

### Clinical Utility of Pharmacogenetic Research Opioid CYP2D6 Results

The purpose of this questionnaire is to learn your responses to receiving the enclosed research opioid CYP2D6 test result for one of your patients, as well as your perceptions of the clinical usefulness of this result. Please read the enclosed research opioid CYP2D6 test result before answering the following questions. You may have more than one patient who participated in our research study. However, you will only be asked to complete one questionnaire. Your return of the completed questionnaire in the enclosed postage paid envelope will serve as your consent to participate in the provider component of our study, eMERGE Return of Research Results (CCHMC IRB 2012-0658).

Do you feel that this research opioid CYP2D6 result could potentially improve {NAME'S} health outcomes?

☐ Yes ☐ No ☐ Unsure

Was your response to the previous question influenced by whether or not a change in prescribing practice (e.g. a different drug or change in dosing) was recommended in the research report?

☐ Yes ☐ No

Was your response to the previous question influenced by the fact that the research opioid CYP2D6 result was reported as part of a research study?

☐ Yes ☐ No

**Please place an "X" in the appropriate column indicating what you intend to do with the enclosed research opioid CYP2D6 result for your patient {NAME}.**

|   | Yes | No | Unsure |
|---|-----|----|--------|
| Have the CYP2D6 pharmacogenetic testing confirmed in another CLIA-approved lab  |     |    |        |
| Enter this research opioid CYP2D6 result into {NAME's} medical record   |     |    |        |
| Discuss implications of {NAME's} research opioid CYP2D6 result with {NAME} and/or {NAME's} parent(s) at their next clinical visit |     |    |        |
| Place an electronic or written alert in {NAME's} medical record about this research opioid CYP2D6 result                          |     |    |        |
| Discard the research opioid CYP2D6 result   |     |    |        |
| Comments:   |     |    |        |

**Please indicate your level of agreement as to whether the enclosed research opioid CYP2D6 result will help inform {NAMES} clinical care if {NAME} needs pain medication in the future by placing an "X" in the appropriate column.**

| Should {NAME} ever need opioid pain medication in the future, having the research opioid CYP2D6 result will:    | Strongly Agree | Agree | Disagree | Strongly Disagree |
|---|----------------|-------|----------|-------------------|
| Help inform opioid selection for {NAME}   |                |       |          |                   |
| Help inform opioid dosing for {NAME}  |                |       |          |                   |
| Increase the likelihood I will consult with a pharmacist about opioid <b>selection</b> for {NAME}               |                |       |          |                   |
| Increase the likelihood I will consult with a pharmacist about <b>dosing</b> of an opioid for {NAME}            |                |       |          |                   |
| Increase the likelihood I will share the research opioid CYP2D6 result with {NAME'S} other healthcare providers |                |       |          |                   |
| Not inform my clinical care for {NAME}  |                |       |          |                   |
| Comments:   |                |       |          |                   |

**ID Number**                      Online Survey Option [insert link]

**There is an increasing expectation that researchers should return genetic testing results to research participants if the research results could potentially improve health outcomes.**

Do you agree with the expectation that research results that could potentially improve health outcomes should be returned to the research participant?

☐ Yes                      ☐ No                      ☐ Unsure

Had {NAMES} family previously shared with you {NAME'S} research opioid CYP2D6 result?

☐ Yes                      ☐ No                      ☐ Unsure

What is your reaction to receiving {NAMES} research opioid CYP2D6 result?

☐ Very positive                      ☐ Positive                      ☐ Neutral                      ☐ Negative                      ☐ Very negative

Comments:

What is your opinion of the content of {NAMES} research opioid CYP2D6 **report**? (check all that apply)

☐ Confusing                      ☐ Understandable                      ☐ Unwanted  
☐ Helpful                      ☐ Informative                      ☐ Useless

Comments:

Have other patients or parents of patients shared any genetic testing research results with you?

