Improving the Management of Nationwide Drug and IV Bag Shortages

Inpatient Pharmacy

Supply Chain

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Improving the Management of Nationwide Drug and IV Bag Shortages

Last Updated: 9/21/2018

Executive Sponsor: Mark Parker, MD  Facilitator: Stephen Tyzik, Suneela Nayak, Ruth Hanselman and Amy Sparks

Team Members: Inpatient Pharmacy and Supply Chain

Problem/Impact Statement:

In September of 2017, Hurricane Maria struck the island of Puerto Rico where over 50 pharmaceutical factories had previously operated. The impact of this was felt not only in the drastic reduction of products that are produced on the island such as Baxter’s mini-bags, but it also exacerbated supply chain issues for key drugs nationwide. As Pharmacy team’s across the country raced to collect information and develop mitigation strategies for navigating these shortages, the need to streamline internal planning and communication is critical. At Maine Medical Center, the Pharmacy Department and Supply Chain did not have a consistent and reliable process for communication, planning and real-time updates. This yielded a tremendous amount of waste before, during and after the drug/IV shortage meetings.

Scope:

In Scope:
The workflows that Pharmacy and Supply Chain utilize to obtain and communicate the most up to date information for drug and IV shortages at the twice-a-week Drug/IV Shortage Meeting.

Out of Scope:
Out of scope will be all of the other workflows that Supply Chain and Pharmacy utilize to communicate with one another in between the meetings.

Baseline Metrics/Current State:

Previously, the inpatient Pharmacy team at Maine Medical Center did not have a robust process for efficiently managing the day to day information for all drugs considered to be on a “shortage”. Due to the number of people that needed to be at the meetings to assess severity and properly develop mitigation strategies, each meeting came at a cost of approximately $429.95. When multiplied by the number of meetings that occurred prior to the interventions, the resulting overall cost was between $20,637.60 and $23,733.24.

Root Cause Analysis:

Issues with Pharmacy, Supply Chain and Materials Management understanding how they can improve the efficiency of weekly meetings

Inconsistency with who is responsible for developing mitigation strategies

Inability to identify and track an entity’s mitigation strategies

Inconsistent communication

Lack of clarity on what variables important to track and what isn’t

Variable Communication

Inconsistent Internal Processes

Narrow communication for identifying the urgency of drug shortages

Lack of clarity around how key variables trigger communication and development of mitigation strategies

Implementation of these strategies led to a meeting time of 24 minutes, which meets the target and reduces the salary cost of the meeting from $429.95 to $171.98

Countermeasures

<table>
<thead>
<tr>
<th>Action</th>
<th>Owner</th>
<th>Completion Date</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop a drug shortage prioritization matrix that the Pharmacy can use to assess criticality and feed into a priority based communication pathway</td>
<td>Stephen Tyzik</td>
<td>January 2018</td>
<td>Completed</td>
</tr>
<tr>
<td>Develop a prioritization matrix which Supply Chain and Materials Management can use to assess criticality and feed into a priority based communication pathway</td>
<td>Stephen Tyzik</td>
<td>January 2018</td>
<td>Completed</td>
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<td>Facilitate a meeting between Supply Chain and Pharmacy to outline gaps in current process, triage the root causes and develop agreed upon action plans/timelines/needs supported to implement improvement strategies</td>
<td>Jason Tremblay and Stephen Tyzik</td>
<td>February 2018</td>
<td>Completed</td>
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Outcomes

FDA Strategies to Effectively Manage Drug Shortages

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Result</th>
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<tbody>
<tr>
<td>Develop and/or Streamline Internal Processes</td>
<td>Reduce the time of the drug shortage discussion/planning from 75 minutes to 30 minutes</td>
</tr>
<tr>
<td>Enhance Public Communications about Drug Shortages</td>
<td>Reduce the time of the IV shortage discussion/planning from 35 minutes to &lt; 10</td>
</tr>
<tr>
<td>Develop Methods to Incentivize and Prioritize Quality</td>
<td>Reduce the time of the twice-weekly Drug/IV Shortage Meeting from 75 minutes to 30 minutes</td>
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In alignment with the development of the above mitigation strategies, each of the color codes on the prioritization matrix (Red, Orange, Yellow, Green) correspond to an associated communication plan.

Developing streamlining strategies led to a meeting time of 24 minutes, which meets the target and reduces the salary cost of the meeting from $429.95 to $171.98.

Next Steps

Continue to utilize prioritization matrix as Drug/IV Fluid shortages evolve and utilize similar process improvement strategies for challenges moving forward.

Plan

1. To reduce the time of the twice-a-week Drug/IV Shortage Meeting from 75 minutes to 30 minutes
2. To reduce the time of the IV shortage discussion/planning from 35 minutes to < 10
3. To reduce the time of the drug shortage discussion/planning from 40 minutes to < 20
4. To eliminate 100% of unnecessary communication between the Pharmacy and Supply Chain outside of the Drug/IV Shortage Meeting

Goal/Objective:

1. To reduce the time of the twice-a-week Drug/IV Shortage Meeting from 75 minutes to 30 minutes
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3. To reduce the time of the drug shortage discussion/planning from 40 minutes to < 20
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Study

June 2018

Provide

Table

July 2018

Complete

Variable

Communication

Inconsistent

Internal Processes

Inefficient Management of Drug/IV Fluid Shortages

Previously identified variables Worried when there were 10 Drugs being tracked

Without agreed upon communication pathways, unnecessary time is spent. Outside of the meetings further discussing drug shortages

Inconsistency with who is responsible for developing mitigation strategies

Lack of understanding that a department cannot craft a mitigation strategy in a vacuum

Lack of understanding as to what variables important to track and what isn’t

Too many variables being tracked

Inadequate process for identifying the urgency of drug shortages

Variable Communication

Inconsistent Internal Processes

Inefficient Management of Drug/IV Fluid Shortages

Previous

Strategy

Implementation

Incentivize

Prioritize

Quality

Develop

Next

Steps

Continue to utilize prioritization matrix as Drug/IV Fluid shortages evolve and utilize similar process improvement strategies for challenges moving forward.

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<th>Root Cause</th>
<th>Mitigation</th>
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<td>Inability to identify and track an entity’s mitigation strategies</td>
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<tr>
<td>Lack of clarity around how key variables trigger communication and development of mitigation strategies</td>
<td>Variable Communication</td>
<td>Work with Supply Chain to develop an IV Fluid shortage prioritization matrix that Supply Chain and Materials Management can use to assess criticality and feed into a priority based communication pathway</td>
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