**Pharmacogenomic Implementation in Australia and New Zealand – the PGx Indicators Project**

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Introduction. Pharmacogenomic (PGx)-guided prescribing can improve the efficacy and safety of some medicines. Numerous international guidelines for PGx testing exist but there are no Australian PGx guidelines.

Aim. To determine the indications for PGx testing in Australia.

Methods. A national multidisciplinary working group was established under governance of the Royal College of Pathologists of Australasia (RCPA). Evidence on PGx-guided prescribing from the Clinical Pharmacogenomics Implementation Consortium (CPIC), the Dutch Pharmacogenomics Working Group (DPWG), the US Food and Drug Administration (FDA), Australian Medicines Handbook (AMH), prescribing information (PI) for individual medicines, published literature and other sources was considered by the working group. Indications for PGx testing were classified into three categories based on working group consensus. *Recommended*: adverse effects or therapeutic failure can cause significant patient harm and international guidelines consistently recommend testing. *Consider:* risk of adverse effects or therapeutic failure is significant and international guidelines generally recommend testing. *Available*: association with adverse effects or therapeutic failure, but no consensus from international guidelines regarding testing.

Results. Pharmacogenomic testing is *recommended* for abacavir, allopurinol, azathioprine, carbamazepine, capecitabine, clopidogrel, fluorouracil, mercaptopurine, oxcarbazepine, phenytoin, and voriconazole. *Consider* testing for amitriptyline, atomoxetine, citalopram, codeine, nortriptyline, tamoxifen, tramadol and warfarin. Pharmacogenomic testing is *available* for atorvastatin, clomipramine, doxepin, escitalopram, fluvastatin, imipramine, lansoprazole, omeprazole, pantoprazole, paroxetine, pravastatin, rosuvastatin, sertraline, simvastatin and tacrolimus. No other medicines currently have sufficient evidence for PGx-guided prescribing to support PGx testing.

Discussion. A pragmatic consensus-based approach was used to determine the indications for PGx testing in Australia based on international guidelines and multidisciplinary national PGx expertise. The indications will be made available on the RCPA website. Review of the indications for PGx testing in Australia will occur annually.