Case Number:	CM14-0188716		
Date Assigned:	11/19/2014	**Date of Injury:**	12/31/2012
Decision Date:	03/10/2015	**UR Denial Date:**	10/10/2014
Priority:	Standard	**Application Received:**	11/12/2014

HOW THE IMR FINAL DETERMINATION WAS MADE

MAXIMUS Federal Services sent the complete case file to an expert reviewer. He/she has no affiliation with the employer, employee, providers or the claims administrator. He/she has been in active clinical practice for more than five years and is currently working at least 24 hours a week in active practice. The expert reviewer was selected based on his/her clinical experience, education, background, and expertise in the same or similar specialties that evaluate and/or treat the medical condition and disputed items/Service. He/she is familiar with governing laws and regulations, including the strength of evidence hierarchy that applies to Independent Medical Review determinations.

The Expert Reviewer has the following credentials:
State(s) of Licensure: California, Indiana, New York
Certification(s)/Specialty: Internal Medicine

CLINICAL CASE SUMMARY

The expert reviewer developed the following clinical case summary based on a review of the case file, including all medical records:

The injured worker is a 48-year-old with a date of injury December 31, 2012. Prior treatments include surgery, injections and medications. Current medications are Lisinopril, pro-air, aspirin and a Staten drug. The injured worker underwent right the arthroscopy December 21, 2012. The injured worker had an echocardiogram January 11, 2013. Aortic valve was calcified and thick, the aortic valve is probably bicuspid, moderate aortic stenosis is present, left ventricular systolic function was normal, ejection fraction was 65%, mild concentric, left ventricular hypertrophy was present. A stress echocardiography report dated April 24, 2013 documented normal left ventricular size and function, dysmorphic aortic valve, P philosophy was 3.5 m.sec, mildly dilated ascending aorta at 4.2 cm, trace aortic regurgitation, mild LVH, mild left atrial enlargement, no wall motion abnormality with exercise. Stress test results showed no evidence of exercise-induced ischemia, mild left ventricular hypertrophy, mild to moderate aortic stenosis, left atrial enlargement. A transthoracic echocardiogram dated August 5, 2014 documented a fair image study, probable bicuspid aortic valve with moderate stenosis, normal LV size and function (ejection fraction 64% moderate mild stenosis) normal atria and right ventricle, grossly normal pulmonic, mitral and tricuspid valves, normal atrial and PA systolic pressures, grossly normal aortic root and pericardium. Computed tomography of the thorax dated August 5, 2014 documented the heart is normal in size with no pericardial effusion. There is mild atherosclerotic calcification. There is moderate calcification of the aortic valve. Just above the aortic valve the ascending thoracic aorta measures 4.2 cm in diameter. The aortic arch and descending thoracic aorta are normal in caliber.Additional clinical information in the utilization review, not present in

medical record was the ability for the injured worker to walk for 11 minutes on a treadmill, although the injured worker had complaints of fatigue. The patient valve area was 1.6 cm, clearly not within the range that is the national standard for valve replacement.

IMR ISSUES, DECISIONS AND RATIONALES

The Final Determination was based on decisions for the disputed items/services set forth below:

Aortic Valve Replacement , Open Heart Surgery: Upheld

Claims Administrator guideline: The Claims Administrator did not base their decision on the MTUS. Decision based on Non-MTUS Citation http:www.ncbi.nim.nih.gov

MAXIMUS guideline: The Expert Reviewer did not base their decision on the MTUS. Decision based on Non-MTUS Citation Other Medical Treatment Guideline or Medical Evidence: http://content.onlinejacc.org/article.aspx?articleid=1125483 http://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-bicuspid-aortic-valve-in-adults http://www.nlm.nih.gov/medlineplus/ency/article/007325.htm.

