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Exploring Population Health with a COPD Dashboard

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Disclosures

The authors have no disclosures related to this project.

Objectives

- Describe key characteristics of the COPD Clinical Council
- State two metrics evaluated using the dashboard
- State two advantages to using a dashboard to explore population health

Background

- COPD is #3 in readmissions
- Majority of patients seen in ED are admitted
- “Frequent fliers” and “Hotspotting”
- Population characteristics
 - Socioeconomic issues
 - Mental health and substance use/abuse
 - Continued cigarette smoking

COPD Clinical Council

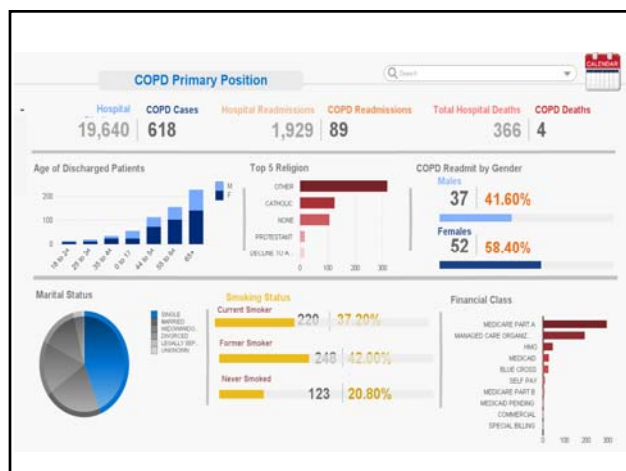
- Multidisciplinary group with monthly meetings
- Analysis of patient population including chart reviews
- Discussed workflows throughout continuum
- Acknowledgment of barriers to care transitions, education, documentation
- Participation in new EMR development
- Clinical experts guided dashboard development

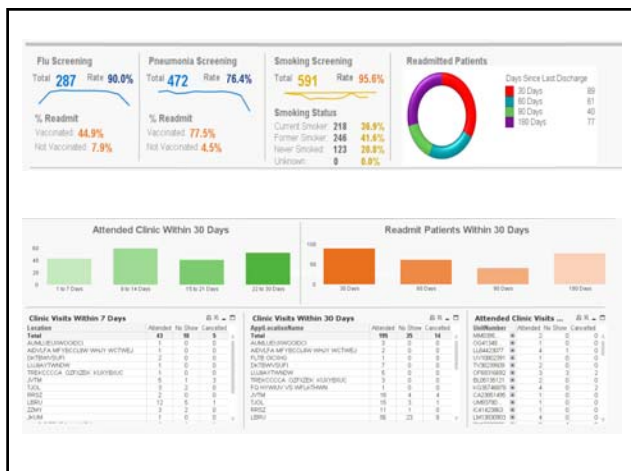
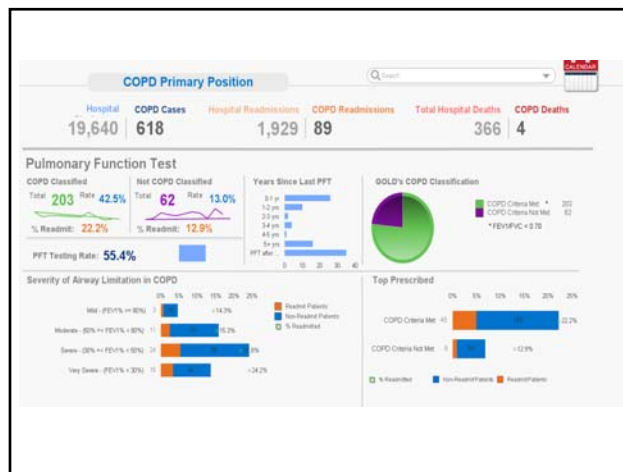
Challenges of Big Data

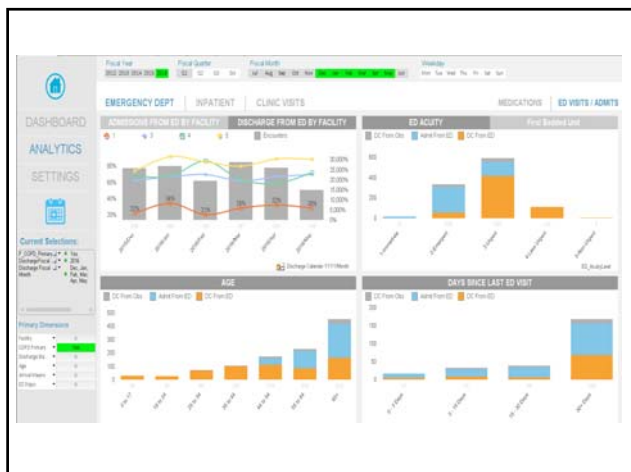
- Extremely large files from EMR (flowsheets, administrative data, notes)
- Requires significant transformation to be useful
- Misclassification of cases and errant data entry
- Comprehensive knowledge of EMR workflow and database behavior needed

Dashboard Features

- Intelligent visualizations
- Highlighting selections
- Data 'flags' for efficient grouping of population
- Drill down analysis
- Outcomes tracking
- Embedded in EMR with launch feature







Advantages of COPD Dashboard

- Compresses large data files for storage and usability
- Near-real time data
- Eliminates need for dissemination of reports
- Can accommodate multiple data sources
- Allows seamless transition between EMR applications

Proposed Metrics

- ED admission, observation, and discharge ratios (including return to ED after dispo)
- ED time to first neb treatments
- Diagnosis criteria – PFTs
- Readmission rate
- Discharge on appropriate respiratory medications

Dashboard Demonstration