**Purpose**

In the field of pediatrics, anesthesia-provided sedation is often necessary for advanced imaging modalities, such as magnetic resonance imaging (MRI), which require prolonged immobility. Currently at our institution, the process for scheduling an inpatient MRI with anesthesia is not standardized, leading to delays in care (diagnostic work-up and/or discharge plan) and frustrations for patients (e.g., prolonged fasting times), anesthesiologists, and pediatricians. These inefficiencies are especially pronounced for add-on cases, leading to increased need for call team coverage. Our quality improvement initiative will identify opportunities to create a process that clarifies and streamlines our current workflow.

**Investigation Methods**

Multiple discussions were held with key stakeholders including pediatricians, MRI staff, and EPIC technicians to better understand the current workflow and its challenges.

Baseline data regarding MRI scheduling, including anesthesia time in MRI after 5pm and on weekends, was collected from the EMR (Table 1).

**Table 1: Current State - Peds MRI**

<table>
<thead>
<tr>
<th>Time Spent in MRI for Peds MRI Cases</th>
<th>Total MRI Time From Anes Start to Anes Stop in MINUTES / DAYS (%)</th>
<th>Average Time From Anes Start to Anes Stop (per case)</th>
<th>Average Time From Case to Scheduled Anes Start (per case)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peds MRI Cases on Weekends</td>
<td>3864 / 2.7 / 4.16%</td>
<td>2 hours 57 minutes</td>
<td>3 hours 50 minutes</td>
</tr>
<tr>
<td>Peds MRI Cases Anes Start &gt; 5pm</td>
<td>3417 / 2.4 / 3.68%</td>
<td>2 hours 2 minutes</td>
<td>3 hours 58 minutes</td>
</tr>
<tr>
<td>Total Cases</td>
<td>3581 / 2.6 / 3.86%</td>
<td>2 hours 11 minutes</td>
<td>3 hours 11 minutes</td>
</tr>
<tr>
<td>Peds MRI normal hours</td>
<td>3581 / 2.6 / 3.86%</td>
<td>2 hours 11 minutes</td>
<td>3 hours 11 minutes</td>
</tr>
<tr>
<td>Total Cases</td>
<td>3581 / 2.6 / 3.86%</td>
<td>2 hours 11 minutes</td>
<td>3 hours 11 minutes</td>
</tr>
</tbody>
</table>

**Figure 1: Future State Process Map for Non-Urgent Pediatric MRI Scheduling**

1) Standardize scheduling of pediatric MRIs requiring sedation (Figures 1, 2).

2) Implement a user-friendly order set
   - To alert pediatric anesthesiologists
   - To allow primary teams and anesthesiologists the ability to triage the urgency of each MRI
   - To facilitate future scheduling

3) Give MRI team more agency
   - To schedule appropriate studies in available anesthesia time in MRI after 5pm and on weekends

**Figure 2: Future State Process Map for Urgent Pediatric MRI Scheduling**

- Under EPIC order for MRI, select "Anesthesia" and "Urgent/Same Day Am." Include NPO information.
- MRI tech receives notification automatically.
- Between 7am - 4pm.
- Outside 7am - 4pm.
- EPIC "push notification" goes directly to the anesthesia team signed into the role "Anesthes Peds MRI".
- Notification within the order set advises primary team to page the Anesthesia PACU resident and call MRI.
- MRI scan scheduled. Primary team notified. NPO status updated.
- See "Non Urgent MRI" process map.

**Conclusions and Future Directions**

Our initiative seeks to improve scheduling for pediatric MRIs requiring anesthesia care. Imaging procedures in children can be difficult to schedule as they require coordination between inpatient primary teams, anesthesia teams, and imaging technicians. Our project utilizes effective interdepartmental communication to create institutional processes and easy to understand EMR interfaces. We will study the effect of our interventions on ease of scheduling and call team utilization. We hope our initiative can be used as a model for future interdepartmental scheduling processes.