

<b>Case Number:</b>	CM14-0015272		
<b>Date Assigned:</b>	02/28/2014	<b>Date of Injury:</b>	09/17/2012
<b>Decision Date:</b>	06/30/2014	<b>UR Denial Date:</b>	01/07/2014
<b>Priority:</b>	Standard	<b>Application Received:</b>	02/06/2014

### 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 and is licensed to practice in California. 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 47 year old female with an injury reported on 09/17/2012. The mechanism of injury was not provided within the clinical notes. The clinical note dated 12/18/2013, reported that the injured worker complained of shoulder pain. Upon physical examination the injured worker had muscle spasms of the anterior right shoulder. The blood pressure of the injured worker was 109/75 with a pulse of 81 beats per minute. The injured worker's diagnoses included right shoulder muscle spasm; right shoulder sprain/strain; right elbow sprain/strain. The provider requested adrenergic responses to active standing; electrocardiogram; and a cardiovagal innervation with heart rate variability, the rationales were not provided. The request for authorization was submitted on 02/03/2014. The injured worker's prior treatments were not provided.

### IMR ISSUES, DECISIONS AND RATIONALES

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

**ADRENERGIC: BEAT TO BEAT BLOOD PRESSURE RESPONSE TO VALSALVA MANEUVER, SUSTAINED HAND GRIP , BP, AND HR RESPONSES TO ACTIVE STANDING:** 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: Novak, P. Quantitative Autonomic Testing. Journal of Visualized Experiments, 2011, Published online, <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3196175/>

**Decision rationale:** The request for adrenergic: beat to beat blood pressure response to valsalva maneuver, sustained hand grip, blood pressure, and heart rate responses to active standing is non-certified. The injured worker complained of shoulder pain. The reported blood pressure was 109/75 with a pulse of 81 beats per minute. According to Quantitative Autonomic Testing, disorders associated with dysfunction of autonomic nervous system are quite common yet frequently unrecognized. Quantitative autonomic testing can be invaluable tool for evaluation of these disorders, both in clinic and research. There are number of autonomic tests, however, only few were validated clinically or are quantitative. Here, fully quantitative and clinically validated protocol for testing of autonomic functions is presented. As a bare minimum the clinical autonomic laboratory should have a tilt table, ECG monitor, continuous noninvasive blood pressure monitor, respiratory monitor and a mean for evaluation of sudomotor domain. The requesting provider did not provide rationale for request. There is a lack of clinical documentation indicating the injured worker has adrenergic failure or vasodepressor syncope. There is a lack of clinical information provided indicating the injured worker can perform the Valsalva maneuver properly. The injured worker's blood pressure and pulse were noted; however, there is a lack of clinical examination findings indicating cardiac issues. Furthermore, the injured worker's cardiac examination was not provided on recent clinical note. Given the information provided, there is insufficient evidence to determine appropriateness to warrant medical necessity; therefore, the request is non-certified.

**ELECTROCARDIOGRAM:** 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: National Heart, Lung, and Blood Institute, Explore Electrocardiogram, <http://www.nhlbi.nih.gov/health/health-topics/topics/ekg/>

**Decision rationale:** The request for electrocardiogram is non-certified. The injured worker complained of shoulder pain. The reported blood pressure was 109/75 with a pulse of 81 beats per minute. The National Heart, Lung, and Blood Institute an electrocardiogram is a simple, painless test that records the heart's electrical activity. To include whether the rhythm of your heartbeat is steady or irregular; the strength and timing of electrical signals as they pass through each part of your heart. EKGs detect and study many heart problems, such as heart attacks, arrhythmias, and heart failure. The test's results also can suggest other disorders that affect heart function. The requesting provider did not indicate the rationale for the request. The injured worker's blood pressure and pulse were noted; however, there is a lack of clinical examination findings indicating cardiac issues. Furthermore, the injured worker's cardiac examination was not

provided on recent clinical note. Given the information provided, there is insufficient evidence to determine appropriateness to warrant medical necessity; therefore, the request is non-certified.

**CARDIOVAGAL INNERVATION AND HEART RATE  
VARIABILITY(PARASYMPATHETIC INNERVATION): 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. [REDACTED], Neuromuscular Center, Cleveland [REDACTED]  
[REDACTED]

**Decision rationale:** The request for cardiovagal innervation and heart rate variability (parasympathetic innervation) is non-certified. The injured worker complained of shoulder pain. The reported blood pressure was 109/75 with a pulse of 81 beats per minute. Heart rate variability with deep breathing as a clinical test of cardiovagal function by [REDACTED] states that research into heart rate variability (HRV) and respiration over the past 150 years has led to the insight that HRV with deep breathing (HRVdb) is a highly sensitive measure of cardiovagal or parasympathetic cardiac function. This sensitivity makes HRVdb an important part of the battery of cardiovascular autonomic function tests used in clinical autonomic laboratories. HRVdb is a reliable and sensitive clinical test for early detection of cardiovagal dysfunction in a wide range of autonomic disorders. The requesting provider did not provide rationale for request. There is a lack of clinical documentation indicating the injured worker has cardiovagal dysfunction or an autonomic disorder. The injured worker's blood pressure and pulse were noted; however, there is a lack of clinical examination findings indicating cardiac issues. Furthermore, the injured worker's cardiac examination was not provided on recent clinical note. Given the information provided, there is insufficient evidence to determine appropriateness to warrant medical necessity; therefore, the request is non-certified.