

## PEER-REVIEW REPORT

**Name of journal:** *World Journal of Medical Genetics*

**Manuscript NO:** 86616

**Title:** Clinical utilities and end-user experience of pharmacogenomics: 39 months of clinical implementation experience in an Australian hospital setting

**Provenance and peer review:** Unsolicited Manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 05227830

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** Doctor

**Reviewer's Country/Territory:** Croatia

**Author's Country/Territory:** Australia

**Manuscript submission date:** 2023-06-28

**Reviewer chosen by:** Geng-Long Liu (Quit 2023)

**Reviewer accepted review:** 2023-07-17 07:01

**Reviewer performed review:** 2023-07-17 07:55

**Review time:** 1 Hour

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation

<b>Scientific significance of the conclusion in this manuscript</b>	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

## SPECIFIC COMMENTS TO AUTHORS

Dear Author(s), Thank you for your interesting and relevant manuscript. As you stated - Pharmacogenomics testing is under-utilized in Australia as well in general. Your research is valuable since it provides Australia-specific data on the perspectives of patients who have had pharmacogenomics testing and those of the clinicians involved in their care, with the aim to inform the wider adoption of pharmacogenomics into routine clinical practice. However, the sample size is too small; thus, high quality regarding writing, presentation, and analysis is needed and major corrections are needed to improve the quality of your manuscript as much as possible before potential publication (if happens at the end). Corrections needed: I) Introduction needs to be more concrete (like last two paragraphs of your current introduction) in order to fit within the scope and aim. II) Description of Australian setting in general (but with a special highlight on St Vincent's Hospital Clinical Genomics Centre) is needed as well as info on principle of referral to PGx and reimbursement as well. III) Bearing the results obtained you need to discuss on what to do to make a change. Use it to tailor the stewardship activities and consider to propose a plan within your discussion section! IV) Discuss on the role of



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clinical pharmacologists and pharamacogeneticists in your country when it comes to PGx interpretation as well as education (of other doctors) in general. V) Compare your commercial gene panel with relevant pharmacogenes (included in the guidelines) according to CPIC and DPWG. Consider to make a table comparison between your, CPIC and DPWG panels, etc. VI) Did you validate the instrument used (survey)? Report the Cochrane alpha for the survey! VII) Comment on response rate! Also have you performed the power analysis to determine the minimal sample size? Also rate your objectives on primary (used for power analysis) and secondary! VIII) How many clinicians were invited to participate? Cite the response rate in order to present interest in PGx field indirectly. To comment, I believe that sample size for this concrete endpoint is to small and results are just obesrvatory/exploratory unfortunately. Did you ask all clinicians (who referred their patient on PGx, analysed in your study, N=100)? IX) If I were you, I would mention the characteristics and competencies for all 5 laypeople and 5 clinicians. Was some sort of training provided to reach the uniformity? X) Within table 1 you should include N and % where applicable and also make the table components and subsections uniform! XI) Did you use statistical package in Microsoft Excel or just a simple regular analysis package? XII) Have you used KS test in order to check for normality of distrubtion? XIII) More strengths and limitations need to be stated within the discussion section. XIV) Also comment on your sample size as well on external validity (compare Australian and other settings - important!). XV) It would be nice if you could include the graphical abstract. Best regards, Reviewer