



Harmony Behavioral Health, Inc.

Harmony Behavioral Health of Florida, Inc.

Harmony Health Plan of Illinois, Inc.

HealthEase of Florida, Inc.

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WellCare Health Insurance of Arizona, Inc.*

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Celiac Disease DNA Testing

Policy Number: HS-163

Original Effective Date: 4/1/2010

Revised Date(s): 7/18/2011

DISCLAIMER

The Clinical Coverage Guideline is intended to supplement certain standard WellCare benefit plans. The terms of a member's particular Benefit Plan, Evidence of Coverage, Certificate of Coverage, etc., may differ significantly from this Coverage Position. For example, a member's benefit plan may contain specific exclusions related to the topic addressed in this Clinical Coverage Guideline. When a conflict exists between the two documents, the Member's Benefit Plan always supersedes the information contained in the Clinical Coverage Guideline. Additionally, Clinical Coverage Guidelines relate exclusively to the administration of health benefit plans and are NOT recommendations for treatment, nor should they be used as treatment guidelines. The application of the Clinical Coverage Guideline is subject to the benefit determinations set forth by the Centers for Medicare and Medicaid Services (CMS) National and Local Coverage Determinations and state-specific Medicaid mandates, if any.

APPLICATION STATEMENT

The application of the Clinical Coverage Guideline is subject to the benefit determinations set forth by the Centers for Medicare and Medicaid Services (CMS) National and Local Coverage Determinations and state-specific Medicaid mandates, if any.

BACKGROUND

Celiac disease is an autoimmune disorder in which the ingestion of gluten, found in wheat, rye, and barley-containing products, leads to progressive damage of the mucosal lining of the small intestine. It is typically diagnosed based on the presence of specific antibodies (antigliadin, antiendomysial, and antitissue transglutaminase) in the blood of affected individuals, characteristic histological findings on small bowel biopsy, and a positive response to a gluten-free diet. The clinical manifestations associated with celiac disease are extremely variable. While the classic triad of features (malabsorption, chronic diarrhea, and failure to thrive) is common, many individuals with celiac disease present with more atypical symptoms, many of which are unrelated to the digestive system. Gastrointestinal symptoms may include abdominal pain, constipation, weight loss, lactose intolerance, irritable bowel syndrome, and abdominal distention. Nongastrointestinal symptoms may include iron-deficient anemia, dermatitis herpetiformis (a blistering skin rash), chronic fatigue, joint pain, migraines, infertility, short stature, delayed puberty, psychiatric disorders, and defects of the dental enamel. In addition, patients with celiac disease are at an increased risk for other autoimmune disorders, such as type 1 diabetes mellitus or thyroiditis, and may have an increased risk for certain malignancies, if untreated. Treatment of celiac disease with a gluten-free diet can eliminate the symptoms of the disease and may result in a normalization of small bowel histology.

The prevalence of celiac disease varies by population background, but it is estimated that approximately 1 in 100 Americans has the disease, many of whom remain undiagnosed. Celiac disease is a multifactorial disorder that results from the interactions of 2 human leukocyte antigen (HLA) genes with non-HLA genes and various environmental factors (including gluten exposure). The *HLA-DQA1* and *HLA-DQB1* genes, both of which are located on chromosome 6 at band p21.3, encode the alpha and beta chains of HLA heterodimers. Approximately 90% to 95% of individuals with celiac disease carry either the *DQA1*0501* allele or the *DQA*0505* allele, along with either the *DQB1*0201* allele or the *DQB1*0202* allele, and express the DQ2 HLA molecule. Most of the remaining 5% to 10% of patients carry *DQA1*03* and *DQB1*0302* alleles and express the DQ8 HLA molecule. In individuals with celiac disease, the DQ2 and DQ8 heterodimers bind gluten peptides and present them to T cells, triggering an immune response and subsequent tissue damage in the small intestine. However, DQ2 and DQ8 heterodimers are also found in approximately 25% to 40% of healthy individuals, suggesting that specific HLA genotypes are necessary, but not sufficient, for the development of celiac disease.

