CABG Readmission Attachment 1: Summary of Empirical Evidence

CABG is a priority area for outcome measure development because it is a common procedure associated with considerable morbidity, readmissions, mortality, and health care spending. Acute myocardial infarction and coronary atherosclerosis, which are often treated by CABG procedures, represent the 5th and 9th most costly conditions in the US across all ages and payers respectively, despite being relatively less common reasons for inpatient admission; the ranking for these conditions rises among patients 65 years and older (Torio et al., 2016). In fiscal year 2014, isolated CABG surgeries accounted for almost half (40.59%) of all cardiac surgery hospital admissions in Massachusetts (Massachusetts Data Analysis Center, 2014). In 2014, the average Medicare payment was $32,499 for CABG without valve and $45,873 for CABG plus valve surgeries (Drye et al., 2009; Pennsylvania Health Care Cost Containment Council, 2014).

Although there have been advancements over the last two decades in the management of coronary artery disease and therefore a subsequent decline in CABG procedures and readmissions (McNeely et al., 2017; Weiss et al., 2014), considerable variation in CABG readmission rates suggests that there is still room for quality improvement; notably, for the time period of July 2015-June 2018, publicly reported 30-day risk-standardized readmission rates ranged from 9.3% to 22.1% for Medicare fee-for-service (FFS) patients undergoing isolated CABG surgery (Wallace et al., 2019). Although many current hospital interventions are known to decrease the risk of readmission within 30 days of hospital discharge, 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.

Furthermore, research on a variety of conditions and procedures has shown that readmission rates are influenced by the quality of care provided within the health system and, specifically, that interventions such as improved discharge planning, reconciling patient medications, and improving communications with outpatient providers can reduce readmission rates. A number of recent studies have demonstrated that improvements in care at the time of patient discharge can reduce 30-day readmission rates (Naylor et al., 1994, 1999; Krumholz et al., 2002; van Walraven et al., 2002; Conley et al., 2003; Coleman et al., 2004; Philips et al., 2004; Jovicic et al., 2006; Garasen et al., 2007; Mistiaen et al., 2007; Courtney et al., 2009; Koehler et al., 2009; Jack et al., 2009; Weiss et al., 2010; Stauffer et al., 2011; Voss et al., 2011, Williams et al., 2011; Bates et al., 2014).  
  
Figure 1. CABG Readmission Logic Model



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