2014/2015 Summer Studentship Project Application Form

Send to: Research Office, University of Otago Christchurch, PO Box 4345, Christchurch, by 5pm on **4 July** 2014

Supervisor Information (First named supervisor will be the contact):

Supervisor's Name(s): **A/Prof Matt Doogue, A/Prof David Jardine & Dr Matthew Strother**

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

Clinical

Project Title (20 words MAXIMUM):

Adverse Drug Reactions Causing Hospital Admissions

Project Description:

Background: Adverse drug reactions (ADRs) are a major cause of harm to patients. Approximately 5% of hospital admissions are due to ADRs and approximately 25% of hospitalized patients experience an ADR. This project will use existing hospital coding data on adverse drug reactions and community prescribing data to describe and quantify ADRs in Canterbury patients over the past four years. The project is a stand-alone project within a wider project on ADRs. The data have been collected by clinical coding and community dispensing and are ready for analysis

The data are available and the project can be completed in 10 weeks. As the project is using 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 epidemiology, medical research and computer skills including spreadsheet use. More advanced skills in data analysis would be an advantage but are not essential.

Aims: To describe the drugs associated with adverse drug reaction requiring hospital admission to Hospital in Canterbury. To estimate the incidence of severe adverse drug reactions associated with commonly prescribed drug classes.

Methods:

ADRs will be identified and obtained from clinical coding data from CDHB data. Rates of drug use in Canterbury will be obtained from community drug dispensing data from PHARMAC data. Rates of ADRs and 95% confidence intervals will be analyzed using Microsof Excel and GraphPad Prism. More complex statistical analyses may be undertaken but are not necessary fro the primary data analysis.

Significance: Previous studies have described ADRs without reference to rates of drug use. This project will quantify the incidence of selected ADRs using rates of dispensing in the local population. This will substantially improve our understanding of prescribing risk in the New Zealand health system.