Clinical Pharmacogenetics Implementation Consortium guideline for CYP2D6, OPRM1, and COMT genotypes and select opioid therapy.

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Clinical Pharmacogenetics Implementation Consortium (CPIC)

Crews KR, Monte AA, Huddart R, et al. Clinical Pharmacogenetics Implementation Consortium guideline for CYP2D6, OPRM1, and COMT genotypes and select opioid therapy. Clin Pharmacol Ther. 2021 Oct;110(4):888-896. [55 references] PubMed

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Overview

Guideline Objective

To provide therapeutic recommendations for the use of *CYP2D6* genotype results for prescribing codeine and tramadol and describe the limited and/or weak data for *CYP2D6* and hydrocodone, oxycodone, and methadone, and for *OPRM1* and catechol-O-methyltransferase (*COMT*) for clinical use

Patient Population

Patients requiring opioid therapy

Recommendations

Recommendation Statements

Major interventions covered in this guideline include:

- Guidance on use and dosing of select opioids (i.e., codeine, tramadol, hydrocodone, oxycodone, and methadone therapy) based on CYP2D6 phenotype (e.g., ultrarapid, normal, intermediate, poor, indeterminate metabolizer)
- Guidance on use of opioids based on *OPRM1* or *COMT* genotypes
- Considerations for pediatric patients and breastfeeding infants

Note: Full recommendation statements have not been provided because this guideline does not meet EGT's systematic review of the evidence criteria. Refer to the original guideline for more information.

Evidence Rating Scheme

Refer to the original guideline documentation for more information.

Recommendation Rating Scheme

Refer to the original guideline documentation for more information.

Related Content

Supporting Documents

- Supplemental Material.
- Incorporation of Pharmacogenomics into Routine Clinical Practice: the Clinical Pharmacogenetics Implementation Consortium (CPIC) Guideline Development Process; 2014 Feb.

Implementation Tools

- *CYP2D6* Allele Definition Table.
- *CYP2D6* Allele Functionality Table.
- *CYP2D6* Frequency Table.
- *CYP2D6* Diplotype-Phenotype Table.
- *CYP2D6* Gene Resource Mapping.
- Drug Resource Mapping:
  - Codeine.
  - Tramadol(https://files.cpicpgx.org/data/guideline/publication/opioids/tramadol-Drug_Resource_Mappings.xlsx"CPIC website").
  - Hydrocodone.
- Clinical Decision Support:
  - Implementation Workflow.
  - *CYP2D6* Consult.
  - Codeine Pre- and Post-Test Alerts and Flow Chart.
  - Tramadol Pre- and Post-Test Alerts and Flow Chart.
  - Hydrocodone Pre- and Post-Test Alerts and Flow Chart.

Patient Education

No patient education materials available.

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