### Initiative Title:

**Improving the care of pediatric patients with acute asthma or wheezing exacerbations in the emergency department**

### Team Members

C. Jackson, C. Walsh-Kelly, W. Stoudemire, E. Frederick

### Initiative Specific Aims

1. Assign PAS for 100% of eligible patients
2. Reduce the time to delivery of the first β-agonist to patients 2-18 years of age presenting to the ED with an acute asthma exacerbation to 20 minutes
3. Reduce the time to steroid administration to patients 2-18 years of age presenting to the ED with an acute asthma exacerbation to 60 minutes

### Key Improvement Steps

1. Implemented and refined ED Pediatric Asthma Pathway and PAS
2. Mapped and revised albuterol administration process
3. Created asthma/wheezing nurse and physician order sets aligned with pathway
4. Clarified roles in continuous Albuterol therapy and provided access to equipment and training for ED nurses
5. Initiated an asthma resident program
6. Revised and implemented the greeter role in identifying potential wheezing patients
7. Incorporated asthma pathway training into monthly resident ED orientation process
8. March 2018—began to shared de-identified clinician specific data

### Results

#### Time to 1st Beta-Agonist

- **Definition**: Mean time in minutes from arrival to administration of 1st beta agonist treatment monthly.
- **Data Source**: ED

#### Time to 3rd Albuterol PAS 6-10

- **Definition**: Mean number of minutes from arrival to time 3rd Albuterol started monthly. Calculated as follows: If 1st Albuterol is a continuous treatment (CAT); 3rd Albuterol start time - 40" after time CAT started, if 2nd Albuterol is CAT; 3rd Albuterol start time - 20" after time CAT started. For patients using Aerogen time = time from start to completion of treatment.
- **Data Source**: ED

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Updated 6/4/18 CWK
Insights and Future Directions

- Working with RT and nursing to identify and eliminate barriers to continuous Albuterol administration
- Current ED triage system for pediatric patients does not consistently result in the timely patient identification needed to achieve delivery of Albuterol within 20” of arrival.
- Sustaining our gains will require frequent monitoring to avoid drift.
- Additional opportunities to improve asthma care are being investigated.
- Plan to create training video for pathway and order sets.
- 12/2015: focus to shift to improving delivery of CAT for PAS 6-10. Currently working on defining challenges and will then develop a key driver diagram and trial changes
- 4/25/16: Working on trial of CAT as second treatment for PAS 6-10
- 9/28/16: Improving times to 3rd Albuterol for PAS 6-10. Near goal of 60”


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