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Assessment of Provider Compliance Using an ED Protocol to Improve Care of COPD

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Assessment of provider compliance and patient outcomes using an ED protocol to improve care of COPD patients

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Disclosure Statement

- We have no financial disclosures or other relevant conflicts of interest pertaining to this quality improvement project and presentation.

Background

- Henry Ford Wyandotte Hospital (HFWH) serves a population with a high prevalence of COPD
- High rates of admission and re-admission in this patient population place a large medical and financial resource burden on HFWH
- It is currently unclear what strategies will effectively reduce COPD re-admissions
- A respiratory therapy bronchodilator protocol (RTBP) was implemented to address this issue

Respiratory Therapy Bronchodilator Protocol

COPD Assessment Y= yes N= no

Why did you come to the hospital? SOB

Do you use a home nebulizer? Y
Medication and frequency? Albuterol TID
Does your nebulizer machine work and do you have supplies? Y

Do you use inhalers? Y
Medication and frequency? SPIRIVA and ADVAIR
Do you use a spacer? N/A

Oxygen at home? Y Liter flow? 2-21/2
Oxygen provider and does your equipment work? Y

CPAP/BIPAP/AVAPS at home? N Settings?
CPAP/BIPAP/AVAPS provider and does your machine work?

Have you attended pulmonary rehab in the last 6 months? N
- if "no" suggest pulmonary rehab consult to physician

Pulse ox @ rest: 97
Pulse ox with ambulation:

Frequency number determined by bronchodilator protocol:
TID and PRN

Respiratory Therapy Bronchodilator Protocol Key

Level	Score	Frequency
6	15 – 17	q3 hours
5	12 – 14	q4 hours
4	9 – 11	QID and Q6 prn
3	6 – 8	TID and Q6 prn
2	3 – 5	BID and Q6 prn
1	0 – 2	Q6 prn

- Order in EPIC that notifies RT to initiate protocol with COPD patient
- RTs write a note scoring a patient based on the severity of their COPD
- Higher scores correlate with a more severe disease
- Identification of medication, equipment, or pulmonary rehab referral needs

Background

- RTBP initiated in November 2017
- 12 months of data after initiation of protocol were promising in that it resulted in a decrease in COPD inpatient admissions (29.8%)
- QI project
  - Poor provider compliance in ordering RTBP
  - Will increased compliance translate to additional decreases in COPD inpatient admissions?
- Ongoing prospective observational study

Methods

- Survey of providers assessing current knowledge and utilization of protocol collected in late 2018
- Retrospective medical record chart review
- Subjects
  - 18 and older presenting to HFWH ED, received Duo-Neb (ipratropium-albuterol) therapy, and had specific ICD10 codes relevant to COPD
- Educational interventions aimed at ED providers implemented in 2019
  - Email, staff and resident presentations, and face-to-face
- COPD admission rates reassessed in the immediate months following educational intervention and will continue to be assessed for several months post-intervention

Results

- RTBP compliance following educational intervention increased 18.6%, from 41.4% to 60%
- Preliminary data in January 2019, month of intervention, shows decreased number of inpatient admissions when compared to January of prior years
  - Suspected secondary to educational intervention and subsequent increased compliance
- Ongoing prospective observational study that will continue to be followed for several months with expected continued decline in COPD inpatient admissions
  - Anticipate future inpatient admissions will continue to decrease and surpass the current reduction of 29.8%

Limitations

- Have not yet defined the proportion of patients admitted to observation
  - More patients potentially being admitted to observation status
  - However, these patients are being correctly admitted and do not require change in admission status during their stay

- A certain portion of our sample with known histories of COPD were admitted for multi-factorial respiratory pathologies including pneumonia and CHF

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