Implementation of Bedside Huddle to Improve Communication When Coordinating Care for PICU Patients with Newly Diagnosed Anterior Mediastinal Masses

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Anterior mediastinal (AM) masses are medical emergencies that require prompt diagnosis and initiation of treatment.

There were 32 CMH PICU patients diagnosed with AM masses between 2010-2017, 22 of whom required surgical procedure to obtain diagnostic specimen.

The average time from presentation to initiation of treatment was longer when the patients required surgical biopsy (153 hours) compared to those who did not (58 hours).

Delays in obtaining tissue for diagnosis lead to prolonged time until diagnosis, and in most cases, treatment cannot be initiated until a diagnosis is determined. By delaying treatment, patient is at risk of cardiovascular compromise and longer PICU stay.

**Aim**

Decrease the time to surgical diagnostic procedure to less than 24 hours for all patients with newly diagnosed AM masses.

**Methods**

Compare time from PICU admission to diagnostic procedure pre vs. post-interventions

### Background

- Anterior mediastinal (AM) masses are medical emergencies that require prompt diagnosis and initiation of treatment.
- There were 32 CMH PICU patients diagnosed with AM masses between 2010-2017, 22 of whom required surgical procedure to obtain diagnostic specimen.
- The average time from presentation to initiation of treatment was longer when the patients required surgical biopsy (153 hours) compared to those who did not (58 hours).
- Delays in obtaining tissue for diagnosis lead to prolonged time until diagnosis, and in most cases, treatment cannot be initiated until a diagnosis is determined. By delaying treatment, patient is at risk of cardiovascular compromise and longer PICU stay.

### Aim

Decrease the time to surgical diagnostic procedure to less than 24 hours for all patients with newly diagnosed AM masses.

### Methods

Compare time from PICU admission to diagnostic procedure pre vs. post-interventions

### Interventions

<table>
<thead>
<tr>
<th>#</th>
<th>Intervention</th>
<th>Root Cause Addressed</th>
<th>How to Measure</th>
<th>Actions</th>
<th>Reliability</th>
<th>Feasibility</th>
<th>Deadline</th>
</tr>
</thead>
</table>
| 1 | Huddle among subspecialists | Communication | Huddle Note | • Create Note  
• Upload into Cerner  
• Educate H/O fellows on need to complete | 9 | 10 | Oct 2017 |
| 2 | Mediastinal Mass Power Plan | Collect supplemental specimens up front | Note if it was used during data collection | • Create power plan, upload to Cerner  
• Educate H/O staff and residents on existence | 7 | 10 | Dec 2017 |
| 3 | Create pathway for Scope | Communication  
Coordination of procedures | N/A | • Study CPGs of other institutions  
• Create CPG / edit  
• Upload to Scope | 6 | 9 | March 2018 |
| 4 | Education | Communication | N/A | • Review pathway, powerplan, and huddle note template with Hem/Onc department | 5 | 10 | April 2018 |

### Results

Since implementation of bedside huddle and creation of ‘huddle note,’ average time to surgical diagnostic procedure has decreased from 34 hours to 17.5 hours.

### Conclusions

The target (<24 hours) will be the new standard for time from PICU admission until diagnostic surgical procedure.

For any patient whose time to diagnostic sample is >24 hours, the case will be reviewed by the Hem/Onc team.

Attributing factors to problematic cases will be charted on an Abnormality Tracker to help identify new and/or old problems that need more attention.

### Next Steps

- The target (<24 hours) will be the new standard for time from PICU admission until diagnostic surgical procedure.
- For any patient whose time to diagnostic sample is >24 hours, the case will be reviewed by the Hem/Onc team.
- Attributing factors to problematic cases will be charted on an Abnormality Tracker to help identify new and/or old problems that need more attention.

### Acknowledgements

Thank you to the multidisciplinary task force that initiated and enforced this project.

Thank you to the Improvement Academy and the staff involved in the Problem Solving for Fellows course.