Background: To describe (a) procedure types, (b) outcomes and (c) resource utilization, including cost, associated with mitral valve surgery (MVS) by age group.

Methods: De-identified data was obtained from the 2007 National Inpatient Sample/AHRQ dataset (n=8,246). MVS types were defined by ICD-9_CM code: repair/MVr (35.12 or 35.33), tissue replacement/MVt (35.23), or mechanical replacement/MVm (35.24). Patients were stratified by age (yo): <20 (n=191; 2.32%), 20-39 (n=340, 4.12%), 40-59 (n=2,209; 26.79%), 60-79 (n=4,467; 54.17), and 80+ (n=1,039, 12.60%).

Results: Over one-half (54.4%) of all patients underwent MVr, including 52.6% of 80+ yo patients. In the 80+ group undergoing MVr, mortality (10.1%) was lower than those undergoing MVm (16.3%; p<0.01). However, it was still significantly higher (1.8%; p<0.01) than MVr in the 40-59 group. Furthermore, discharge to home rates were significantly lower (p<0.01) in the 80+ group (13.2%) compared with the 40-59 group (53.7%). Inpatients costs and LOS were also significantly higher in the 80+ group.

Conclusions: In this national sample, MVr accounted for nearly half of all MVS across all age strata. However, as expected, outcomes, including higher mortality, LOS, inpatient death, discharge to home, and cost, were notably worse in the 80+ group regardless of MVS type.