Case Number:	CM14-0040552		
Date Assigned:	08/01/2014	**Date of Injury:**	01/28/2003
Decision Date:	09/11/2014	**UR Denial Date:**	02/28/2014
Priority:	Standard	**Application Received:**	03/10/2014

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. The expert reviewer is Board Certified in Internal Medicine, has a subspecialty in Hospice and Palliative Medicine and is licensed to practice in Pennsylvania. 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/services. He/she is familiar with governing laws and regulations, including the strength of evidence hierarchy that applies to Independent Medical Review determinations.

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 67-year-old gentleman with a date of injury of 01/28/2003. An AME report by [redacted] dated 07/21/2009 identified the mechanism of injury as work-related high blood pressure. An AME report by [redacted] dated 07/12/2010 and office visit notes by [redacted] dated 07/23/2013, 10/29/2013, 01/21/2014, and 04/15/2014 indicated the worker was experiencing no complaints, and his blood pressure was well-controlled with medications. Documented examinations consistently described no abnormal findings, and the blood pressures ranged from 122 to 130mmHg systolic and 66 to 80mmHg diastolic. [redacted] AME report dated 07/12/2010 summarized the prior four yearly echocardiograms from 2006 to 2010 as being generally unchanged. [redacted] note dated 07/23/2013 summarized the echocardiogram done in 05/2013 as showing aortic valve sclerosis and mitral valve ring sclerosis; a stress test was summarized as being normal. Laboratory studies reported on 10/29/2013 showed the cholesterol panel, apolipoproteins, chemistry panel with creatinine, liver function studies, uric acid level, thyroid function panel, ferritin, and vitamin D level were all normal. The complete blood count was minimally abnormal; the submitted documentation did not address these mild abnormalities. The submitted documentation consistently concluded the worker suffered from high blood pressure and bladder cancer. The AME reports dated 07/21/2009 and 07/12/2010 also concluded the worker suffered from hypertensive heart disease, chronic back pain, and idiopathic peripheral neuropathy. Treatment had included oral medications, multiple bladder surgeries, bladder chemotherapy, and acupuncture. [redacted] notes dated 10/29/2014, 01/21/2014, and 04/15/2014 reported the medications included ramipril, triamterene and hydrochlorothiazide, carvedilol, omeprazole, and selenium with doses and frequencies unchanged during that time. A Utilization Review decision by [redacted] was rendered on 02/28/2014 recommending non-certification for total triiodothyronine (TT-3),

total thyroxine, thyroid hormone (T3 or T4), free triiodothyronine T3, free thyroxine, Doppler echocardiography with color flow velocity mapping, uric acid, gamma glutanyltransferase (GGT), ferritin, apolipoprotein, creatinine, routine electrocardiogram (ECG) with at least twelve leads, rhythm ECG with one to three leads, and real time transthoracic echocardiography with image documentation (2D) including M-mode recording.

IMR ISSUES, DECISIONS AND RATIONALES

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

Triiodothyronin T3; Total (TT-3) -: 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:Kaplan NM, et al. Overview of hypertension in adults. Topic 3852, version 24.0. UpToDate, accessed 08/23/2014.Ross DS, et al. Laboratory assessment of thyroid function. Topic 7891, version 17.0. UpToDate, accessed 08/23/2014.

Decision rationale: The MTUS Guidelines are silent on this issue. The literature does not support routinely monitoring those with high blood pressure with this blood test. The literature does support screening those at increased risk for thyroid disease with a thyroid stimulating hormone (TSH) blood level. Other blood tests looking at thyroid function are reserved for those with abnormal TSH results and/or those with overt signs or symptoms of thyroid disease. The submitted documentation did not indicate the worker had symptoms or describe any signs of thyroid disease. In the absence of such evidence, the current request for a triiodothyronine (T3) blood level is not medically necessary.

