

Local Coverage Determination (LCD): Heavy Metal Testing (L35074)

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Contractor Information

CONTRACTOR NAME	CONTRACT TYPE	CONTRACT NUMBER	JURISDICTION	STATE(S)
National Government Services, Inc.	MAC - Part A	06101 - MAC A	J - 06	Illinois
National Government Services, Inc.	MAC - Part B	06102 - MAC B	J - 06	Illinois
National Government Services, Inc.	MAC - Part A	06201 - MAC A	J - 06	Minnesota
National Government Services, Inc.	MAC - Part B	06202 - MAC B	J - 06	Minnesota
National Government Services, Inc.	MAC - Part A	06301 - MAC A	J - 06	Wisconsin
National Government Services, Inc.	MAC - Part B	06302 - MAC B	J - 06	Wisconsin
National Government Services, Inc.	A and B and HHH MAC	13101 - MAC A	J - K	Connecticut
National Government Services, Inc.	A and B and HHH MAC	13102 - MAC B	J - K	Connecticut
National Government Services, Inc.	A and B and HHH MAC	13201 - MAC A	J - K	New York - Entire State
National Government Services, Inc.	A and B and HHH MAC	13202 - MAC B	J - K	New York - Downstate
National Government Services, Inc.	A and B and HHH MAC	13282 - MAC B	J - K	New York - Upstate
National Government Services, Inc.	A and B and HHH MAC	13292 - MAC B	J - K	New York - Queens
National Government Services, Inc.	A and B and HHH MAC	14111 - MAC A	J - K	Maine
National Government Services, Inc.	A and B and HHH MAC	14112 - MAC B	J - K	Maine
National Government Services, Inc.	A and B and HHH MAC	14211 - MAC A	J - K	Massachusetts
National Government Services, Inc.	A and B and HHH MAC	14212 - MAC B	J - K	Massachusetts

CONTRACTOR NAME	CONTRACT TYPE	CONTRACT NUMBER	JURISDICTION	STATE(S)
Inc.	MAC			
National Government Services, Inc.	A and B and HHH MAC	14311 - MAC A	J - K	New Hampshire
National Government Services, Inc.	A and B and HHH MAC	14312 - MAC B	J - K	New Hampshire
National Government Services, Inc.	A and B and HHH MAC	14411 - MAC A	J - K	Rhode Island
National Government Services, Inc.	A and B and HHH MAC	14412 - MAC B	J - K	Rhode Island
National Government Services, Inc.	A and B and HHH MAC	14511 - MAC A	J - K	Vermont
National Government Services, Inc.	A and B and HHH MAC	14512 - MAC B	J - K	Vermont

LCD Information

Document Information

LCD ID

L35074

Original Effective Date

For services performed on or after 10/01/2015

LCD Title

Heavy Metal Testing

Revision Effective Date

For services performed on or after 04/15/2021

Proposed LCD in Comment Period

N/A

Revision Ending Date

N/A

Source Proposed LCD

DL35074

Retirement Date

N/A

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Notice Period Start Date

02/25/2021

Notice Period End Date

04/14/2021

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CMS National Coverage Policy

Title XVIII of the Social Security Act section 1862 (a)(1)(A). This section allows coverage and payment of those services that are considered to be medically reasonable and necessary.

Title XVIII of the Social Security Act section 1862 (a)(7). This section excludes routine physical examinations and services.

Coverage Guidance

Coverage Indications, Limitations, and/or Medical Necessity

The term heavy metal testing is historically used to describe elements such as lead, arsenic, mercury, cadmium, and chromium. In general, all of the heavy metals in inorganic form cause GI irritation, resulting in nausea, vomiting, abdominal pain and diarrhea. The next most consistent toxicity for the heavy metals as a group, but not for every heavy metal, is renal toxicity. A further generalization is that each member of the heavy metal group tends to cause multi-organ toxicity. Many metals cause cutaneous abnormalities, such as irritant and allergic contact dermatitis, urticaria, keratoses, and premalignant and malignant lesions. Several of the heavy metals produce central and peripheral nervous system toxicity. Other metals cause pulmonary illness.

However, before any testing for heavy metal is ordered, a detailed medical history of the patient must be obtained, including a careful documentation of occupational and avocational exposure to these toxins. A complete physical examination must be done. While classified as heavy metals, this policy does not include iron or lithium since the former is typically tested for anemia issues, discussed in National Coverage Determination 110.10 (Intravenous Iron Therapy), and the latter is typically tested for monitoring of medications. In addition, iron testing is covered under the National Coverage Determination 190.18 (Serum Iron Studies).

