

## INTRODUCTION

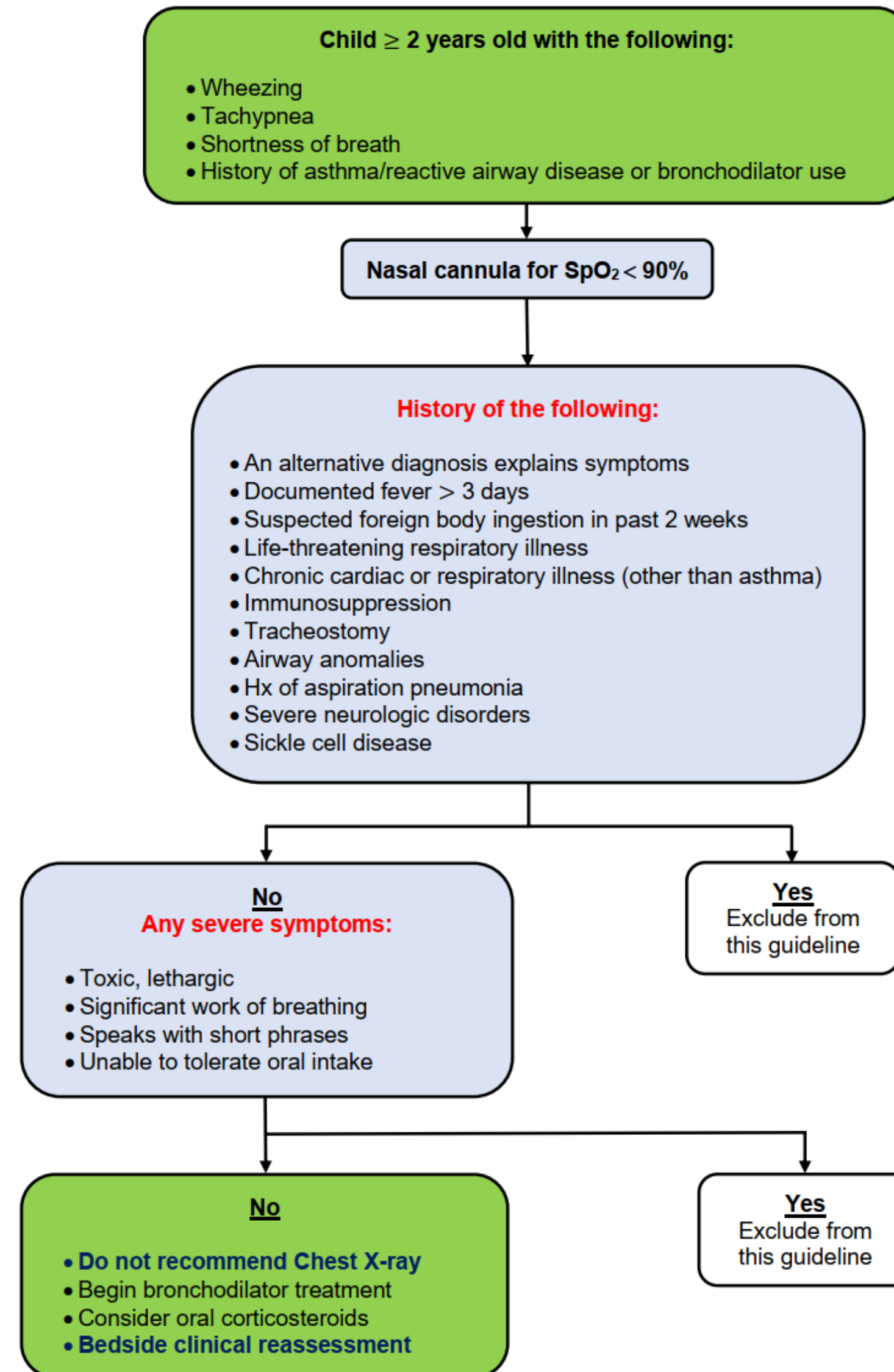
- Chest radiography (CXR) is not routinely recommended for children with asthma who present to the pediatric emergency department (PED) for acute exacerbations.
- However, CXRs are frequently obtained, contributing to unnecessary radiation exposure and infrequently adds information in the management of asthma exacerbations.

