**ABSTRACT**

GOLD (2017) guidelines provide evidence-based recommendations for treating COPD, although their employment in clinical practice is inconsistent. Lack of a standardized method to view COPD specific information within the EHR during patient encounters complicates visits and development of GOLD-guided treatment plans. Our goal is to determine the impact of an EHR-based tool on relevant COPD disease measurements (spirometry rates, pneumococcal vaccination rates and COPD Action plans).

**INTRODUCTION**

- COPD is the 3rd leading cause of death in the US in 2010 and 3rd leading cause of death worldwide by 2020.
- Disease exacerbations impact quality of life and increase hospitalizations costing $32.1 billion in 2010 and $49 billion in 2020.
- Preventive measures and disease management key to reducing number of exacerbations.
- Barriers to GOLD guidelines use in Primary Care – lack of awareness, time constraints.
- Primary Care Providers 1st line to diagnose/manage COPD symptoms.

**METHODS**

- Educational Intervention
  - Education
  - Providers
  - MAS
  - COPD Assessment Tool
  - Educational Materials
  - COPD Action Plan, EHR Tool
  - spirometry data previously scanned into EHR

- EHR Tool
  - GOLD (2017)
  - EHR Uodge
  - Spirometry data entry
  - COPD Assessment Tool
  - COPD Action Plan, EHR Tool

- Analysis of Spirometry tool
  - Spirometry data entry
  - GOLD (2017)
  - EHR Uodge
  - COPD Assessment Tool
  - COPD Action Plan, EHR Tool

**PROCESS**

- Pre-intervention survey
- GOLD/EHR intervention
- Spirometry data entry
- COPD Action Plan, EHR Tool
- Spirometry data entry
- EHR Uodge
- GOLD (2017)
- COPD Assessment Tool

**RESULTS**

Provider Survey:
- Increase in need to order Spirometry annually and after exacerbation.
- Increase in need to create COPD Action Plans and update after exacerbation.
- No change in ordering Pulmonary Rehab referrals – resistance noted by patients.

Chart Review:
- 51/77 Patients seen
- 109 Office Visits (all cause)
- 23 COPD visits (CC cough, URI, ED follow up)
- Influenza: 37.2% (19)
- PCV13: 1.9% (1)
- PPSV23: 1.9% (1)
- Spirometry: Increase 3.9% (2)
- Pulmonary Rehab referrals: Increase 3.9% (2)

**DISCUSSION**

- Providers felt EHR tool useful for documenting COPD visits; used exclusively during COPD acute visits, not Wellness.
- Increased recognition of need to perform spirometry on more frequent basis.
- No changes in COPD Action Plans use.
- Patient resistance to Pulmonary Rehab despite provider referral.
- Influenza vaccinations consistently provided to COPD patients in clinic; PNA vaccinations given offsite less follow thru by patients.
- Spirometry data previously scanned into EHR less accessible; now directly entered into flowsheet.
- Spirometry time consuming and may limit provider ability to perform during COPD visit.

**CONCLUSIONS**

- EHR tool useful to providers in documenting COPD encounters.
- COPD Annual Visits to perform COPD-specific care (spirometry, action plans, Immunization).
- Additional research to evaluate patient resistance/barriers to Pulmonary Rehab participation.
- PNA Vaccination Program Initiative.

**REFERENCES**