HLA-DQ genotyping is typically performed using polymerase chain reaction (PCR) amplification with sequence-specific primers (PCR-SSP) or PCR with hybridization of sequence-specific probes to detect the *HLA-DQA1* and *HLA-DQB1* gene variants known to be associated with celiac disease: *DQA1*0501*, *DQA*0505*, *DQB1*0201*, *DQB1*0202*, *DQA1*0301*, and *DQB1*0302*. Celiac disease gene testing may be considered in children and adults who are exhibiting symptoms of celiac disease but have borderline or ambiguous results from antibody testing and small bowel biopsy. This may include previously symptomatic individuals who are no longer exhibiting symptoms on a gluten-free diet. In addition, testing may be considered in the family members of celiac disease patients. It has also been proposed that *HLA-DQ* genotyping may be used to screen individuals in the general population in order to identify those with undiagnosed celiac disease (Hayes, 2010).

Cost Analysis

Cost for the test ranges from \$395 (Kimball Genetics, Inc.) to \$509 (Prometheus Laboratories).

POSITION STATEMENT

Celiac disease DNA testing of the *HLA-DQA1* and *HLA-DQB1* genes **is considered medically necessary** in the following circumstances:

- For symptomatic members who have not responded to a gluten-free diet; **AND**,

- For symptomatic members with borderline or ambiguous celiac-associated antibody results or small-bowel biopsy results

Celiac disease DNA testing of the HLA-DQA1 and HLA-DQB1 genes **is considered NOT medically necessary** in the following circumstances:

- For the evaluation or diagnosis confirmation of celiac disease in symptomatic members with an unequivocal diagnosis by small bowel biopsy and serology; **OR**,
- For the pre-symptomatic evaluation of family members of members with confirmed celiac disease; **OR**,
- For the screening of healthy individuals with no family history of celiac disease (i.e., population screening); **OR**,
- Any circumstance not listed in the medically necessary list above.

CODING

Covered CPT® Codes

- 82784** Total Serum IgA, by Nephelometry
83520 ASCA (Anti-Saccharomyces cerevisiae) ELISA, **IgA** specific
83520 Anti-Gliadin ELISA, **IgG** specific
83520 Anti-Human Tissue Transglutaminase (hu-tTG) ELISA, IgA Recombinant antigen
83891 Molecular diagnostics; isolation or extraction of highly purified nucleic acid, each nucleic acid type
83896 Molecular diagnostics; nucleic acid probe, each; DQA1 and DQB1 (x72)
83898 Molecular diagnostics; amplification, target, each nucleic acid sequence
83900 Molecular diagnostics; Amplification of patient nucleic acid, multiplex, first two nucleic acid sequences for DQA1
83900 Molecular diagnostics; Amplification of patient nucleic acid, multiplex, first two nucleic acid sequences for DQB1
83901+ Molecular diagnostics; amplification, target, multiplex, each additional nucleic acid sequence beyond 2
+List separately in addition to code for primary procedure
83912 Molecular diagnostics; interpretation and report
88347 Anti-Endomysial (EMA) IgA antibody by IFA

ICD-9-CM Procedure Codes - No applicable codes

HCPCS Level II ® Codes - No applicable codes

Covered ICD-9-CM Diagnosis Codes when the above criteria has been met.

- 579.0** Celiac disease
V18.5 Family history of digestive disorders
V77.99 Special screening for other and unspecified endocrine, nutritional, metabolic, and immunity disorders

*Current Procedural Terminology (CPT®) ©2010 American Medical Association: Chicago, IL.

REFERENCES

Peer Reviewed

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Government Agencies, Professional and Medical Organizations

N/A

HISTORY AND REVISIONS

Date	Action
12/1/2011	<ul style="list-style-type: none">• New template design approved by MPC.
7/18/2011	<ul style="list-style-type: none">• Approved by MPC.