

Exploring Patient Views on the Implementation of Pharmacogenetic (PGx) Testing to Support Tacrolimus Prescribing in Adult Renal Transplant Recipients Using Focus Groups - An Explorative Qualitative Pilot Study

Dane Howard[1], Dr. Justine Tomlinson [2], Dr. Samantha McLean[2]Dr. Sunil Daga[1]

1. Leeds Teaching Hospitals NHS Trust
2. University of Bradford

Background/Aims: Pharmacogenomic (PGx) testing has the potential to personalise medication regimens by considering genetic differences, particularly for renal transplant patients taking tacrolimus, an immunosuppressant with a narrow therapeutic window. Despite its potential benefits, little is known about patients' views on using PGx testing in this clinical setting. This study explores renal transplant patients' understanding, attitudes, preferences, and perceived barriers regarding PGx testing, acting as a pilot to inform future research and assess methodological feasibility.

Methods: Qualitative data were gathered through focus groups with renal transplant patients from a large UK renal transplant unit. Participants were recruited via postal invitations and clinic discussions, with 10 consenting and 8 attending virtual focus groups on Microsoft Teams. Discussions were recorded, transcribed, and analysed using reflexive thematic analysis, guided by the Health Belief Model.

Results: Participants were generally positive about PGx testing, recognising its potential to personalise tacrolimus dosing, reduce side effects, and stabilise drug levels. They acknowledged genetic differences in tacrolimus metabolism and saw PGx as a way to prevent frequent dose adjustments and lower the risk of organ rejection. Emotional stress from fluctuating tacrolimus levels and multiple dose changes was a key concern with current practice. Trust in healthcare professionals, especially doctors and pharmacists, strongly influenced participants' willingness to adopt PGx testing. Concerns about genetic data complexity and privacy posed notable barriers. Patients preferred PGx testing to be integrated into routine care alongside blood tests, avoiding added treatment complexity. The study also highlighted digital exclusion as a challenge for recruiting older patients in future research in this area.

Conclusion: This pilot study reveals both enthusiasm for PGx testing's benefits and concerns about data privacy and communication. It underscores the need for clear guidance from healthcare professionals and seamless integration into care. Findings will inform larger studies, with a focus on improving inclusivity through mixed recruitment methods.