

Well-informed patients key to accepting gene-based drug dosing

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Dr. Michael Rieder, Professor of Pediatrics, and Physiology and Pharmacology at Western University, led a study which concluded if patients are well-informed about gene-based drug dosing, they're far more accepting of genetic testing.
Credit: Western University

A new study out of Western University (London, Canada) illustrates the need for a lot more education around pharmacogenetics (PGx) –the

study of how a patient's genes can affect drug reaction and dosage. PGx promises to optimize patient response to therapy, but this is the first study to really investigate how patients perceive this kind of genetic testing, and whether those perceptions differ when it comes to parents and their children. The research, led by Dr. Michael Rieder of Western's Schulich School of Medicine & Dentistry is published in the journal *Pediatrics*.

"Pharmacogenetic testing has become widely used and gene-based drug dosing is becoming a reality for a number of common health problems. This study confirms what we suspected; Whether or not you're a parent, your degree of acceptability of [genetic testing](#) was determined by your knowledge of it. That is to say –if you understand what the test is for, and the concept of gene-based drug dosing, you're far more open to it, than if you don't understand it," said Dr. Rieder, a professor in the Departments of Paediatrics, and Physiology and Pharmacology.

The researchers surveyed three groups including: 236 medical students representing those having greater educational exposure to PGx, 1,226 lay parents and 105 lay people without children. A second survey was completed by 229 parents. The surveys didn't use PGx but rather, asked about "DNA testing to guide therapy." The study concluded that the acceptability of PGx testing, either for oneself or one's child, seemed to depend on baseline PGx knowledge, but not on parenthood.

The main concern for all respondents was the need for informed consent. Other findings included:

- More acceptance for PGx when the disease was severe
- Strong desire/demand for separate consent for PGx testing
- More education about PGx needed in medical schools
- Acceptability of genetic testing didn't differ whether for the parent or the child

Dr. Rieder says PGx should take a lesson from pediatric oncology. He says health care workers in that division do a good job in the way they frame the discussions around care, treatment, and consent. "When they have to make a diagnosis, they spend a lot of time explaining what tests they're going to do, the risks, and what therapies are available. And they're successful. Their patients comply with treatment, they get involved in studies, they're informed, and they want to know what's going on."

Provided by University of Western Ontario

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