1. Aluminum. Serum aluminum testing is payable for beneficiaries who have been on dialysis with evidence suggesting aluminum toxicity, or for beneficiaries with chronic industrial exposure history
2. Antimony. Serum and/or urine antimony testing is payable for beneficiaries with documented treatment in the past with antileishmaniasis agents or with documented chronic antimony industrial exposure history.
3. Arsenic. Serum and whole blood and/or urine arsenic testing is payable for beneficiaries with unexplained peripheral neuropathies, industrial exposure to arsenic, histories of arsenic pesticide exposure, unexplained encephalopathies, unexplained weight loss, chronic glomerulonephritis, bone marrow hypoplasia, or melanosis of skin, unexplained chronic diarrhea, persistent abdominal pain, or nausea and vomiting.
4. Barium. Serum and or/urine barium testing is payable for beneficiaries with pulmonary disease with industrial exposure to barium or unexplained flaccid paralysis.
5. Beryllium. Serum and/or urine beryllium testing is payable for beneficiaries with pulmonary disease with industrial exposure to beryllium.
6. Bismuth. Serum and/or urine bismuth testing is payable for beneficiaries with bismuth lines on their gums, methemoglobinemia, unexplained pathological fractures, or a history of bismuth medicine abuse.
7. Cadmium. Serum and whole blood and/or urine cadmium testing is payable for beneficiaries with an exposure to cadmium with evidence of pulmonary disease or unexplained renal failure.
8. Chromium. Serum chromium testing is payable for beneficiaries with an industrial exposure to chromium with evidence of pulmonary disease.
9. Cobalt. Serum cobalt testing is payable for beneficiaries with an industrial exposure to cobalt with evidence of pulmonary disease
10. Copper. Serum copper testing is payable for beneficiaries with an industrial exposure to copper with evidence of pulmonary disease, for beneficiaries with Wilson's Disease, unexplained cardiomyopathy, unexplained renal failure, polycythemia. unexplained myelodysplastic syndrome or known ingestion of zinc.
11. Lead. Blood (serum and whole) and/or urine lead testing is covered if there is documented industrial exposure to lead, documented avocation exposure to lead, retained bullet fragments at or near joints, a blue gum line, a history of moonshine abuse, unexplained peripheral neuropathies, evidence of lead contaminated drinking water, paint stripping, lead lines on bones on radiographs, or basophilic stippling of red blood cells.
12. Manganese. Serum manganese testing is covered for beneficiaries with documented industrial exposure to manganese.

13. Mercury. Serum, whole blood, and/or urine mercury testing is covered for beneficiaries with documented industrial exposure to mercury, with a blue line in their mouth, those with a history of laxative abuse, with a history of pesticide exposure, mercury spillage with vacuuming of the liquid metal, unexplained renal failure, or a history of skin lightening treatments.
14. Molybdenum. Serum molybdenum testing is covered for beneficiaries with documented industrial exposure to molybdenum.
15. Nickel. Serum and/or urine nickel testing is covered for beneficiaries with documented industrial exposure to nickel, unexplained renal failure, unexplained pulmonary disease.
16. Selenium. Serum and/or urine selenium testing is covered for beneficiaries with documented industrial exposure to selenium or on chronic renal dialysis.
17. Thallium. Serum thallium testing is covered for beneficiaries with documented industrial exposure to thallium and unexplained ataxia.
18. Tin. Serum tin testing is covered for beneficiaries with documented industrial exposure to tin.
19. Titanium. Serum titanium testing is covered for beneficiaries with documented industrial exposure to titanium.
20. Zinc. Serum zinc and/or urine testing is covered for beneficiaries with documented industrial exposure to zinc, on chronic renal dialysis, with malabsorption syndromes, Crohn's disease, unexplained myelodysplastic syndrome or known ingestion of zinc. Zinc testing is not covered for the assessment and supplementation for the treatment of depression.
21. Testings for the following metals are non-covered: Boron, Phosphorous, Silica, Strontium, Sulfur, Uranium, Vanadium

Documented recent, long-term total parenteral nutrition (TPN) with clinical trace element deficiency evidence is an acceptable medical indication for testing for copper, manganese, and zinc.

Summary of Evidence

Zinc deficiency is characterized by growth retardation, loss of appetite, and impaired immune function as well as hair loss, diarrhea, impotence, hypogonadism in males, eye and skin lesions, weight loss, delayed healing of wounds, and taste abnormalities in more severe cases.¹ Zinc nutritional status is difficult to measure adequately using laboratory tests. Plasma or serum zinc levels are the most commonly used indices for evaluating zinc deficiency, but these levels do not necessarily reflect cellular zinc status.¹ It has been suggested that zinc and other micronutrients might influence depression.² A recent meta-analysis assessing the relationship between zinc deficiency and depression concluded that there is insufficient evidence demonstrating a causal effect. Furthermore, the authors noted that "the relationship between serum zinc levels and depression could be partially explained by reverse causation, whereby depression influences the intake, bioavailability or biological regulation of zinc". Therefore, zinc assessment and supplementation for the treatment of depression is considered not medically necessary.

