New Century Health

Cardio Policy:

Aortic Valve Replacement

POLICY NUMBER UM CARDIO_1095	SUBJECT Aortic Valve Replacement		DEPT/PROGRAM UM Dept	PAGE 1 OF 3
DATES COMMITTEE REVIEWED 04/06/11, 11/07/12, 08/22/13, 06/28/14, 08/12/15, 11/23/16, 12/21/16, 10/31/17, 08/01/18, 02/13/19, 03/05/19, 05/01/19, 08/14/19, 12/11/19, 08/12/20, 08/11/21, 09/14/22, 09/13/23	APPROVAL DATE September 13, 2023	EFFECTIVE DATE September 29, 2023	COMMITTEE APPROVAL DATES 04/06/11, 11/07/12, 08/22/13, 06/28/14, 08/12/15, 11/23/16, 12/21/16, 10/31/17, 08/01/18, 02/13/19, 03/05/19, 05/01/19, 08/14/19, 12/11/19, 08/12/20, 08/11/21, 09/14/22, 09/13/23	
PRIMARY BUSINESS OWNER: UM		COMMITTEE/BOARD APPROVAL Utilization Management Committee		
NCQA STANDARDS UM 2		ADDITIONAL AREAS OF IMPACT		
CMS REQUIREMENTS	STATE/FEDERAL REQUIREMENTS		APPLICABLE LINES OF BUSINESS Commercial, Exchange, Medicaid	

I. PURPOSE

Indications for determining medical necessity for Aortic Valve Replacement.

II. DEFINITIONS

Aortic valve replacement is a cardiac surgery in which a patient's failing aortic valve is replaced with an alternate healthy valve.

Severe AS is defined as an aortic velocity ≥4.0 mm per second or mean pressure gradient ≥40 mm Hg with a valve area ≤1.0 cm^2 or an indexed valve area ≤0.6 cm^2/m^2 on trans thoracic echocardiogram or Dimensionless index <0.25 on trans thoracic echocardiogram.

Severe AI is defined as vena contracta >0.6cm, holodiastolic flow reversal in descending aorta, regurgitation volume ≥60ml/beat, effective orifice area ≥0.3cm^2 on trans thoracic echocardiogram or 34+ grade on angiography with LV dilation.

Dimensionless index or Velocity ratio (DI) is expressed as a simple ratio of velocities (or velocity-time integrals) in left ventricular outflow track and across the valve. It can used to measure the severity of aortic stenosis especially in prosthetic aortic valve and thereby avoiding use of LV outflow tract diameter which is a common source of error in calculating Aortic Valve area by continuity equation. DI is not influenced by conditions producing high flow across the valve. DI<0.25 is severe Aortic stenosis.

An appropriate diagnostic or therapeutic procedure is one in which the expected clinical benefit exceeds the risks or negative consequences of the procedure by a sufficiently wide margin such that the procedure is generally considered acceptable or reasonable care. The ultimate objective of AUC is to improve patient care and health outcomes in a cost–effective manner but is not intended to ignore ambiguity and nuance intrinsic to clinical decision making.

Appropriate Care – Median Score 7-9

May be Appropriate Care – Median Score 4-6

Rarely Appropriate Care – Median Score 1-3

III. POLICY

Indications for Aortic Valve Replacement are as follows:

A. AVR is recommended with sever high-gradient AS who have symptoms by history or on exercise testing **(AUC Score 9)**[1,2]

B. AVR is recommended for asymptomatic patients with severe and LVEF less than 50% **(AUC Score 8)**[1,2]

C. AVR is indicated for patients with severe AS when undergoing other cardiac surgery **(AUC Score 8)**[1,2]

D. AVR is reasonable for asymptomatic patients with very severe AS and low surgical risk **(AUC Score 7)**[1,2]

E. AVR is reasonable in symptomatic patients with low-flow/low-gradient severe AS with reduced LVEF with a low dose Dobutamine stress study that shows an aortic velocity greater than 4.0 m/s (or mean pressure gradient greater than 40 mm Hg) with a valve area greater than1.0 cm^2 at any Dobutamine dose **(AUC Score 7)**[1,2]

F. AVR is indicated for symptomatic patients with severe AR regardless of LV systolic function **(AUC Score 8)**[1,2]

G. AVR is indicated for asymptomatic patients with chronic severe AR and LV systolic dysfunction (LVEF less than 50%) **(AUC Score 8)**[1,2]

H. AVR is indicated for patients with severe AR while undergoing cardiac surgery for other indications **(AUC Score 7)**[1,2]

I. AVR is reasonable for asymptomatic patients with severe AR with normal LV systolic function (LVEF greater than 50%) but with severe LV dilation (LVESD greater than 50 mm) **(AUC Score 7)**[1,2]

Limitations

A. Requests for services that are part of a surveillance protocol for patients who are involved in a clinical trial are considered out of scope (OOS) for New Century Health and cannot be reviewed.

IV. PROCEDURE

A. To review for medical determination, the following items must be submitted for review
   1. Latest cardiology or cardiothoracic surgeon's progress note
   2. Most recent echocardiogram or TEE

3. Cardiac catheterization report

B. Primary codes appropriate for this service are: 33405, 33406, 33410-33412. 33530-Reoperation, CABG, or valve surgery, more than 1 month after original operation

C. Place/Site of Service: Inpatient hospital (21)

V. APPROVAL AUTHORITY

A. Review – Utilization Management Department

B. Final Approval – Utilization Management Committee

VI. ATTACHMENTS

A. None

VII. REFERENCES

1. Nishimura RA, et al. 2017 AHA/ACC Focused Update of the 2014 AHA/ACC Guideline for the Management of Patients with Valvular Heart Disease: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. Circulation June 2017. Volume 135 Number 25, Pages e1159-e1195
2. Robert C. Hendel MD, FACC, FAHA, et al. Appropriate use of cardiovascular technology: 2013 ACCF appropriate use criteria methodology update: a report of the American College of Cardiology Foundation appropriate use criteria task force. Journal of the American College of Cardiology. March 2013, Volume 61, Issue 12, Pages 1305-1317.
3. NCQA UM 2023 Standards and Elements.

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