Decision rationale: The primary objective criteria are a valve area of 1.6 cm, an ejection fraction of 67%, no wall motion abnormalities, no evidence of wall-induced ischemia. The Injured worker does not have symptoms of angina, dyspnea on exertion or syncope. An entry in the October 10, 2014 utilization review indicated the injured worker was able to walk for 11 minutes on the treadmill. A progress note dated September 24, 2014 (cardiovascular thoracic surgery evaluation) has conflicting evidence. It indicated the injured worker was symptomatic with symptoms of fatigue and shortness of breath with exertion. Follow-up progress note dated October 1, 2014 stated the injured worker exercises regularly and denies dyspnea on exertion, angina or syncope. The medical record does not, however, discuss causation of the "injuries" and how they, in fact, relate to the work related injury. Bicuspid aortic valve affects approximately 1 to 2% of people. It is the most common congenital heart disorder; impacting both the aortic valve (which controls the flow of blood into the aorta) and the thoracic aorta (the major vessel lessens blood throughout the body). About 9% of people with bicuspid aortic valve relatives have the disease so family screening is important. Many people with bicuspid aortic valve will need surgery in their lifetime, either for the valve, the ascending aorta or both. There is no documentation in the medical record indicating the bicuspid aortic valve is in any way related to employment. Similarly, the injured worker had hypertension years prior to the reported date of injury. Essential hypertension remains a major modifiable risk factor for cardiovascular disease despite important advances in our understanding of its pathophysiology and the availability of effective treatment strategies. High blood pressure increases the risk for cardiovascular disease. The QME on page 53 and 54 the medical record reflect the injured worker had borderline hypertension in 2004 alternating with normal blood pressures in 2006, 2007, and 2009. There were occasional borderline hypertensive readings in 2010 alternating with normal blood pressures. The documentation indicates the "borderline hypertension" predated the date of injury. The documentation does not show hypertension isn't any way related to employment. Consequently, the injured worker has bicuspid aortic valve stenosis but does not have severe stenosis according to national standards. The injured worker does not have complaints of shortness of breath with exertion, angina or syncope. Bicuspid aortic valve

(congenital abnormality) disease will likely result in surgery during the patient's lifetime but it is not related to employment. Essential hypertension is a modifiable risk factor for cardiovascular disease and, as noted, is not related to the worker's job duties. The objective data show a valve area of 1.6 cm, an ejection fraction of 67%, no wall motion abnormalities, no evidence of wall-induced ischemia. The Injured worker does not have symptoms of angina, dyspnea on exertion or syncope. An entry in the October 10, 2014 utilization review indicated the injured worker was able to walk for 11 minutes on the treadmill. A progress note dated September 24, 2014 (cardiovascular thoracic surgery evaluation) has conflicting evidence. The progress note indicated the injured worker was symptomatic with symptoms of fatigue and shortness of breath with exertion. Follow-up progress note dated October 1, 2014 stated the injured worker exercises regularly and denies dyspnea on exertion, angina or syncope. Therefore, aortic valve replacement, open-heart surgery is not indicated at this time according to the documentation and objective data collected by the treating physician and the national standards set by the American College of Cardiology. Consequently, Aortic value, open heart surgery is not medically necessary.

Pre-Labs with CXR, EKG: Upheld

Claims Administrator guideline: The Claims Administrator did not cite any medical evidence for its decision.

MAXIMUS guideline: The Expert Reviewer did not base their decision on the MTUS. Decision based on Non-MTUS Citation Other Medical Treatment Guideline or Medical Evidence: http://content.onlinejacc.org/article.aspx?articleid=1125483 http://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-bicuspid-aortic-valve-in-adults http://www.nlm.nih.gov/medlineplus/ency/article/007325.htm http://www.aafp.org/afp/2013/0315/p414.html.

Decision rationale: Preoperative testing (e.g., chest radiography, electrocardiography, laboratory testing, and urinalysis) is often performed before surgical procedures. These investigations can be helpful to stratify risk, direct anesthetic choices, and guide postoperative management, but often are obtained because of protocol rather than medical necessity. The decision to order preoperative tests should be guided by the patient's clinical history, comorbidities, and physical examination findings. Patients with signs or symptoms of active cardiovascular disease should be evaluated with appropriate testing, regardless of their preoperative status. The injured worker's aortic surgery is not medically necessary at this time based on the documentation and the American College of Cardiology, National Standards. The surgery is not medical necessary and, consequently, the pre-operative workup is not medically necessary this time.