Thyroxine; Total: 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: Kaplan NM, et al. Overview of hypertension in adults. Topic 3852, version 24.0. UpToDate, accessed 08/23/2014.Ross DS, et al. Laboratory assessment of thyroid function. Topic 7891, version 17.0. UpToDate, accessed 08/23/2014.

Decision rationale: The MTUS Guidelines are silent on this issue. The literature does not support routinely monitoring those with high blood pressure with this blood test. The literature does support screening those at increased risk for thyroid disease with a thyroid stimulating hormone (TSH) blood level. Other blood tests looking at thyroid function are reserved for those with abnormal TSH results and/or those with overt signs or symptoms of thyroid disease. The submitted documentation did not indicate the worker had symptoms or describe any signs of

thyroid disease. In the absence of such evidence, the current request for a total thyroxine blood level is not medically necessary.

Thyroid Hormone (T3 or T4): 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: Kaplan NM, et al. Overview of hypertension in adults. Topic 3852, version 24.0. UpToDate, accessed 08/23/2014.Ross DS, et al. Laboratory assessment of thyroid function. Topic 7891, version 17.0. UpToDate, accessed 08/23/2014.

Decision rationale: The MTUS Guidelines are silent on this issue. The literature does not support routinely monitoring those with high blood pressure with this blood test. The literature does support screening those at increased risk for thyroid disease with a thyroid stimulating hormone (TSH) blood level. Other blood tests looking at thyroid function are reserved for those with abnormal TSH results and/or those with overt signs or symptoms of thyroid disease. The submitted documentation did not indicate the worker had symptoms or describe any signs of thyroid disease. In the absence of such evidence, the current request for a thyroid hormone (T3 or T4) blood level is not medically necessary..

Triiodothyronine T3: Free: 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: Kaplan NM, et al. Overview of hypertension in adults. Topic 3852, version 24.0. UpToDate, accessed 08/23/2014.Ross DS, et al. Laboratory assessment of thyroid function. Topic 7891, version 17.0. UpToDate, accessed 08/23/2014.

Decision rationale: The MTUS Guidelines are silent on this issue. The literature does not support routinely monitoring those with high blood pressure with this blood test. The literature does support screening those at increased risk for thyroid disease with a thyroid stimulating hormone (TSH) blood level. Other blood tests looking at thyroid function are reserved for those with abnormal TSH results and/or those with overt signs or symptoms of thyroid disease. The submitted documentation did not indicate the worker had symptoms or describe any signs of thyroid disease. In the absence of such evidence, the current request for a free triiodothyronine (T3) blood level is not medically necessary.

Thyroxine; Free: 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: Kaplan NM, et al. Overview of hypertension in adults. Topic 3852, version 24.0. UpToDate, accessed 08/23/2014.Ross DS, et al. Laboratory assessment of thyroid function. Topic 7891, version 17.0. UpToDate, accessed 08/23/2014.

Decision rationale: The MTUS Guidelines are silent on this issue. The literature does not support routinely monitoring those with high blood pressure with this blood test. The literature does support screening those at increased risk for thyroid disease with a thyroid stimulating hormone (TSH) blood level. Other blood tests looking at thyroid function are reserved for those with abnormal TSH results and/or those with overt signs or symptoms of thyroid disease. The submitted documentation did not indicate the worker had symptoms or describe any signs of thyroid disease. In the absence of such evidence, the current request for a free thyroxine blood level is not medically necessary.

Doppler Echocardiography Color Flow Velocity Mapping: 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: Echocardiography Writing Group, Technical Panel, Appropriate Use Criteria Task Force. ACCF/ASE/AHA/ASNC/HFSA/HRS/SCAI/SCCM/SCCT/SCMR 2011 Appropriate use criteria for echocardiography. J Am Coll Cardiol 2011; 57(9): 1126-1166.Kaplan NM, et al. Overview of hypertension in adults. Topic 3852, version 24.0. UpToDate, accessed 08/23/2014.

