Improving Pediatric Emergency Department Throughput
One Chest X-ray at a Time

**Problem**
- Healthy patients from 7-60 days with fevers should not have chest x-rays done as routine screening exams
- Treatment of the pediatric febrile infant is variable within the pediatric emergency and inpatient departments
- Evidence-based guidelines on treatment management in this age group and disease population do exist
- Comer’s pediatric inpatient and emergency department addressed the Triple AIM (efficient, timely and cost effective care) to this population using the AAP REVISE (Reducing Excessive Variability in Infant Sepsis Evaluation) Collaborative

**Goal**
- Hypothesis: There is an effect on emergency department throughput when chest x-rays are done on patients that do not have symptoms of respiratory disease
- If proven correct, throughput would be increased if chest x-rays were performed less frequently
- Therefore, by decreasing variation in care and improving throughput the ripple effects of the improvement would help that patient, other patients waiting, utilization of resources and endless more areas.

**Quality Improvement, Innovation and Implementation QI³**

- Area of implementation: Comer’s Pediatric Inpatient and Emergency Departments
- Quality Improvement method used: Model for Improvement (PDSA Cycle)
- Created many education interventions that were presented over time
- Created documentation prompts
- Created treatment prompts
- Update Fever in Newborn Guideline
- Follow data over time with Run charts

**Results**

**Conclusions**
- The department was able to decreased the unneeded chest x-rays.
- For patients with chest x-ray and no respiratory symptoms there was an average addition of 4 hours to the emergency department length of stay (LOS).
- Shortest LOS was for patients that received Chest x-rays with respiratory symptoms
- Multiple PDSA cycles and incremental benefits have demonstrated a significant impact on throughput of febrile infants in the Pediatrics Emergency Department.

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