

**Version 2.0-2013 Measure Updates and Specifications
Report:
Hospital-level 30-day Mortality Following an Admission for an
Acute Exacerbation of Chronic Obstructive Pulmonary Disease**

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Prepared For:

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INTRODUCTION

The Centers for Medicare & Medicaid Services (CMS) contracted with Yale New Haven Health Services Corporation/Center for Outcomes Research and Evaluation (YNHHSC/CORE) to develop a hospital-level 30-day measure of mortality after hospitalization for an acute exacerbation of chronic obstructive pulmonary disease (COPD). The YNHHSC/CORE team developed the measure using Medicare claims and enrollment data. YNHHSC/CORE has not made any updates or revisions to the measure since measure development in 2011.

Below is an overview of key measure specifications and methodology. For complete details of the cohort, outcome, and statistical methodology; please see the original 2011 COPD measure methodology report, [*Hospital-level 30-Day Mortality Following an Acute Exacerbation of Chronic Obstructive Pulmonary Disease*](#).

CURRENT MEASURE SPECIFICATIONS

- **Measure Cohort:** Hospitalizations for patients admitted for an acute exacerbation of COPD.
- **Timeframe:** The measure uses a 30-day outcome timeframe. The timeframe begins at the date of admission for the index hospitalization.
- **All-cause Mortality:** The measure includes deaths for all causes.
- **Inclusion Criteria:**
 - Patient is aged 65 years or older
 - Patient continuously enrolled in Medicare FFS for the 12 months prior to the index admission
- **Exclusion Criteria:**
 - Admissions for patients transferred into the hospital from another acute care facility
 - Admissions for patients with inconsistent or unknown mortality status
 - Admissions for patients enrolled in Medicare Hospice in the 12 months prior to the index hospitalization, up to and including the date of the index admission
 - Admissions for patients who were discharged against medical advice
 - Admissions with unreliable data (e.g. age > 115)
- **Risk Adjustment:** The measure adjusts for case mix differences (clinical status of the patient, accounted for by adjusting for comorbidities), as described in detail in the measure methodology report. Consistent with National Quality Forum guidelines, the model does not adjust for socioeconomic status (SES) or race.
- **Hierarchical Modeling:** The measure uses hierarchical logistic regression to adjust for differences in hospital case mix, and to account for the clustering of patients within a hospital.
- **Measure Score Calculation:** The measure calculates the risk-standardized ratio as the number of predicted deaths to the number of expected deaths. This ratio is multiplied by the national observed mortality rate to get the risk-standardized mortality rate (RSMR).