Pharmacogenomic-Guided Antidepressant Prescribing (PGx-GAP) in Adolescents Trial

PRESENTER:

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OBJECTIVE

To determine if pharmacogenetic (PGx)-guided prescribing improves efficacy, tolerability, and cost-efficacy of antidepressant treatment in adolescent depression.

METHODS

Design: Multisite, triple-blinded, randomized-controlled trial.

Participants: Adolescents with moderate-to-severe depression, aged 12–17 years, that did not respond or tolerate fluoxetine therapy.

Intervention: Antidepressant recommendations based on the adolescent's CYP2C19, CYP2D6, and CYP2B6 genotype-predicted metabolism phenotype.

Control: Antidepressant recommendations based on the Guidelines for Adolescent Depression in Primary Care (GLAD-PC).

Primary outcome: Remission after 12 weeks using the Quick Inventory of Depressive Symptomatology – Adolescent 17-item – Self-Report (QIDS-A17-SR).

Secondary outcomes: Symptoms, side effects, role-functioning, quality of life at 4, 8, and 12 weeks; overall cost-efficacy, and healthcare utilization.

ANTICIPATED RESULTS

Our preliminary work has shown 82% of youth seeking mental health care in Alberta have an actionable genotype for *CYP2C19, CYP2D6, or CYP2B6* that may affect mental health medication or safety (Bousman et al., unpublished data). We anticipate this high rate of actionability will translate to better outcomes in adolescents receiving PGx-guided treatment compared to those receiving care guided by clinical practice guidelines.

AUTHORS:

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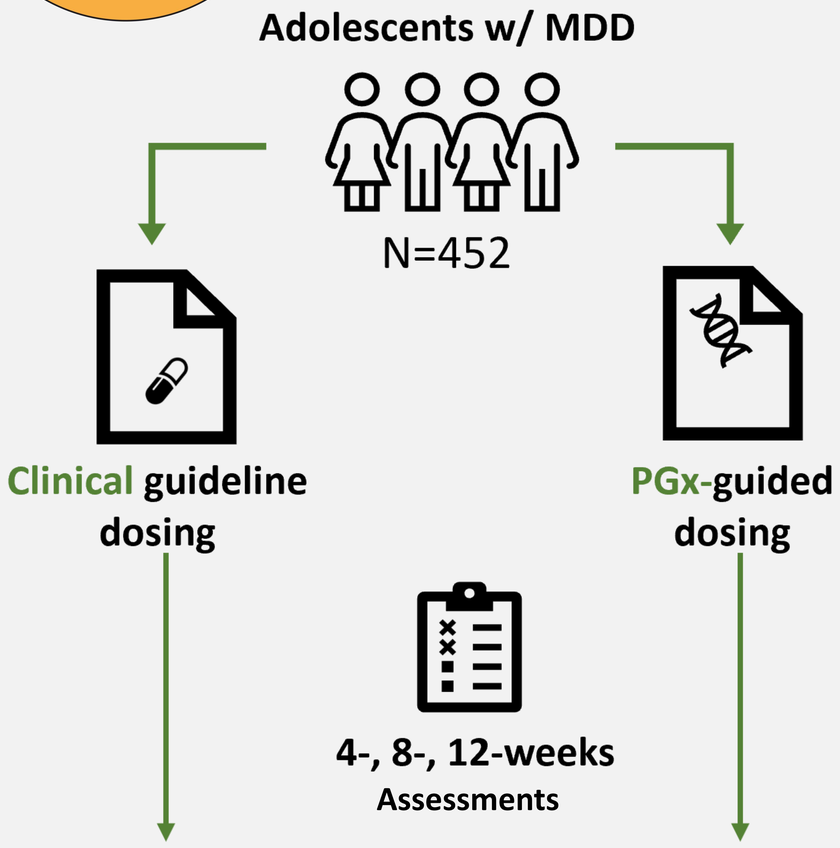
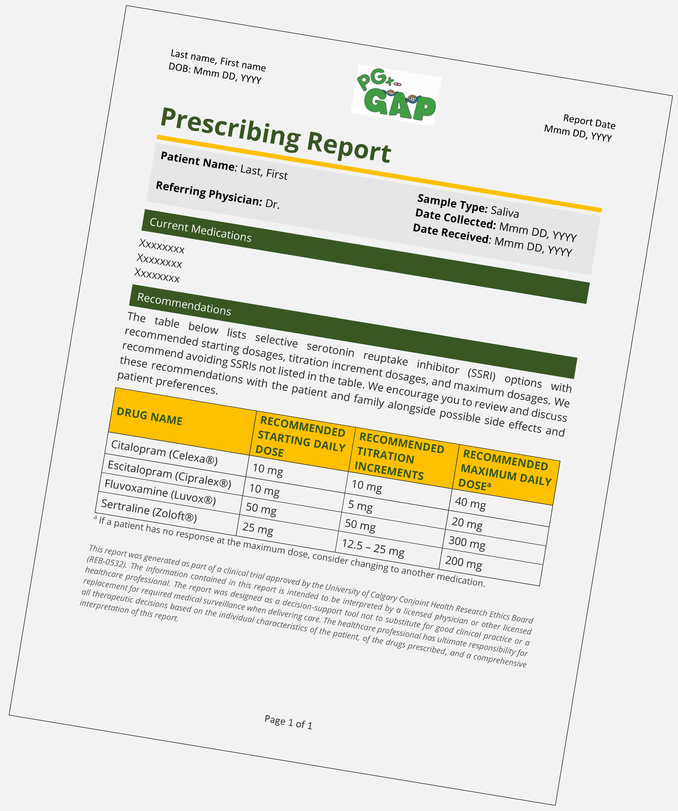
Does Pharmacogenomic-Guided Prescribing Improve Efficacy, Tolerability, and Cost-Efficacy of Antidepressant Treatment in Adolescents?




