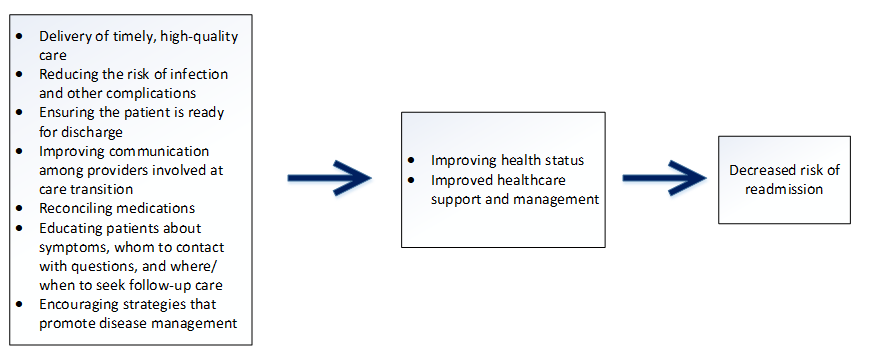
COPD Readmission Attachment 1: Summary of Empirical Evidence

In 2007 the Medicare Payment Advisory Committee (MedPAC) published a report to Congress in which it identified the seven conditions associated with the most costly potentially preventable readmissions. Among these seven, COPD ranked fourth (MedPAC, 2007). COPD is a leading cause of readmissions to the hospital (Jencks et al., 2009), accounting for more than 77,000 readmissions among Medicare patients and costing more than 900 million dollars a year (Hines et al., 2014). Some estimated project total costs of COPD treatment to increase to almost $50 billion dollars by 2020, primarily driven by disease complexity, lengthy hospital admissions, and increased prevalence of comorbid conditions (Lin et al., 2020; Guarascio et al., 2013; Huber et al., 2015). Readmission rates following COPD discharge are high and variable across hospitals; for the time period of July 2015-June 2018, publicly reported 30-day risk-standardized readmission rates ranged from 15.8% to 26.1% for patients admitted with COPD (Wallace et al., 2019).

Although many current hospital interventions are known to decrease the risk of readmission within 30 days of hospital discharge (Leppin et al., 2014; Benbassat et al., 2000; Naylor et al., 1999; Coleman et al., 2006; Agee et al., 2017; Goto et al., 2018; Rezaee et al., 2018; Wright et al., 2019), current process-based performance measures, cannot capture all the ways that care within the hospital might influence outcomes. Measurement of patient outcomes allows for a comprehensive view of quality of care that reflects complex aspects of care, such as communication between providers and coordinated transitions to the outpatient environment. These aspects are critical to patient outcomes and are broader than what can be captured by individual process-of-care measures.

The COPD hospital-specific, risk-standardized readmission rate (RSRR) measure is thus intended to inform quality-of-care improvement efforts, as individual process-based performance measures cannot encompass all the complex and critical aspects of care within a hospital that contribute to patient outcomes. As a result, many stakeholders, including patient organizations, are interested in outcomes measures that allow patients and providers to assess relative outcomes performance for hospitals (Krumholz et al., 2007). Improvement in inpatient care and care transitions for this common, costly condition are likely to reduce costly readmissions.

Figure 1: COPD Readmission Logic Model



The diagram above indicates some of the many care processes that can influence readmission risk by improving health status or improving healthcare management and support. Early experience with care bundles suggests that that appropriate (guideline recommended care), high-quality, and timely treatment for COPD patients can reduce the risk of readmission within 30 days of hospital discharge (Hopkinson et al., 2012). Studies of integrated care management after hospitals discharge have suggested clinical benefit (Casas et al., 2006; Prieto-Centurion et al., 2014). For instance, Wake Forest Baptist Medical Center showed promising reductions in readmissions after implementing a comprehensive care plan focused on transitions of care, treatment of comorbidities, and appropriate and timely hospice and palliative care services for COPD patients (Ohar et al., 2018). Recent evidence of declining readmission rates provides further support for the concept that efforts to improve transitional care can affect a patient's risk of readmission.

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