2016/2017 Summer Studentship Project Application Form

Send to: Research Office, University of Otago Christchurch, PO Box 4345, Christchurch, by 5pm on **4 July 2016**

Supervisor Information

First Supervisor's Name and Title: Dr Ben Hudson

Department - UOC &/or CDHB (if applicable): Dept of General Practice UOC

Contact Supervisors Phone: 027 3481122

First Supervisors Email: ben.hudson@otago.ac.nz

Fax: 364 3637

First Supervisors Mailing Address: Dept of General Practice, UOC, PO Box 4345, CHCH 8140

State:

ZIP Code:

Co-Supervisors Name and Title(s): Diane Bos (Pegasus Health), Dr Andrew Meads (24 Hour Surgery), Dr Martin Than (Christchurch Hospital Emergency Department)

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

Clinical	Laboratory	Community X

Project Title (20 words MAXIMUM):

Assessment of acute chest pain in the community – a descriptive study of community cardiac troponin testing

Project Description:

Introduction:

Blood measurements of cardiac troponin (cTn) are essential tests in stratifying the risk of acute coronary syndrome (ACS) in patients presenting acutely to hospital with chest pain. In this setting it has been shown that, when cTn measurements are used in conjunction with risk score systems, patients at low risk of ACS can be reliably identified and discharged. There is little evidence, however, about the performance of cTn testing in the community.

Canterbury is unusual in that cTn testing has been available in primary care for several years. The test is regularly used by GPs (c.500 tests per month). As yet, there has been no detailed analysis of how cTn testing is used in this community.

We propose a descriptive study that will examine the community use of cTn testing in Canterbury.

Aim:

This study will describe the population of patients undergoing community cTn testing and answer the following questions:

1. How many patients undergo cTn testing in the community?
2. Has the number of community tests changed over time?
3. What is the test positivity rate?
4. Has the positivity rate changed with time?
5. What is the rate of major adverse cardiac endpoints (MACE) following cTn testing amongst those undergoing community cTn testing?
6. How does a positive cTn test alter patient management?

Possible impact (in lay terms):

The results of this study will help us understand whether using cTn testing in patients presenting with chest pain in the community assists with clinical decision making. We hope that this will allow us to improve the care of patients presenting in this way.

Method:

Community cardiac troponin (cTn) testing is performed at two laboratories: Canterbury Health Laboratories and Southern Community Laboratories. Patient data for those undergoing cTn testing are available from both laboratories. We will identify patients who have had community cTn testing in a defined period and will then match their National Health Index (NHI) numbers with hospital discharge data to identify those patients who presented with MACE following their cTn test. We will do this using a software tool that has already been developed and used in a similar study of secondary care patients.

The size of the cohort of patients will be determined by initial exploratory analysis of the frequency of MACE following cTn testing.

We will use simple descriptive statistics to present the demographics of the cohort of patients tested. The cohort will also be analysed according to cTn test result and occurrence of MACE during the follow-up period.

To further elucidate the role of cTn testing in clinical decision making, we will select a random sample of those tested and review their general practice notes and interview the clinician who ordered the test.