

IMPACT Newsletter

3rd Edition | July 2015

Introduction

The goal of the IMPACT newsletter is to provide you with exciting news, updates and study milestones. Without your referrals and continued support, we would not have been able to reach the high number of patients who have already received pharmacogenomic testing through IMPACT. Thank you for all of your support!



Meet the IMPACT team! Visit us at www.im-pact.ca.

IMPACT Study Milestones

- ◆ The IMPACT study was initiated in June 2011 after receiving \$19.5 million from the Ontario Ministry of Research and Innovation, the CAMH Campbell Family Mental Health Research Institute and Lary & Judy Tanenbaum.
- ◆ In May 2012, the first IMPACT patient was consented.
- ◆ In January 2013, for the first time in Canada, patients were able to receive genetic testing at their family physician's office; this was made possible through the IMPACT study.
- ◆ In November 2013, CAMH and Assurex Health signed a partnership agreement to bring the benefits of a personalized approach to psychiatric treatment to more Canadians.
- ◆ Beginning in November 2014, patients enrolled in the IMPACT study were tested using the Assurex Health proprietary technology, GeneSight Psychotropic.
- ◆ Since May 2012, 1,247 clinicians have completed the clinic registration process.

Important Study Reminders

Participants are asked to provide the following information at each stage of the study:

Baseline (upon consent)

- Symptoms
- Medication History
- Side Effects

Week 4

- Symptoms
- Current Medications
- Side Effects

Week 8

- Symptoms
- Current Medications
- Side Effects

Symptomology is gathered through scales such as BDI and PANSS; depending on the patient's diagnosis. Please discuss with your patients the importance of completing these scales at each time point of the study.

Clinic Registration

In order to receive your patients' GeneSight Psychotropic reports, you must register your clinic by filling out the IMPACT Clinic Registration Form. This form can be accessed by visiting <http://impact.camhx.ca/en/docs/IMPACT-AssureRx-RegistrationForms>. Please complete and return this form via email to registrations@assurexhealth.com or fax to 1.888.894.4344.

The second step in the clinic registration process is gaining access to reports. GeneSight reports can be faxed, once your office verifies the fax number, or viewed online via the GeneSight portal. Besides providing your email address for online access, you may also designate access to your staff by providing their email addresses.

Referral Process

Referring a patient to the IMPACT study is easy!

To refer a patient to the study, please download and complete the appropriate referral form below and return it to the IMPACT team via email impact@camh.ca or fax 416.979.4666:

- [IMPACT Adult Referral Form \(16+\)](#)
- [IMPACT Adolescent Referral Form \(7-15\)](#)

A Research Analyst from CAMH will then contact your patient to walk him/her through the informed consent process in order to enroll him/her in the study. If you have any questions regarding the referral process please contact us at 416.535.8501 ext. 30240.

Testimonials

Please let us know if you would be interested in sharing your experiences with pharmacogenomic testing. We are always interested in feedback — reach us by email at impact@camh.ca.

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IMPACT Study Status

As of July 2015, the IMPACT Study has enrolled 3,623 patients for pharmacogenomic testing, averaging just over 98 patients enrolled per month.

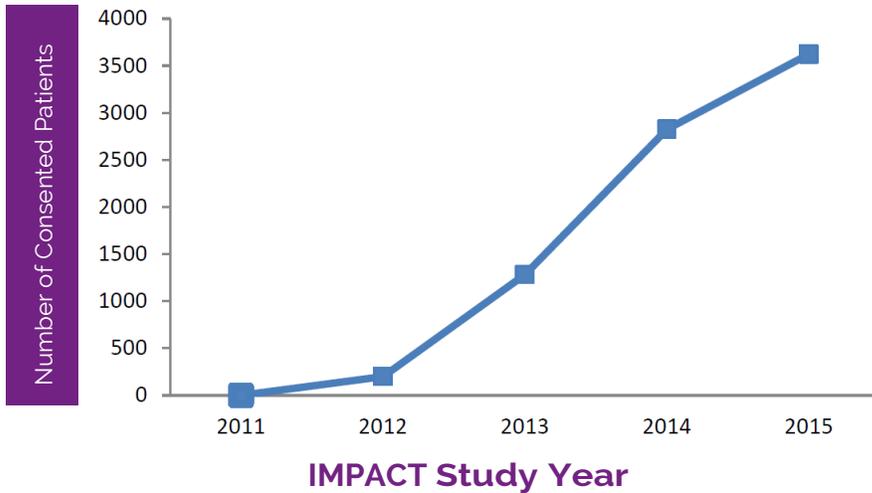


FIGURE 1 Number of patients consented to participate in the IMPACT Study.

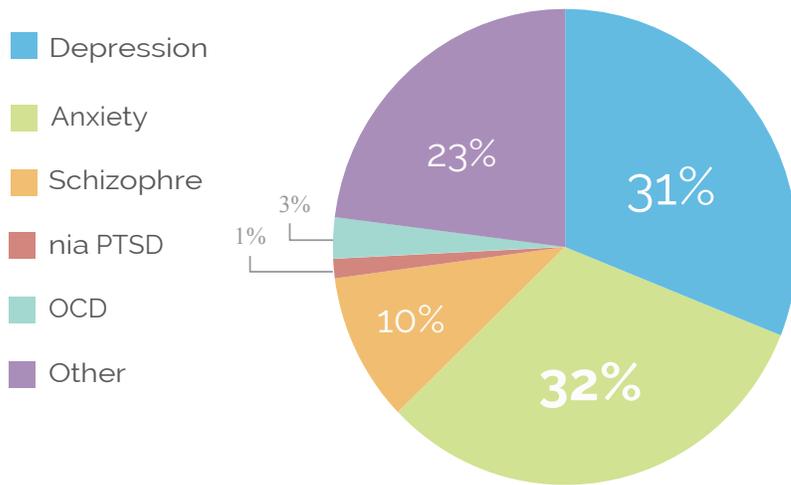


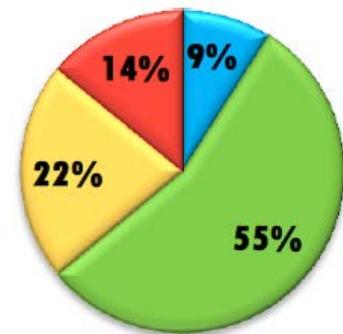
FIGURE 2 Percentage of IMPACT study participants with a primary diagnosis of depression, anxiety, schizophrenia, PTSD, OCD or other. Patients may have a secondary diagnosis

Gene Spotlight

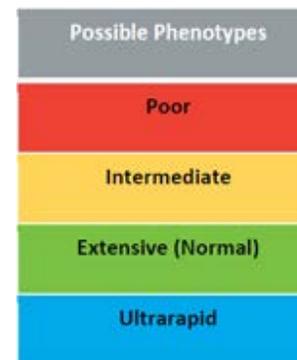
Drug metabolizer CYP2D6

The cytochrome P450 gene CYP2D6 plays a role in the metabolism of at least 30 psychotropic medications. As with most CYP enzymes, a star (*) allele nomenclature is used to differentiate functionally impactful gene variants, and the most prevalent wild type allele, designated *1. There are at least 16 *alleles that comprise CYP2D6, with the *1/*1 allele equating to normal or extensive metabolism (EM). At least eight alleles produce an enzyme with no metabolic activity. The intermediate metabolism (IM) phenotype is ascribed when one gene contains this no activity allele and the other *1 wild type allele. A poor metabolizer (PM) phenotype is associated with the inheritance of both no activity alleles. The ultrarapid metabolizer (UM) phenotype derives from inheritance of one or more additional copies of the CYP gene with activity equal to or greater than that of the *1 allele. Due to the diversity and functional redundancy of many alleles, we report here on the conventional PM, IM, EM and UM phenotypes ascribed to allele variants for all CYP enzymes reviewed.

CYP2D6 Phenotype Frequency*



* Phenotype frequency is based on internal Assurex Health data of over 100,000 tested patients



Webinars

Assurex Health offers educational webinars that provide treating clinicians with more information about GeneSight technology and pharmacogenomics in general.

If you are interested in participating, register by visiting <http://genesight.com/educational-webinars>.

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GeneSight Psychotropic

The GeneSight Psychotropic laboratory developed test analyzes how eight genes may affect a patient's metabolism and response to 33 Health Canada approved antidepressant and antipsychotic medications.

GeneSight testing includes genotyping of pharmacokinetic genes from the Cytochrome P450 family and pharmacodynamics genes related specifically to the serotonin system.

GeneSight differs from other pharmacogenomic testing in that it is combinatorial. GeneSight takes into consideration how a combination of genetic variations can affect a patient's ability to respond to a medication.

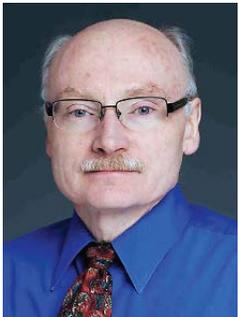
For more information, visit: www.genesight.com

In The News

The American Psychiatric Association Annual Meeting (APA) was held in Toronto Saturday, May 16, 2015 through Wednesday, May 20, 2015 at the Metro Convention Centre.

Assurex Health participated with a variety of activities including a GeneSight product theater, presenting data in the poster session and staffing a booth in the exhibit hall.

Dr. Chris Bojrab presented "**Next Generation Pharmacogenomics: Moving beyond Mendel**" at the product theatre, while our poster presentation focused on the health care utilization and medication costs in patients receiving psychiatric combinatorial pharmacogenomic testing.



Dr. James Kennedy, M.D., Director of Molecular Science Program at CAMH, was the inaugural speaker for the David A. Mrazek Memorial Lecture series at the APA meeting on Monday, May 18 from 9:00 - 10:30 a.m.



Dr. James Kennedy, MD

For More Information

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