Technical Description

The Chronic Obstructive Pulmonary Disease (COPD) Analytic Accelerator provides data and visualizations to improve the care of patients with COPD—supporting teams in their efforts to decrease mortality, prevent exacerbations, optimize utilization of services, increase quality of life, and lower costs.

Note that this application, like all Health Catalyst analytic accelerators, is implemented in a custom way; organizations identify their own areas of focus, process aims, and outcome goals. For this reason, the appearance and functionality of the application may differ from what is presented here.

Visualization

The COPD Analytic Accelerator drives a focus on best-practice assessment and treatment—and the clinical and financial outcome improvements that your organization has targeted.

Background

COPD is the third leading cause of death in the U.S. and it presents a considerable burden to society, diminishing patients’ quality of life and raising healthcare costs. Organizations choose to focus on COPD to address these impacts and because they see:

- **Significant variation in care, despite well established guidelines.** Unwarranted practice variation typically signals an improvement opportunity.
- **Opportunity to affect care across the continuum.** Well documented initiatives have been shown to reduce hospital admissions, lower costs, and improve quality of life.

Accelerator Overview

Actionable insight to improve quality of life and care across the continuum for patients with COPD
The COPD Analytic Accelerator supports a disciplined, data-driven approach to the evaluation and management of patients with COPD, helping to drive and sustain improvement in clinical and financial outcomes. Typical implementations focus on confirmatory testing (spirometry), treatment optimization, care management and coordination, and exacerbation management—areas where getting it right is especially meaningful to improve quality and cost.

Benefits and Features

- Gain an at-a-glance view of quality of care and its impact. The application visualizes outcome and process metrics in an easy-to-consume, one-page summary. This allows you to see trends as they develop—and take timely action to address issues.
- Access actionable insight for every patient. The application presents reports showing each patient’s severity and risk so you can provide appropriate interventions to prevent readmission.
- Understand the resources required to provide care for every patient with COPD. Depending on the availability of data, the application can bring in data from both ambulatory and hospital settings, in and out of network, to help surface the cost of care, utilization of services, and frequency of exacerbations.
- Start faster with meaningful, scalable clinical definitions. The cohorts, definitions, and process measures that come with the accelerator are clinically relevant, standard, and meaningful across domains, ready for customization or adoption in your organization. Organizations are able to look at patients’ demographic information, medication history, and clinical features—not just administrative codes (e.g., ICD, CPT codes)—to precisely identify cohorts of patients with COPD and at risk for COPD.
- Identify improvement opportunities and focus on what matters most. Outcome metrics typically include mortality, readmission, ED and hospital utilization rate, LOS, and cost per case. Typical process metrics include documentation of spirometry and compliance with care protocols related to medication optimization and care transitions. The result? Your team understands the priorities and can help solve problems that stand in the way of improvement.

Intended Users

- Chief Medical Officer
- Chief Quality Officer
- Chief Financial Officer (when financial improvement is a goal)
- Population Health leadership
- Clinical directors
- Operational directors
- Clinical educators
- Front-line clinicians: physicians, nurses, respiratory therapists, care managers
- Ambulatory office staff
- COPD improvement teams

Use Cases

- The executive team in a large hospital system observes that the utilization rate for their COPD patient population has been creeping upward over the previous three quarters. What are possible drivers of this trend? They use the COPD analytic accelerator to explore performance—particularly adherence to system standards for spirometry and medication optimization—and to guide a plan to improve.
- A nurse in the Pulmonology Clinic uses the COPD accelerator to generate a weekly worklist. She identifies patients scheduled for an upcoming visit at her location, checks for interventions (based on a GOLD Guidelines) that these patients may still need, creates orders as needed in the EHR, then generates a printable worklist to guide the patients’ care at their visits.
- An improvement team wants to check progress on COPD improvement efforts initiated a year ago. They use the application to compare the most recent 12 months to the previous 12 months in terms of patient counts, visits (clinic, ED, and hospital), exacerbations, and overall costs per patient.
Chronic Obstructive Pulmonary Disease (COPD)

Data Sources
This product may leverage one or more of the following sources:

- EMR - Clinical
- Claims
- Patient Satisfaction
- Other:
  - Costing
  - Health-related quality of life (HRQOL)
  - Pulmonary function testing software

Key Measures

- Mortality
- Utilization: clinic, urgent care, ED and hospital
- Exacerbations
- Readmission rate
- Length of Stay (LOS)
- Cost per case/episode, per-member-per-month (PMPM)
- Cost of comorbidities
- Patient satisfaction
- HRQOL

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