)</td>
</tr>
<tr>
<td>Unknown</td>
<td>8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Cause & Effect Diagram

Patient
- Eligibility
- Transportation
- Language barrier

Provider
- Tumor Board review
- Multidisciplinary
- No single Provider in charge

Processes
- No staff to guide patient
- Eligibility Application form changes
- Completion of staging process

Policies
- Appointments canceled if no Access
- Referrals; both internal and external

Facility
- Radiation therapy only at one site
- Need for multiple appointments
- Visit Fees

Environment
- Urban sprawl city, safety issues
- Navigating Medical Center

Days from Diagnosis to Treatment
Aim Statement

Overarching Aim: Improve the timely delivery of high-quality care for patients diagnosed with lung cancer

**SMART Aim:** To decrease the days from cancer diagnosis to treatment initiations in stage III lung cancer patients by 25% over 24 months
Measures

• **Measure:** Days from Lung Cancer Diagnosis to Treatment Initiation – *Broad Definition*

• **Patient population:** New Stage III Lung Cancer Patients
  - Exclusions (if any)

• **Calculation methodology:** Online Business Day Calculator
  - Numerator & Denominator (if applicable)

• **Data source:** Harris Health Cancer Registry

• **Data collection frequency:** Bi-Weekly

• **Data quality (any limitations):** Manual Data Entry and Calculation
<table>
<thead>
<tr>
<th>Grant Goals &amp; Objectives</th>
<th>Grant Metric Definition</th>
<th>AONN Metric</th>
<th>AONN Definition</th>
<th>ACS Grant Required Metric</th>
<th>Routinely Captured?</th>
<th>Measurement/Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days from Diagnosis to Treatment by 25% over 24 months 80→60days</td>
<td>Diagnosis (pathology) to Initial Treatment Average* (Goal 1)</td>
<td></td>
<td></td>
<td>6/8</td>
<td>No, and unclear process</td>
<td>Date pathology results delivered</td>
</tr>
<tr>
<td>- how do we define Diagnosis?</td>
<td>Pathologic diagnosis to Treatment start / any modality (business days)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Treatment date</td>
</tr>
<tr>
<td>- imaging vs pathology?</td>
<td>Diagnosis to Initial Treatment*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>IT generate variable of business days</td>
</tr>
<tr>
<td>- define Treatment</td>
<td>Date pathology results delivered to initial modality / date of first treatment (business days)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Baseline Data

Chart 1. Stage I Lung Cancer Patients Days from Initial Diagnosis to Treatment Initiation
Average = 56 days
Baseline Data

Chart 2. Stage II Lung Cancer Patients Days from Initial Diagnosis to Treatment Initiation
Average = 76 days
Baseline Data

Chart 3. Stage III Lung Cancer Patients Days from Initial Diagnosis to Treatment Initiation
Average = 48 days
Baseline Data

Chart 4. Stage IV Lung Cancer Patients Days from Initial Diagnosis to Treatment Initiation
Average = 20 days
## Prioritized List of Changes (Priority/Pay-Off Matrix)

<table>
<thead>
<tr>
<th>High Impact</th>
<th>Easy</th>
<th>Difficult</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner with Cancer Registry – obtain baseline data and data as baseline or check moving forward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop Tracking Mechanism for patients to measure impact of changes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incorporate Patient Navigator to Ensure Data Collection -&gt; publication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thoracic Tumor Board review of new cases (done prior to QTP and effects not measured)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analyze Cancer Registry Data – completed but needs more depth, what reasons specifically contributed to increased days?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Ease of Implementation**

- **High Impact**
  - Partner with Cancer Registry – obtain baseline data and data as baseline or check moving forward
  - Develop Tracking Mechanism for patients to measure impact of changes
  - Incorporate Patient Navigator to Ensure Data Collection -> publication

- **Low Impact**
  - Thoracic Tumor Board review of new cases (done prior to QTP and effects not measured)
  - Analyze Cancer Registry Data – completed but needs more depth, what reasons specifically contributed to increased days?

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**ASCO Quality Training Program**

**Knowledge Conquers Cancer**
# PDSA Plan (Test of Change)

<table>
<thead>
<tr>
<th>Date of PDSA Cycle</th>
<th>Description of Intervention</th>
<th>Results</th>
<th>Action Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>July – August 2022</td>
<td>a. Revised Patient Navigation spreadsheet to apply to new lung cancer patients &lt;br&gt;b. Presented to Cancer Committee; further updates made</td>
<td>a. Data collection items personalized for lung cancer patients &lt;br&gt;b. Cancer Committee assisted with IT partnership to help auto-populate</td>
<td>Plan to implement the revised spreadsheet for background data collection and then revise again as needed</td>
</tr>
<tr>
<td>September-October, 2022</td>
<td>a. Redesign and implement process for using Navigation Spreadsheet &lt;br&gt;b. Identified changes for next PDSA cycle</td>
<td>a. Dedicated navigator needed for lung patients &lt;br&gt;b. Process updates planned for (date)</td>
<td>a. Dedicated lung navigator needed; hiring process continued &lt;br&gt;b. Partnership with IT continues to develop workbench to collect data</td>
</tr>
</tbody>
</table>
PDSA Plan (Test of Change)
Conclusions

- The variability we measured demonstrates that process improvement will help patients from diagnosis through treatment planning and initiation
- Initial PDSA cycles streamlined the process for data collection
- Additional partnership with our stakeholder groups (patients, clinicians, staff) is needed to elucidate additional reasons for variability and to identify additional process improvements
Conclusions

• More research and infrastructure is needed in medically underserved communities to elucidate the reasons our patients have difficulty with this process
• Thank you to the ASCO QTP!
• Thank you to our Coach Dr. Grace Campbell for sticking with us as we worked through our project to lay an infrastructure of QI
• Look forward to sharing our future work with ASCO to show that improvements in safety net populations are worthwhile and attainable
Next Steps/Plan for Sustainability

• Work with American Cancer Society (ACS) Learning Community
  ▪ Share best practices for Patient Navigation
• Incorporation of a Patient Navigator into the Oncology Care Team

Thank You