

<b>Case Number:</b>	CM14-0097875		
<b>Date Assigned:</b>	07/28/2014	<b>Date of Injury:</b>	01/10/2000
<b>Decision Date:</b>	08/28/2014	<b>UR Denial Date:</b>	06/10/2014
<b>Priority:</b>	Standard	<b>Application Received:</b>	06/26/2014

### 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:

This is a case of a male patient who currently is 67 years old. Date of injury was 1/10/2000 when he was 53 years old. He has been diagnosed with displacement of lumbar disc without myelopathy and lumbosacral radiculitis. The patient has undergone multiple treatment modalities which include physical therapy, medications, modified work duty, lumbar support, lumbar epidural injections and facet injections. Some of the medications the patient has tried include oxycodone, oxycontin, roxicodone, lyrica and neurontin. On exam dated 5/22/2014, the patient was noted to be reasonably pleased with his clinical response to generic industrial medication. The patient still complained of low back and left sciatic pain, aching in nature. Escalating activities of daily living (ADL's) aggravate the underlying symptoms and reducing ADL's improve the patients symptoms. On physical exam, he has tenderness to the left sciatic notch and only 10 degrees of lumbosacral extension, left lateral flexion, right lateral flexion, left rotation, and right rotation. The patient is not exhibiting aberrant drug-related behavior or any significant side-effect profile to currently prescribed opioid therapy by any route. His total pain-related impairment score was 45 which is moderately severe impairment. At this time, there has been a request for genetic testing to help identify the enzymes that are used to metabolize opiates to help better guide opiate selection to manage his pain.

### IMR ISSUES, DECISIONS AND RATIONALES

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

**MOLECULAR PATHOLOGY PROCEDURE (GENETIC TESTING TO HELP IDENTIFY THE ENZYMES THAT ARE USED TO METABOLIZE OPIATES):** Upheld

**Claims Administrator guideline:** Decision based on MTUS ACOEM Chapter 3 Initial Approaches to Treatment Page(s): 44. Decision based on Non-MTUS Citation OFFICIAL DISABILITY GUIDELINES.

**MAXIMUS guideline:** The Expert Reviewer based his/her decision on the Non-MTUS Other Medical Treatment Guideline.

**Decision rationale:** Molecular genetic testing to help identify the enzymes that are used to metabolize opiates is not a topic covered in the MTUS or ODG. Patients differ in their response to specific opioid analgesics and may require trials of several opioids before finding an agent that provides effective analgesia with acceptable tolerability. Reasons for the variability include factors that are not clearly understood, such as allelic variants that dictate the complement of opioid receptors and subtle differences in the receptor-binding profiles of opioids. However, altered opioid metabolism may also influence response in terms of efficacy and tolerability, and several factors contributing to this metabolic variability have been identified. For example, the risk of drug interactions with an opioid is determined largely by which enzyme systems metabolize the opioid. The rate and pathways of opioid metabolites may also be influenced by genetic factors, race, and medical conditions (most notably liver or kidney disease). Patient characteristics and structural differences between opioids contribute to differences in opioid metabolism and thereby to the variability of the efficacy, safety, and tolerability of specific opioids in individual patients. There is a clear gene-dose effect on the formation of O-demethylated metabolites from multiple opioids, but the clinical significance of this may be minimal, as the analgesic effect is not altered in poor metabolizers. Genetically caused inactivity of CYP2D6 renders codeine ineffective owing to lack of morphine formation, decreases the efficacy of tramadol owing to reduced formation of the active O-desmethyl-tramadol and reduces the clearance of methadone. Genetically precipitated drug interaction might render a standard opioid dose toxic. Given that genotype testing for CYP2D6 is not routinely performed in clinical practice and there is uncertainty regarding genotype-phenotype, gene-concentration and gene-dose relationships, further prospective studies on the clinical impact of CYP2D6-dependent metabolism of drugs are warranted in large cohorts. Based on the information in this case and based on the lack of evidence based information on the clinical utility of molecular genetic testing, the request for the molecular pathology procedure (genetic testing to help identify the enzymes that are used to metabolize opiates) is not medically necessary.