Last name, First name
DOB: Mmm DD, YYYY

Report Date
Mmm DD, YYYY

Prescribing Report

Patient Name: Last, First

Referring Physician: Dr.

Sample Type: Saliva
Date Collected: Mmm DD, YYYY
Date Received: Mmm DD, YYYY

Current Medications

Xxxxxxxx
Xxxxxxxx
Xxxxxxxx

Recommendations

The table below lists selective serotonin reuptake inhibitor (SSRI) options with recommended starting dosages, titration increment dosages, and maximum dosages. We recommend avoiding SSRIs not listed in the table. We encourage you to review and discuss these recommendations with the patient and family alongside possible side effects and patient preferences.

DRUG NAME	RECOMMENDED STARTING DAILY DOSE	RECOMMENDED TITRATION INCREMENTS	RECOMMENDED MAXIMUM DAILY DOSE[a]
Citalopram (Celexa®)	10 mg	10 mg	40 mg
Escitalopram (Cipralex®)	10 mg	5 mg	20 mg
Fluvoxamine (Luvox®)	50 mg	50 mg	300 mg
Sertraline (Zoloft®)	25 mg	12.5 – 25 mg	200 mg

[a] If a patient has no response at the maximum dose, consider changing to another medication.

This report was generated as part of a clinical trial approved by the University of Calgary Conjoint Health Research Ethics Board (REB-0532). The information contained in this report is intended to be interpreted by a licensed physician or other licensed healthcare professional. The report was designed as a decision-support tool not to substitute for, good clinical practice or a replacement for required medical surveillance when delivering care. The healthcare professional has ultimate responsibility for all therapeutic decisions based on the individual characteristics of the patient, of the drugs prescribed, and a comprehensive interpretation of this report.

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WE ARE ACCEPTING REFERRALS

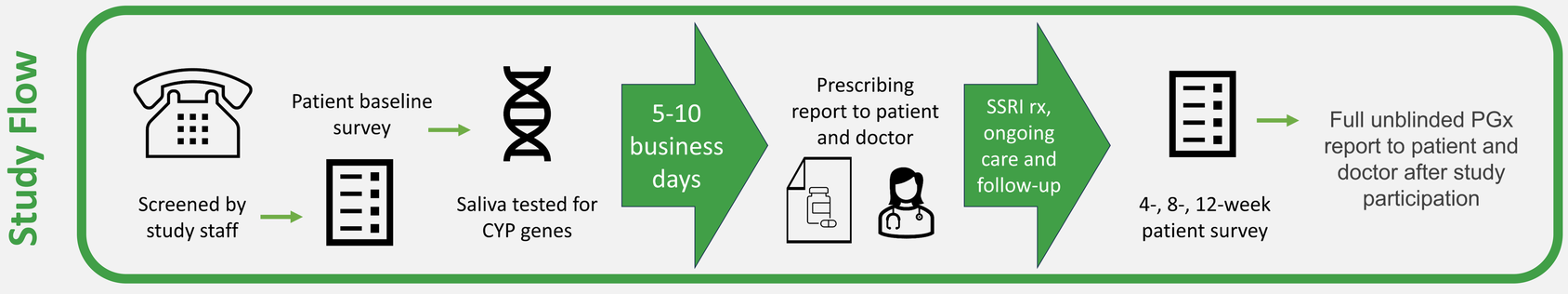
Scan for Referral Form

Eligibility Criteria

- Age 12 – 17 years old
- Primary diagnosis of depression
- Did not respond or tolerate fluoxetine therapy
- Starting a new SSRI
- Have not had pharmacogenomic testing before

Or email referrals to:

gap@ucalgary.ca



CIHR IRSC Canadian Institutes of Health Research / Instituts de recherche en santé du Canada

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