UHA
HEALTH INSURANCE

Cytochrome p450 Genotyping

I. Policy

The cytochrome p450 (CYP450) family is involved in the metabolism of a significant proportion of currently administered drugs, and genetic variants in cytochrome p450 are associated with altered metabolism of many drugs. University Health Alliance (UHA) will reimburse for cytochrome p450 genotyping when determined to be medically necessary and within the medical criteria guidelines (subject to limitations and exclusions) indicated below.

II. Criteria/Guidelines

A. CYP450 genotyping is covered (subject to Limitations / Exclusions and Administrative Guidelines) once per lifetime for the purpose of aiding in the choice of clopidogrel (Plavix) versus alternative anti-platelet agents or in decision on the optimal dosing of clopidogrel.

B. CYP450 genotyping is covered (subject to Limitations and Administrative Guidelines) once per lifetime to determine drug metabolizer status for patients:

   1. With Gaucher disease being considered for treatment with eliglustat; or
   2. With Huntington disease being considered for treatment with tetrabenazine in a dosage greater than 50 mg per day

C. CYP450 genotyping for the purpose of aiding in the choice of drug or dose to increase efficacy and/or avoid toxicity is not medically necessary for all other indications, including but not limited to the following applications:

   1. Selection or dosing of psychiatric drugs
   2. Selection or dosing of codeine
   3. Dosing of efavirenz and other antiretroviral therapies for HIV
   4. Dosing of immunosuppressant for organ transplantation
   5. Selection or dose of beta blockers (e.g., metoprolol)
   6. Dosing and management of anti-tuberculosis medications

III. Limitations/Exclusions

A. CYP450 Genotyping is limited to once per lifetime for any covered indication above.

   1. UHA considers one genotyping for CYP2C19 polymorphisms medically necessary for persons who have been prescribed clopidogrel (Plavix). Repeat CYP2C19 genotyping has no proven value.
   2. UHA considers one genotyping for CYP2D6 polymorphisms medically necessary for persons with Huntington Disease who have been prescribed doses of tetrabenazine (Xenazine) greater than 50 mg per day or for persons with Gaucher disease type 1 who are being considered for treatment with eliglustat (Cerdelga). Repeat CYP2D6 genotyping has no proven value.

B. The use of genetic panels that include multiple CYP450 mutations are not covered.

NOTE:

This UHA payment policy is a guide to coverage, the need for prior authorization and other administrative directives. It is not meant to provide instruction in the practice of medicine and it should not deter a provider from expressing his/her judgment.

Even though this payment policy may indicate that a particular service or supply is considered covered, specific provider contract terms and/or member's individual benefit plans may apply, and this policy is not a guarantee of payment UHA reserves the right to apply this payment policy to all UHA companies and subsidiaries.

UHA understands that opinions about and approaches to clinical problems may vary. Questions concerning medical necessity (see Hawaii Revised Statutes §432E-1.4) are welcome. A provider may request that UHA reconsider the application of the medical necessity criteria in light of any supporting documentation.

IV. Administrative Guidelines

A. Prior authorization is not required.

B. Applicable CPT codes:

CPT Code	Description
81225	CYP2C19 (cytochrome P450, family 2, subfamily C, polypeptide 19) (e.g., drug metabolism), gene analysis, common variants (e.g., *2, *3, *4, *8, *17)
81226	CYP2D6 (cytochrome P450, family 2, subfamily D, polypeptide 6) (e.g., drug metabolism), gene analysis, common variants (e.g., *2, *3, *4, *5, *6, *9, *10, *17, *19, *29, *35, *41, *1XN, *2XN, *4XN)

V. Policy History

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