Decision rationale: The MTUS Guidelines are silent on this issue. The 2011 Appropriate Use Criteria for Echocardiography guidelines were assembled by the American College of Cardiology Foundation, the American Society of Echocardiography, and eight other key specialty and subspecialty societies. The 2011 Guideline recommendations were extensive. The most common indications for this type of testing include symptoms or findings that suggest a problem with the heart, prior testing showed findings that were concerning for heart disease, symptoms or findings that suggest a problem with a heart valve(s), and a concern for heart failure. The literature does not support routinely monitoring those with high blood pressure with this study. The submitted documentation described multiple echocardiograms with minimal clinically significant change over several years. The most recent study described was done in 05/2013. The reports further indicated the worker's blood pressure was well-controlled with medications, and the worker had no symptoms or findings concerning for a change in his condition. In the absence of such evidence, the current request for Doppler echocardiography with color flow velocity mapping is not medically necessary.

Uric Acid; Blood: Overturned

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: Kaplan NM, et al. Overview of hypertension in adults. Topic 3852, version 24.0. UpToDate, accessed 08/23/2014.Carvedilol: Drug Information, Topic 9208, Version 124.0, UpToDate, accessed 08/23/2014.

Decision rationale: The MTUS Guidelines are silent on this issue in this clinical setting. The submitted documentation reported the worker's treatment for high blood pressure included the beta-blocker medication carvedilol. Studies of carvedilol have demonstrated a low percentage of people can develop high serum uric acid as a side effect of this medication. In the presence of this supportive evidence, the current request for testing for the uric acid level in the blood is medically necessary.

Glutamyltransferase, Gamma (GGT): 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: Kaplan NM, et al. Overview of hypertension in adults. Topic 3852, version 24.0. UpToDate, accessed 08/23/2014.Carvedilol: Drug Information, Topic 9208, Version 124.0, UpToDate, accessed 08/23/2014.

Decision rationale: The MTUS Guidelines are silent on this issue. The submitted documentation reported the worker's treatment for high blood pressure included the beta-blocker medication carvedilol. Studies of carvedilol have described a very low percentage of people can develop increased levels of gamma-glutamyl transferase (GGT) as a side effect from this medication. However, it would be quite unlikely for this to occur without symptoms and/or similar increases in other blood tests that were routinely monitored during treatment. The submitted and reviewed documentation did not report any concerning findings. In the absence of such evidence, the current request for blood testing for a gamma-glutamyl transferase (GGT) level is not medically necessary.

Ferritin: 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:Camaschella C, et al. Regulation of iron balance. Topic 7105, Version 40.0,

UpToDate, accessed 07/12/2014.Kaplan NM, et al. Overview of hypertension in adults. Topic 3852, version 24.0. UpToDate, accessed 08/23/2014.

Decision rationale: The MTUS Guidelines are silent on this issue. Serum ferritin is a protein in the blood that stores iron and releases it when the body needs more iron, such as during and after bleeding. The level can increase when the body is under physical stress, such as with infection or inflammation. The presence of very low serum ferritin levels suggests the body does not have enough iron. The presence of increased serum ferritin levels suggests the body is physically stressed and/or the body has too much iron. The literature does not support routinely monitoring those with high blood pressure with this test. The submitted documentation did not indicate recent bleeding had occurred and did not describe signs or symptoms of infection or inflammation. Further, blood ferritin levels done on 10/29/2013 were normal, and the documentation did not discuss a history of prior abnormal levels. In the absence of such evidence, the current request for blood testing for a ferritin level is not medically necessary.

Apolipoprotein Each: 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: Rosenson RS, et al. Lipoportein(a) and cardiovascular disease. Topic 4566, Version 18.0, UpToDate, accessed 07/12/2014.Rosenson RS, et al. Measurement of blood lipids and lipoproteins. Topic 4556, Version 13.0, UpToDate, accessed 07/12/2014.Kaplan NM, et al. Overview of hypertension in adults. Topic 3852, version 24.0. UpToDate, accessed 08/23/2014.