☐ Yes                      ☐ No                      ☐ Unsure

**In what circumstances would you like to receive research results from genomic research studies in which your pediatric patients participate?**

|   | Yes | No | Unsure |
|---|-----|----|--------|
| Genetic risk information that might inform drug selection or dosing. For example, the enclosed research opioid CYP2D6 results.  |     |    |        |
| Genetic risk information for a disease that is treatable during childhood. For example, risk for enlarged heart with strenuous activity.  |     |    |        |
| Genetic risk for a disease that could affect a patient in adulthood for which there are preventive actions that can be taken during childhood. For example, risk for high cholesterol that could lead to heart disease. |     |    |        |
| Genetic risk for a disease that could affect a patient in adulthood but for which there are <b>not</b> preventive actions that can be taken during childhood. For example, breast or prostate cancer.                   |     |    |        |
| Genetic risk information for a disease that could affect a patient in adulthood but is untreatable and no preventive actions are available. For example, dementia or Alzheimer's.                                       |     |    |        |
| Genetic information that revealed a change in one of your patient's genes but researchers were not sure what the genetic change meant.  |     |    |        |
| Genetic information that a patient is a carrier of a gene for an autosomal recessive condition such as cystic fibrosis or sickle cell.  |     |    |        |
| I do not wish to receive any genetic testing research results from studies in which my patients participate.  |     |    |        |
| Comments:   |     |    |        |

ID Number

Online Survey Option [insert link]

The following questions are about your impressions and use of clinical *CYP2D6* pharmacogenetic testing.

|   | Yes | No | Unsure |
|---|-----|----|--------|
| Do you feel clinical <i>CYP2D6</i> pharmacogenetic testing should be offered to <b>pediatric</b> patients prior to prescribing opioids metabolized by <i>CYP2D6</i> ? |     |    |        |
| Do you feel clinical <i>CYP2D6</i> pharmacogenetic testing should be offered to <b>adult</b> patients prior to prescribing opioids metabolized by <i>CYP2D6</i> ?     |     |    |        |
| Has the receipt of the enclosed research report influenced your perceptions of the usefulness of <i>CYP2D6</i> pharmacogenetic testing?                               |     |    |        |
| Have you ordered or recommended any type of pharmacogenetic test in the past six months?  |     |    |        |
| Do you anticipate ordering or recommending any type of pharmacogenetic test in the next six months?   |     |    |        |
| Comments:   |     |    |        |

### Demographics

Which of the following drugs do you personally prescribe or monitor (check all that apply)?

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Clopidogrel (Plavix) | <input type="checkbox"/> Simvastatin (Zocor)  | <input type="checkbox"/> Tricyclic antidepressants |
| <input type="checkbox"/> Codeine              | <input type="checkbox"/> SNRI antidepressants | <input type="checkbox"/> Warfarin (Coumadin)       |
| <input type="checkbox"/> Hydrocodone          | <input type="checkbox"/> SSRI antidepressants | <input type="checkbox"/> None of these             |
| <input type="checkbox"/> Oxycodone            | <input type="checkbox"/> Tramadol             |  |

Were you aware of *CYP2D6* pharmacogenetic testing prior to the receipt of the enclosed research report?

- ☐ Yes      ☐ No      ☐ Unsure

Select the category that best describes your age:

- |                                   |                                   |                                       |
|-----------------------------------|-----------------------------------|---------------------------------------|
| <input type="checkbox"/> 21 to 30 | <input type="checkbox"/> 41 to 50 | <input type="checkbox"/> 61 to 70     |
| <input type="checkbox"/> 31 to 40 | <input type="checkbox"/> 51 to 60 | <input type="checkbox"/> More than 71 |

Gender:      ☐ Female      ☐ Male

Type of prescribing clinician:    ☐ Physician (MD/ DO)      ☐ Advanced Practice Nurse      ☐ Physician Assistant

How many years have you been a prescriber?

- |                                    |                                |                                       |
|------------------------------------|--------------------------------|---------------------------------------|
| <input type="checkbox"/> 5 or less | <input type="checkbox"/> 11-15 | <input type="checkbox"/> 21-25        |
| <input type="checkbox"/> 6-10      | <input type="checkbox"/> 16-20 | <input type="checkbox"/> More than 25 |

Practice specialty:

- |  |  |   |
|--|--|---|
| <input type="checkbox"/> Family practice   | <input type="checkbox"/> Pediatrics              | <input type="checkbox"/> General practice |
| <input type="checkbox"/> Internal medicine | <input type="checkbox"/> Other (please specify): |   |

What percent effort do you typically spend providing direct clinical care?

- |                                      |                                  |                                 |
|--------------------------------------|----------------------------------|---------------------------------|
| <input type="checkbox"/> 20% or less | <input type="checkbox"/> 21-40%  | <input type="checkbox"/> 41-60% |
| <input type="checkbox"/> 61-80%      | <input type="checkbox"/> 81-100% |                                 |

**Thank you for completing this questionnaire. Please return it in the enclosed postage paid envelope.**