

Pharmacogenomic testing for depression: A qualitative study of the perceptions of people with lived experience and professional stakeholders

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BACKGROUND

- As evidence for the clinical utility of pharmacogenomic (PGx) testing for depression accumulates¹⁻³, issues related to the implementation of this testing into routine clinical care must be considered³.
- Perspectives of key stakeholders (both people with lived experience [PWLE] and professional stakeholders and healthcare providers [P/HCPs]) are critical, but not frequently explored³.
- Our goal was to understand how PWLE and P/HCPs perceive PGx testing for depression, to inform the consideration of clinical implementation within the public healthcare system in British Columbia (BC), Canada.

METHODS

- As part of a larger study on PGx testing in BC, we:
- Purposely recruited and conducted one-hour, semi-structured interviews with 1) PWLE and 2) P/HCPs
- Recorded, transcribed and analyzed interviews using interpretive description⁴

RESULTS

- 17 interviews were completed with PWLE (Table 1); 15 interviews were completed with P/HCPs (Table 2).
- Models of PWLE's and P/HCPs' perceptions of PGx testing were developed (Figures 1-2), with key messages for its implementation in BC (Box 1).

DISCUSSION & CONCLUSIONS

- Our findings can help inform PGx implementation strategies that have the best chance of being acceptable and effective within BC's public healthcare system.
- Pre-test counselling should address expectations, limitations and misconceptions of PGx testing.
- PGx test results should be applied in a person-centered manner with appropriate psychiatric care.
- Further research is needed about the accessibility, effectiveness and cost-effectiveness of various implementation strategies that could be used in BC.

The hopes, concerns and needs of people with depression, and their healthcare providers, should be considered when integrating pharmacogenomic testing for depression into routine care.



Box 1. Key takeaways from interviews with PWLE and P/HCPs about the potential implementation of PGx testing for depression in British Columbia, Canada.

People With Lived Experience (PWLE) and Professional stakeholders/Healthcare Providers (P/HCPs):

Are generally hopeful about the potential for therapeutic benefit

Want education for clinicians and patients

Want provincial testing facilities and data security

Want accessible, easy-to-understand, and clinically actionable test reports

PWLE want:

- No cost, equitable, and easy access to testing
- Accessible, holistic psychiatric care
- Informed consent and counselling/emotional support

P/HCPs want:

- Clinical protocols and technological support
- Conclusive economic analysis to support the use of PGx
- Ongoing evaluation and outcomes monitoring

"I wouldn't want to see it become something for the privileged, you know, because that's just depressing in itself... just another thing inaccessible to people with disabilities, people living in poverty."
- Participant 9, man, has not had PGx

"I don't believe that drugs in and of themselves are a sufficient remedy for mental illness. You know, there's a lot more to it, there has to be some therapeutic intervention, [... you] can't just rely on drugs. It's insufficient really."
- Participant 6, woman, has not had PGx

Table 1. Demographic information for PWLE.

PWLE demographics N=17	
Gender	
Women	11
Men	6
Age Range	21-77y
Had PGx testing?	
Yes	7
No	10
Race*	
White	12
South Asian	3
Mixed	2

Table 2. Demographic information for P/HCPs.

HCP demographics N=15	
Gender	
Women	9
Men	6
Professional role	
Clinical	9
Psychiatrist	3
Pharmacist	2
Family Physician	2
Genetic Counsellor	1
Nurse	1
Lab (Public & Private)	2
Policy/leadership	2
Private Insurance	2

*Participants were asked about their ethnic background; data are presented as race categories to match how participants self-described.

