

Table S1 Procedure codes of cardiac surgeries

Cardiac surgeries	ICD codes
TAVR	35.05, 35.0600
SAVR	35.0601, 35.0602, 35.2100, 35.2101, 35.2200, 35.2201, 38.4503, 38.4505, 38.4506
PCI	0.66, 36.06, 36.07
Permanent pacemaker implantation	37.8

ICD, International Classification of Diseases; PCI, percutaneous coronary intervention; SAVR, surgical aortic valve replacement; TAVR, transcatheter aortic valve replacement

Table S2 Definitions and corresponding diagnosis or procedure codes of comorbidities

Variable name	Definition (selection rule)	ICD code	ICD version
Diabetes mellitus	Primary and 15 other discharge diagnoses containing specific codes and the admission status being “present”	E10-E14	ICD-10CM
Hypertension	Primary and 15 other discharge diagnoses containing specific codes and the admission status being “present”	I10-I15	ICD-10CM
Peripheral vascular disease	Primary and 15 other discharge diagnoses containing specific codes and the admission status being “present”	I70, I72, I73, I74.2-I74.9, I77.1, I77.4	ICD-10CM
Atrial fibrillation	Primary and 15 other discharge diagnoses containing specific codes and the admission status being “present”	I48	ICD-10CM
Myocardial infarction	Primary and 15 other discharge diagnoses containing specific codes and the admission status being “present”	I21-I22, I25.2	ICD-10CM
Heart failure	Primary and 15 other discharge diagnoses containing specific codes and the admission status being “present”	I50	ICD-10CM
Cerebrovascular disease	Primary and 15 other discharge diagnoses containing specific codes and the admission status being “present”	I60-I69	ICD-10CM
Peripheral vascular disease	Primary and 15 other discharge diagnoses containing specific codes and the admission status being “present”	I70, I72-I74, I77-I78	ICD-10CM
Renal failure	Primary and 15 other discharge diagnoses containing specific codes and the admission status being “present”	N17-N19	ICD-10CM
Chronic obstructive pulmonary disease	Primary and 15 other discharge diagnoses containing specific codes and the admission status being “present”	J40-J47	ICD-10CM
Cancer	Primary and 15 other discharge diagnoses containing specific codes and the admission status being “present”	C, D01-D09	ICD-10CM
Coronary heart disease	Primary and 15 other discharge diagnoses containing specific codes and the admission status being “present”	I20-I25	ICD-10CM

ICD, International Classification of Diseases.

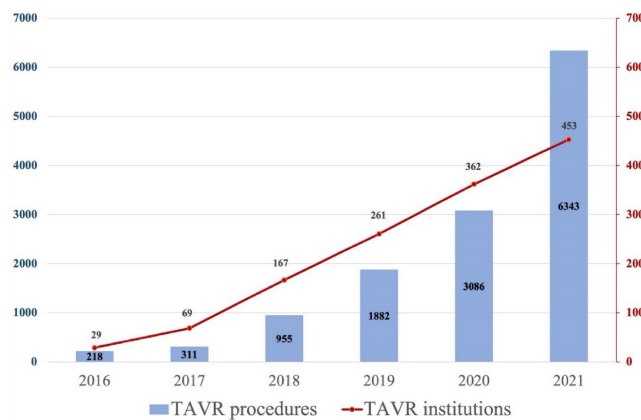


Figure S1 Number of institutions performed TAVR and procedures during the study period. TAVR, transcatheter aortic valve replacement.

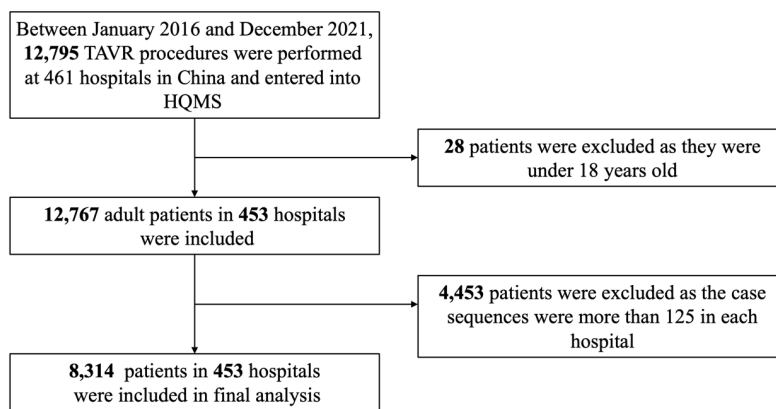


Figure S2 Study flow chart. HQMS, Hospital Quality Monitoring System; TAVR, transcatheter aortic valve replacement.

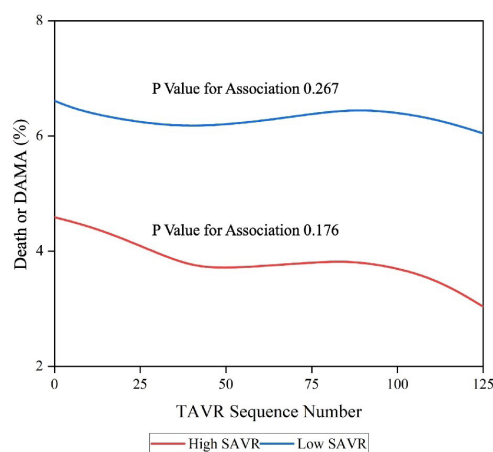


Figure S3 Volume-outcome association for death or DAMA in hospitals with high or low SAVR volume. Hospitals with ≥ 40 SAVR cases/year were classified as the high SAVR group, whereas those with < 40 cases/year were considered the low SAVR group. The modeled death or DAMA rate was higher in the low SAVR group than in the high SAVR group. Although a reduction in death or DAMA rates was observed in both groups, the differences were not statistically significant. DAMA, discharge against medical advice; SAVR, surgical aortic valve replacement.