Introduction

In recent years, innovative technologies have fueled the development of new molecular pathology tests that improve our capacity to screen and diagnose diseases. As third-party payers seek to better control utilization of these tests, the methodology-based “stacking” codes that laboratories were billing presented an obstacle by preventing payers from identifying the tests being reimbursed. Consequently, in 2012 the American Medical Association (AMA) Current Procedural Terminology (CPT®) established a new set of analyte-specific molecular pathology (MoPath) codes to replace the methodology-based “stacking” codes that laboratories were previously using to bill for their tests. Effective January 1, 2013, all laboratories must use the new MoPath codes to bill for molecular diagnostic testing as the “stacking” codes will officially be retired.

What are MoPath Codes?

MoPath codes are labels for molecular diagnostics tests that enable payers (i.e., Medicare, Medicaid, private insurance companies) to properly identify and bill for services. In 2012, the AMA CPT established a new set of analyte-specific MoPath codes to replace the methodology-based codes (CPT 83890-83914; 88384-88386) that previously allowed labs to bill different coding combinations (also known as “code stacks”) for tests evaluating the same analyte. These “stacking” codes were retired as of January 1, 2013. Labs are now required to report tests using the analyte-specific MoPath codes.

The MoPath codes are categorized into Tier 1 and Tier 2 codes:

- **Tier 1** codes represent the majority of commonly performed single-analyte molecular tests.
- **Tier 2** codes represent procedures that are generally performed in lower volumes than Tier 1 procedures (e.g., when the incidence of the disease being tested is rare), and correspond to nine ascending levels of technical resources and interpretive work performed by the physician or other qualified healthcare professional.

What are the MoPath Codes for Cystic Fibrosis (CF) Genetic Testing?

There are five Tier 1 MoPath codes for CFTR gene analysis, which are segmented by the types of genetic variants interrogated (Table 1). In general, each code corresponds to specific analyses that may be performed for carrier screening and/or diagnostic testing indications. Laboratories should bill the CPT code(s) that accurately describe the CF testing services provided based on the genetic analysis performed in each case.

<table>
<thead>
<tr>
<th>CPT Code</th>
<th>Descriptor</th>
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<tbody>
<tr>
<td>81220</td>
<td>CFTR (cystic fibrosis transmembrane conductance regulator) (e.g., cystic fibrosis) gene analysis; common variants (e.g., ACMG/ACOG guidelines)</td>
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<tr>
<td>81221</td>
<td>CFTR known familial variants</td>
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<td>81222</td>
<td>CFTR duplication/deletion variants</td>
</tr>
<tr>
<td>81223</td>
<td>CFTR full gene sequence</td>
</tr>
<tr>
<td>81224</td>
<td>CFTR intron 8 poly-T analysis (e.g., male infertility)</td>
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</table>

AMA CPT Clinical Vignettes

The following clinical vignettes describe common clinical scenarios in which each code for CFTR gene analysis may be billed²:

- **CPT 81220**: A 26-year-old Caucasian female, approximately eight weeks pregnant and otherwise in good health, visits her obstetrician for a first prenatal visit. After discussing advantages and limitations of prenatal CF carrier screening with her obstetrician an anticoagulated peripheral blood sample is sent to the laboratory to be tested for common mutations and variants associated with CF.
- **CPT 81221**: A 1-year-old Caucasian male, whose 6-year-old brother was previously diagnosed with CF is brought by his mother to the pediatrician for genetic testing. The brother was previously demonstrated to be a compound heterozygote carrying one copy each of the common CFTR DeltaF508 mutation as well as a rare variant not included in assays which test for common variants of CFTR but known to cause CF. An anticoagulated peripheral blood sample is sent to the laboratory to be tested for common mutations and variants associated with CF.
- **CPT 81222**: A 17-year-old Caucasian female, previously diagnosed with CF based on convincing clinical criteria and two elevated sweat chloride results, visits her pediatrician with her father to discuss potential additional genetic testing. Previous tests with a screening assay for common mutations and variants followed by CFTR full gene sequence analysis revealed only heterozygosity for the DeltaF508 mutation. An anticoagulated peripheral blood sample is forwarded to a reference laboratory for deletion/duplication analysis for an uncommon CFTR mutation.
• **CPT 81223:** A 17-year-old Caucasian female with chronic rhino-sinusitis, idiopathic bronchiectasis, and two sweat chloride measurements in the intermediate range (40–60 meq/L) is suspected by her pediatrician of having an atypical form of CF. A tube of anticoagulated peripheral blood is submitted to the laboratory for full CFTR gene sequence analysis.

• **CPT 81224:** Following recent consultation with his family physician regarding his wife’s difficulty in conceiving a child, a 34-year-old Caucasian male is referred to an urologist for infertility workup. Physical further examination and testing reveals bilateral absence of the vas deferens. The urologist recommends genetic analysis of the CFTR gene to look for common CFTR mutations and assess the intron 8 poly-T region frequently associated with male infertility. An anticoagulated peripheral blood sample is forwarded to the laboratory for testing.

**What are the Implications for My Laboratory?**

For all claims with dates of service on or after January, 1, 2013, laboratories must use CPT 81220–81224 to bill for CFTR gene analysis. It is the responsibility of each laboratory to comply with correct coding practices, and bill the specific code(s) that accurately describe(s) the services performed in each case.

**References**

1. CPT is a registered trademark of the American Medical Association. ©2012 American Medical Association. All rights reserved.
3. © American Medical Association 2011. All rights reserved.