2015/2016 Summer Studentship Project Application Form

Send to: Research Office, University of Otago Christchurch, PO Box 4345, Christchurch, by 5pm on **3 July 2015**

Supervisor Information (First named supervisor will be the contact):	
Supervisor's Name and Title(s): **A/Prof Matt Doogue, Dr Matthew Strother & Dr Paul Chin**	
Department: Medicine – Clinical Pharmacology	Institution: UOC
Phone: 03 364 1055, 022 406 3735	E-mail: matt.doogue@otago.ac.nz
Mailing Address: Private bag 4710, Christchurch 8140	

Research Category (Choose one category only – to be used for judging the students' presentations):		
Clinical		

Project Title (20 words MAXIMUM):

Diagnosis and Recording of Adverse Drug Reactions in an Electronic Prescribing System

Project Description:

Introduction: Adverse drug reactions (ADRs) are common. ADRs cause 5-10% of hospital admissions, occur in 25% of inpatients, and about 50% of patients report at least one previous ADR. ADRs are poorly documented in paper systems, with about half of patients' previous ADRs not recorded (false negatives) and about half of those recorded potentially incorrect (false positives). Of those that are recorded there is usually insufficient information to inform clinical decisions.

New Zealand hospitals are moving from paper to electronic prescribing and administration (ePA). ePA systems include electronic checking of prescribed medicines against ADRs to alert the prescriber. New Zealand is using one ePA system across all hospitals (MedChart®). MedChart is implemented in 350 beds in Christchurch and data can be extracted for analysis.

The data are available and the project can be completed in 10 weeks. As the project will use de-identifed data ethics approval is not required.

The selected student will learn and be involved in data analysis and interpretation and in presentation of results. The student will have close supervision by clinical academic staff. The student will be encouraged to present their project at a scientific meeting - although this is not required and would be outside the 10-week project time frame.

The student is expected to have basic knowledge of medicines and medical conditions, medical research and computer skills including spreadsheet use. More advanced skills in data analysis would be an advantage but are not essential.

Aims: To evaluate the recording of adverse drug reactions in an ePA system. To evaluate the ADR alerts generated by an ePA system and the response of prescribers to the alerts.

Method:

The ADR records of all patients admitted under Health Care of the Elderly in CDHB, 1 May – 1 November 2016 (six months), will be extracted from MedChart® for analysis in Microsoft Excel®. The recording of ADRs will be analysed with descriptive statistics. Rates (95%CI) of ADR alerts and clinician responses to alerts will be analyzed (per admission and per ADR recorded) using Microsof Excel and GraphPad Prism. More complex statistical analyses may be undertaken but are not necessary for the primary data analysis.

Significance: New Zealand is planning a new national system for ADRs. This project will quantify and describe recorded ADRs and clinician behaviour. This is the first study of this type in New Zealand and the results will help inform the design of the NZ ADR system.

Student Prerequisites (eg. Medical Student) if applicable:
Medical Student