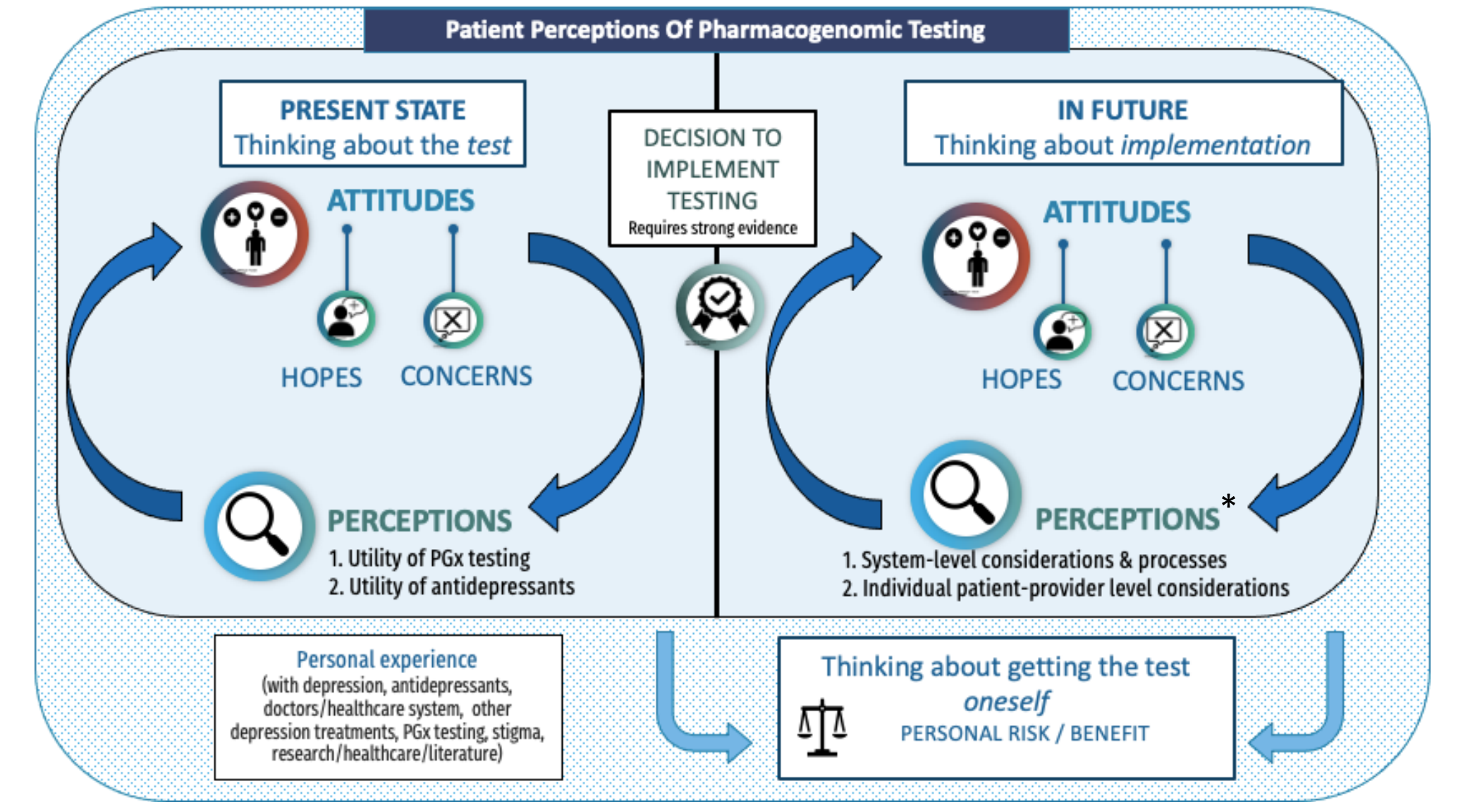


Figure 1. Visual model of patient perceptions of PGx testing in BC. PWLE describe thinking about the present state of the test itself – whether or not the test is currently useful – and thinking about the possible future use of PGx testing in BC. In both scenarios, there is a cyclical relationship between PWLE's attitudes (hopes and concerns) and perceptions of PGx testing and its use. Before PGx testing is implemented widely in BC, PWLE expect there to be strong evidence for its utility. Decisions to pursue PGx testing oneself are independent of whether BC adopts PGx testing. The way people think about PGx testing is influenced by their own personal experiences. PWLE: People With Lived Experience. PGx: Pharmacogenomic

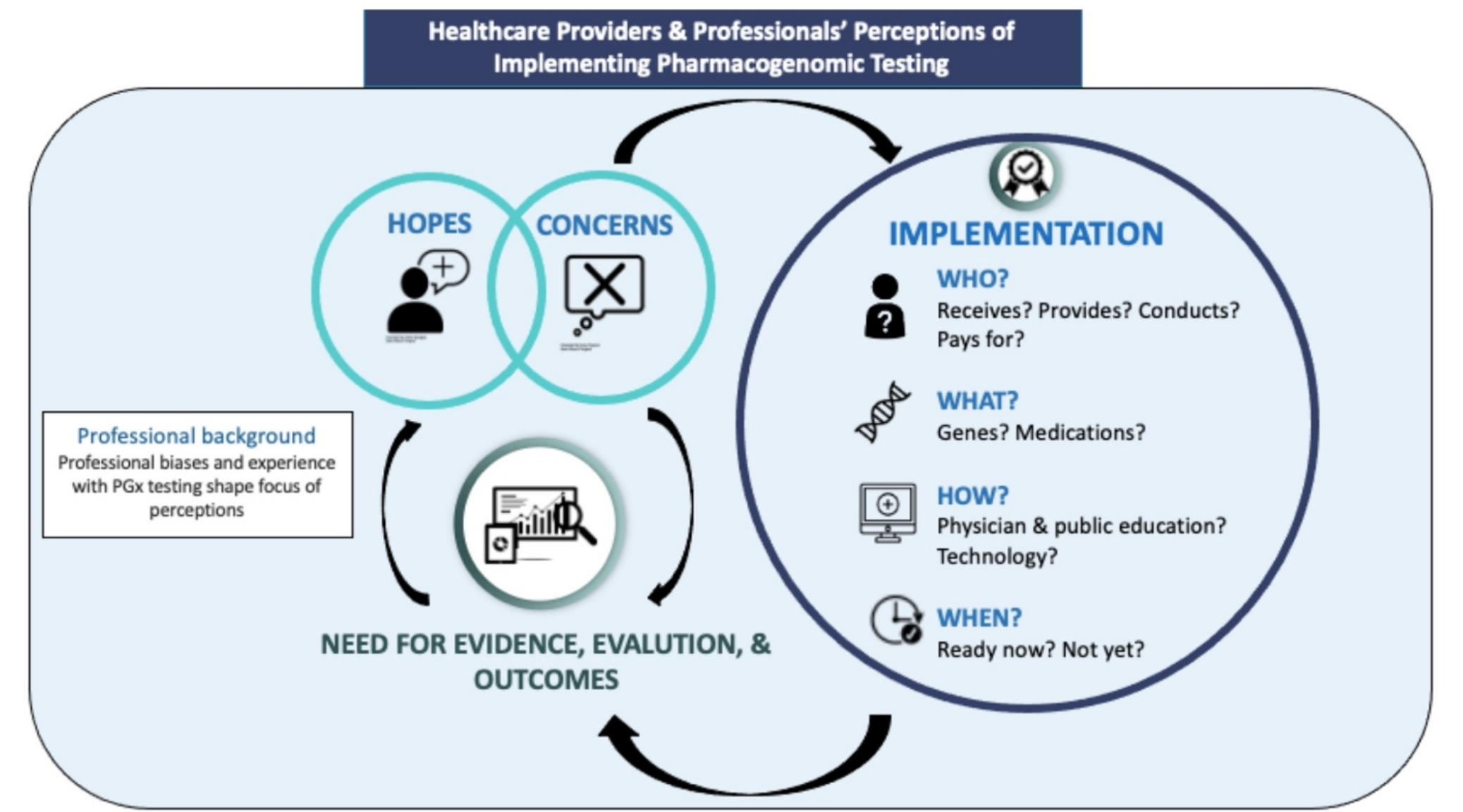


Figure 2. Visual model of P/HCPs' perceptions of PGx testing in BC. P/HCPs have hopes and concerns about PGx testing, which influence their perceptions about what additional evidence for PGx testing is needed. There is a further cyclical relationship between P/HCPs' hopes/concerns/need for evidence and the way they believe PGx testing should be implemented (who, what, how and when). Implementation was not seen as a one-time decision, but as an ongoing process during which additional outcomes monitoring should occur. The way P/HCPs think about PGx testing is influenced by their professional background and experiences. P/HCPs: Professional stakeholders/Healthcare Providers. PGx: Pharmacogenomic

REFERENCES

- Rosenblat JD, Lee Y, McIntyre RS (2018). The effect of pharmacogenomic testing on response and remission rates in the acute treatment of major depressive disorder: A meta-analysis.
- Brown, LC et al (2022). Pharmacogenomic testing and depressive symptoms remission: A systematic review and meta-analysis of prospective, controlled clinical trials.
- Luzum JA et al (2021). Moving Pharmacogenetics Into Practice: It's All About the Evidence!
- Thorne, S. et al (1997). Interpretive Description: A Non-Categorical Qualitative Alternative for Developing Nursing Knowledge.