Decision rationale: The MTUS Guidelines are silent on this issue. Apolipoproteins are involved with carrying cholesterol and fats in the blood and may play an indirect role in the process that causes clogged heart arteries. The literature supports guidelines, including the 2010 American College of Cardiology Foundation/American Heart Association Guidelines, which recommend against routine monitoring of these blood tests in people with heart issues and/or those with high blood pressure. The submitted documentation did not discuss any symptoms or findings that suggested a need for this laboratory test. Further, blood apolipoprotein levels done on 10/29/2013 were normal. In the absence of such evidence, the current request for blood testing for apolipoprotein levels is not medically necessary.

Creatinine; Other Source: 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: Kaplan NM, et al. Overview of hypertension in adults. Topic 3852, version 24.0. UpToDate, accessed 08/23/2014.

Decision rationale: The MTUS Guidelines are silent on this issue. The literature strongly supports routinely monitoring those with high blood pressure with a creatinine blood level. The submitted documentation concluded the worker suffered from long-standing high blood pressure. However, this blood test is included in the chemistry panel that was requested and certified as medically necessary. For this reason, the current request for a separate creatinine blood level is not medically necessary.

Electrocardiogram, Routine ECG With At Least 12 Leads: Overturned

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: Kaplan NM, et al. Overview of hypertension in adults. Topic 3852, version 24.0. UpToDate, accessed 08/23/2014.

Decision rationale: The MTUS Guidelines are silent on this issue. The literature strongly supports routinely monitoring those with high blood pressure with an electrocardiogram (ECG). The submitted documentation concluded the worker suffered from long-standing high blood pressure. In the presence of this supportive evidence, the current request for a routine electrocardiogram with at least twelve leads is medically necessary.

Rhythm ECG 1-3 Leads: 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: Kaplan NM, et al. Overview of hypertension in adults. Topic 3852, version 24.0. UpToDate, accessed 08/23/2014.

Decision rationale: The MTUS Guidelines are silent on this issue. The literature strongly supports routinely monitoring those with high blood pressure with an electrocardiogram (ECG). The submitted documentation concluded the worker suffered from long-standing high blood pressure. However, a complete ECG with at least twelve leads provides a more complete assessment than a limited rhythm ECG with only one to three leads; both are not needed. For this reason, the current request for a rhythm electrocardiogram with one to three leads is not medically necessary.

Echocardiography, Transthoracic, Real Time With Image Documentation (2d), Includes M-Mode Recording: 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: Echocardiography Writing Group, Technical Panel, Appropriate Use Criteria Task Force. ACCF/ASE/AHA/ASNC/HFSA/HRS/SCAI/SCCM/SCCT/SCMR 2011 Appropriate use criteria for echocardiography. J Am Coll Cardiol 2011; 57(9): 1126-1166.Kaplan NM, et al. Overview of hypertension in adults. Topic 3852, version 24.0. UpToDate, accessed 08/23/2014.

Decision rationale: The MTUS Guidelines are silent on this issue. The 2011 Appropriate Use Criteria for Echocardiography guidelines were assembled by the American College of Cardiology Foundation, the American Society of Echocardiography, and eight other key specialty and subspecialty societies. The 2011 Guideline recommendations were extensive. The most common indications for this type of testing include symptoms or findings that suggest a problem with the heart, prior testing showed findings that were concerning for heart disease, symptoms or findings that suggest a problem with a heart valve(s), and a concern for heart failure. The literature does not support routinely monitoring those with high blood pressure with this study. The submitted documentation described multiple echocardiograms with minimal clinically significant change over several years. The most recent study described was done in 05/2013. The reports further indicated the worker's blood pressure was well-controlled with medications, and the worker had no symptoms or findings concerning for a change in his condition. In the absence of such evidence, the current request for real time transthoracic echocardiography with image documentation (2D) and M-Mode recording is not medically necessary.