



Service Priorities and Programmes
Electronic Presentations

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Personalized Perioperative Care: Implementing Pharmacogenetics in the Perioperative Setting

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Introduction

It is an accepted norm that surgical patients can expect post-operative pain, nausea and vomiting. Being able to tailor medications to match the patient's genetic profile would allow providers to provide the most effective and appropriate medication. Pharmacogenetics (PGX) is the application of the study of how a patient's specific genetic makeup responds to a medication. UCSD Health decided to offer genetic testing in the Preoperative Care Centers (PCC) to personalize care tailored to a patient's genetic makeup.

Objectives

To develop and implement a pilot project to incorporate the creation of a genetic profile process for eligible patients prior to surgery to improve their overall episode of care.

Methodology

The PDSA (Plan, Do, Study, Act) Framework was utilized to guide the development and roll out this pilot project. To ensure successful implementation of pharmacogenetics into clinical practice, guidelines and protocols were developed to ensure reliable testing methods. Educational and training programs were implemented to facilitate practice change. Weekly audits were carried out to assess compliance of policies and best practice, efficacy of the project, and chart audits to ensure all eligible patients are tested. The genetic analysis allowed medical

practitioners to create a genetic profile database specific to the patient's reaction to medications, allowing the provider to assess interactions and to accurately tailor medications to treat the patient.

Result

Of 835 eligible patients, 77.4% or 646 patients were tested by PCC RNs. About 7% of patients did not want their DNA tested, another 7% canceled their PCC appointment and 3% informed they had prior pharmacogenetic testing. With the introduction of this practice, about 80% of post-operative pain medication prescribed has been adjusted based on patient PDX profile and drug interaction with other medication being taken.