Analysis of Evidence (Rationale for Determination)

Based on the evidence above, zinc assessment and supplementation for the treatment of depression is considered not medically necessary.

General Information

Associated Information

N/A

Sources of Information

National Library of Medicine: IGM Full Record Screen
Carrier Advisory Committee

Bibliography

1. NIH Office of Dietary Supplements. <https://ods.od.nih.gov/factsheets/Zinc-HealthProfessional/>
2. Petrilli, MA et al. The Emerging Role for Zinc in Depression and Psychosis. *Front Pharmacol.* 2017 Jun 30;8:414
3. Wang, J Zinc, Magnesium, Selenium and Depression: A Review of the Evidence, Potential Mechanisms and Implications. *Nutrients.* 2018 May 9;10(5):584

Revision History Information

REVISION HISTORY DATE	REVISION HISTORY NUMBER	REVISION HISTORY EXPLANATION	REASON(S) FOR CHANGE
04/15/2021	R8	This LCD was returned for comment from 9/24-11/7/2020 for Jurisdictions 6 and K. Coverage Indications, Limitations and/or Medical Necessity was revised to include non-coverage of Zinc testing for the diagnosis of depression.	<ul style="list-style-type: none">• Provider Education/Guidance• Reconsideration Request
11/07/2019	R7	Consistent with Change Request 10901, all coding information, National coverage provisions, and Associated Information (Documentation Requirements, Utilization Guidelines) have been removed from the LCD and placed in the related Billing and Coding Article, A56767. There has been no change in coverage with this LCD revision.	<ul style="list-style-type: none">• Revisions Due To Code Removal

REVISION HISTORY DATE	REVISION HISTORY NUMBER	REVISION HISTORY EXPLANATION	REASON(S) FOR CHANGE
10/01/2019	R6	Due to the annual ICD-10-CM update, the following ICD-10 code was added to the ICD-10 Codes that Support Medical Necessity section- Group 3: R11.15.	<ul style="list-style-type: none"> Revisions Due To ICD-10-CM Code Changes
01/01/2017	R5	Added the ICD-10-CM diagnosis code range K50.00-K50.919 to the ICD-10 Codes that Support Medical Necessity section, Group 20 (Zinc), effective for services rendered on or after 1/1/2017.	<ul style="list-style-type: none"> Provider Education/Guidance
01/01/2017	R4	Based on the CPT/HCPCS annual update, the descriptions for the following codes in Group 1 have been changed: 83015 and 80318. Revised the following language in the Coverage Indications, Limitations section from " While classified as heavy metals, this policy does not include iron or lithium since the former is typically tested for anemia issues, and the latter is typically tested for monitoring of medications." to " While classified as heavy metals, this policy does not include iron or lithium since the former is typically tested for anemia issues, discussed in National Coverage Determination 110.10 (Intravenous Iron Therapy), and the latter is typically tested for monitoring of medications." No change in coverage.	<ul style="list-style-type: none"> Provider Education/Guidance Revisions Due To CPT/HCPCS Code Changes
10/01/2016	R3	Added ICD-10-CM Diagnosis codes K52.21, K52.22, and K52.29 to the ICD-10 Codes that Support Medical Necessity section, Group 3, due to the annual ICD-10-CM update.	<ul style="list-style-type: none"> Revisions Due To ICD-10-CM Code Changes
06/06/2016	R2	DL35074 was released to a final LCD L35074, effective for services rendered on or after June 6, 2016. No official comments were received. The policy will be in the notice period from April 21, 2016 though June 5, 2016.	<ul style="list-style-type: none"> Provider Education/Guidance Creation of Uniform LCDs With Other MAC Jurisdiction
10/01/2015	R1	Added 7th digit to ICD-10-CM diagnosis codes to diagnosis code groups where appropriate.	<ul style="list-style-type: none"> Provider Education/Guidance

Associated Documents

Attachments

N/A

Related Local Coverage Documents

Article(s)

A56767 - Billing and Coding: Heavy Metal Testing

A58628 - Response to Comments: Heavy Metal Testing

Related National Coverage Documents

N/A

Public Version(s)

Updated on 02/19/2021 with effective dates 04/15/2021 - N/A

Updated on 11/01/2019 with effective dates 11/07/2019 - 04/14/2021

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Keywords

N/A