

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): R. Matthew Strother (Clinical Senior Lecturer, Oncology), Matt Doogue (Assoc Prof, Clinical Pharmacology), Paul Chin (Research Fellow UOC, Clinical Pharmacology),

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Institution: CDHB, UOC

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

Clinical

Project Title (20 words MAXIMUM):

Monitoring and evaluation of an implementation of an electronic prescribing system.

Project Description:

Introduction: New Zealand is investing heavily in electronic prescribing, which is also known as Clinical Provider Order Entry (CPOE). The current preferred CPOE software for New Zealand public hospitals is MedChart®. CPOE systems reduce some prescribing errors (e.g. legibility of prescriptions), but they increase other types of error and introduce new errors (e.g. clicking on the wrong drug from a list). We have derived key safety indicators from the literature to monitor CPOE as it is rolled out. An application to report prescribing and administration data using these indicators to monitor medicines use in CDHB has been written and is in use. This project will evaluate the safety of CPOE using six months of MedChart data and the indicators.

The data are available and the project can be completed in 10 weeks. As this is a quality assurance project using de-identified data collected as part of routine healthcare, 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.

Importance: Electronic prescribing is rolling out across New Zealand, but to-date, no assessments of monitoring the safety of these systems has been undertaken. This work could impact all hospital-based prescribing.

Aim: To evaluate the temporal trends of CPOE safety using indicators derived from the literature

Method: The CDHB Information Services (IS) reporting system will be used to query the MedChart database over 6 months (May to November 2015). This tool allows the user to select indicators and time windows to report on, and delivers a report of patient-level data for the selected indicator and window. The student would be responsible for working with the supervisors to select serial time-windows for the indicators of interest, download the data to a spreadsheet (e.g. MS-Excel), then carry out descriptive statistics of the temporal trends of these indicators.

Student Prerequisites (eg. Medical Student) if applicable:

Comfort with spreadsheet (MS-Excel), comfort in basic descriptive statistics and using relatively large datasets.