## METHODS

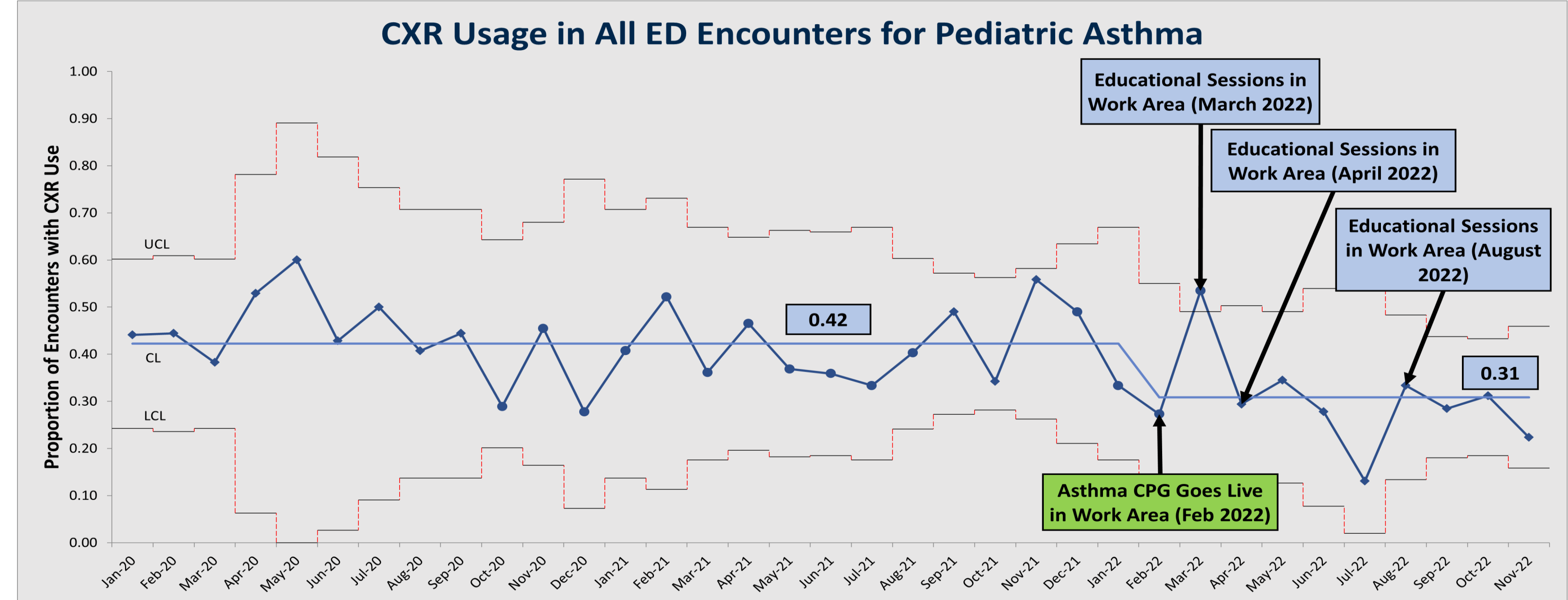
- We conducted this QI project at a PED and included patients between 2 and 21 years of age with prior bronchodilator use or diagnosis of asthma who presented with acute exacerbation from January 2020 through November 2022.
- A clinical practice guideline (CPG) and frequent bedside education sessions for resident, fellow, and attending physicians were implemented beginning February 2022.
- Data from early 2020 were obtained from Michigan Emergency Department Improvement Collaborative (MEDIC), an electronic data repository in our state. All other data were obtained directly from the hospital electronic medical record.
- Chi-squared tests were used to analyze changes in CXR use overtime.

## QI INTERVENTION

### Pediatric Asthma Clinical Practice Guideline



## RESULTS



Overall Analysis			
	Pre-CPG Initiation (n=1099)	Post-CPG Initiation (n=648)	p value
CXR Ordered	464 (42%)	200 (31%)	<0.001
Received Antibiotics	44 (4%)	25 (4%)	0.88
Admitted	277 (25%)	200 (31%)	0.01
Subset Analysis			
Admitted Patients:	Pre-CPG Initiation (n=277)	Post-CPG Initiation (n=200)	
CXR Ordered	223 (80%)	113 (57%)	<0.001
Received Antibiotics	28 (10%)	18 (9%)	0.68
Discharged Patients:	Pre-CPG Initiation (n=822)	Post-CPG Initiation (n=448)	
CXR Ordered	241 (29%)	87 (19%)	<0.001
Received Antibiotics	16 (2%)	7 (2%)	0.62

- Of 1,747 patients, 664 (38%) received a CXR.
- CXR use decreased from 42% to 31% overall after implementing our CPG.
- CXR use decreased from 29% to 19% for discharged patients and from 80% to 57% for admitted patients.

## CONCLUSION

A bedside CPG produced reduction of CXR usage for patients with asthma exacerbations at a PED.

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