

2017/2018 Summer Studentship Project Application Form

Send to: Research Office, University of Otago Christchurch, PO Box 4345, Christchurch, by 5pm on 3 July 2017

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

First Supervisor's Name and Title: Heather Isenman

Department - UOC &/or CDHB (if applicable): CDHB General Medicine and Infectious Diseases

First Supervisors Phone: 02041367236

First Supervisors Email:

First Supervisors Mailing Address:

Co-Supervisors Name and Title(s): Dr Alan Pithie, Dr Matt Doogue,

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

Clinical

Laboratory

Community

Project Title (20 words MAXIMUM):

Direct Oral Amoxicillin Challenge Study of Low Risk General Medical Hospital Inpatients

Project Description:

Introduction:

Penicillin allergy is reported by up to 20% of hospital inpatients, but only up to 10% of these patients have confirmed allergy on skin testing.

Being labelled as penicillin allergic carries a substantial burden in terms of increased length of stay, cost, and adverse outcomes associated with alternative antimicrobial agents, including treatment failure. Accordingly, the recent Infectious Diseases Society of America (IDSA) antimicrobial stewardship guidelines recommend reviewing patient's antibiotic allergy status as an integral stewardship intervention.

An immediate hypersensitivity reaction is normally excluded by skin testing, followed by an oral challenge. Skin testing requires specific re-agents, some of which are in short supply, expertise and manpower to execute, and as such is not always feasible in a busy hospital setting. Additionally, only 0.8 – 4 % of patients have positive skin tests, and of those with a negative skin test given an oral challenge, only 0.8% to 1.5% of patients experience a reaction, with cutaneous reactions rather than anaphylaxis being the norm.

A recent direct oral challenge of 328 low risk outpatients resulted in 5 (1.5%) cutaneous reactions, and no episodes of anaphylaxis.

Aim:

To determine whether direct oral penicillin challenge testing is feasible, and safe in the acute hospital setting.

Possible impact (in lay terms):

We hope that this pilot study will help us confirm the safety of our criteria for choosing low risk patients for direct oral penicillin challenges – the aim being to expand the selection criteria across the hospital to capture further patients and ultimately lead to more effective antimicrobial prescribing. The follow on benefits from this would include reduced cost (alternative antimicrobials are often costly) and potentially reduced length of stay.

Method:

Identify patients:

Daily screen (Mon – Friday) of general medical acute admissions for those labelled as penicillin allergic using medchart/pharmacy reconciliation.

Based on allergy documented in medchart, select potential low risk patients for further interview to confirm allergy history – exclude those labelled as anaphylactic; DRESS; TENS in medchart. All patients screened to be logged.

Inclusion Criteria:

- Patients admitted to the general medical service with documented history of penicillin allergy who do not meet the exclusion criteria.

Exclusion Criteria:

- Reaction within 1 hour of administration of penicillin (urticaria, angioedema, bronchospasm, anaphylaxis).
- Severe cutaneous drug reaction (blistering)
- Delayed reaction with mucosal, systemic or organ involvement
- End of life/actively dying
- Haemodynamically unstable
- On other antimicrobials
- Serum sickness reaction
- Pregnant

Patient's not meeting exclusion criteria listed above to be interviewed to determine low risk. The interview is to be conducted by: allergy specialist nurse, Heather Isenman, summer student (if we recruit one), Niall Hamilton.

Those confirmed as low risk (as decided by the interviewer – student will be supervised for this) to be consented to receive an oral challenge of amoxicillin 250mg. The patient's supervising Consultant will be informed. The amoxicillin will be prescribed by the study team.

This is to be administered during working hours, and the patient needs to be observed for a 2 hour post dose on the ward with adrenaline drawn up nearby, and an anti-histamine prescribed PRN in medchart. Study team to remain at bedside for the first 30 minutes post administration of dose.

Adverse effects to be recorded on data sheet.

We are aiming to recruit 100 patients.

Student Prerequisites (eg. Medical Student) if applicable:

Ideally a medical student in 4th year or above, with good excel capabilities.

Administration Details

1. Is ethical approval required? **Yes/No**

If Yes: please circle or tick one of the following:

- a) Applied for (provide application #)
- b) Approved (attach a copy of the letter of approval from the ethics committee or application #)
- c) To be done**

2. Are you able to provide the funding for this project (ie. \$5,000 for the student, incidental expenses should be met from departmental or research funds) **Yes/No**

If Yes: Please provide name of the funder _____

If No: Please provide ideas of possible funding sources, including past funding agents and topics often associated with this research area, for the Research Office to contact.

Department of Infectious Diseases, Department of Clinical Pharmacology, Department of General Medicine

If Yes: You will be sent a request for more information.

3. Medical Records or Decision Support accessed **Yes/No**

4. Health Connect South or other DHB records **Yes/No**

5. Signatures:

- I have read the 2017/2018 Summer Studentship programme handbook.
- I am prepared to supervise the project and will be available to the student during the studentship (including Christmas/New Year break if the student is working during this time).
- I agree to assume responsibility for the submission **of the student's reports to the Research Office** by the due date 29 January 2018.
- I agree that the project lay report may be available to local media for publicity purposes.

Signature of Project Supervisor(s):

Date:

- I understand that I am responsible for hosting the Summer Student chosen for this project and will meet any costs incurred. I agree that incidental expenses will be met from departmental or research funds.

Signature of Head of Department:
(Print Name)

Date:

Signature of Clinical Director: (if applicable)
(Print Name)

Date: