Developing the Study Question: Relationship Between Cardiologist Age and Delivery of Aortic Valve Replacement

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Introduction:

Aortic stenosis (AS) is the most common valve disease worldwide, but intervention for symptomatic AS is variable and dependent on patient age, frailty, and co-morbidities. Recent studies have suggested that the greatest determinant of receipt of aortic valve replacement (AVR) is a supportive recommendation by the patient's cardiologist. Given that recommendations for cardiovascular therapies sometimes vary by clinician age, it is unclear whether cardiologist age is associated with referral for AVR.

Objective:

To determine whether cardiologist age is associated with referral for AVR.

Hypothesis:

We hypothesized that receipt of AVR is more likely to be associated with younger aged cardiologists (</= 40 years) than older aged cardiologists (>40 years).

Methods:

Using the Centers for Medicare and Medicaid services (CMS) national database, we will use hierarchical logistic regression models to assess odds of AVR delivery according to cardiologist age group among patients hospitalized with primary diagnosis of AS. Models will be adjusted for patient-level covariates (demographics, insurance, comorbidities, comorbidity index) and hospital-level covariates (location, number of cardiologists per hospital). Secondary analyses will include stratifying odds AVR by type (transcatheter and surgical).

Discussion:

We expect to find that physicians who have completed their training more recently may have higher rates of AVR referrals. This includes the use of transcatheter AVR, in patients with elevated surgical risk, which is an established non-inferior alternative to surgical AVR in many patients. While there are many factors which dictate intervention for AS, we hope that by performing this study, we will be able to promote a guideline directed approach to the management of symptomatic AS. we will be limited in the ability to classify severity of AS, selecting patients with primary admit diagnosis of AS will likely focus on patients with symptoms related to AS, which would support severe AS diagnosis.