

Editorial

Welcome to this, the second research newsletter, for Christchurch. This year has been an interesting one with WONCA mid year. This brought together over 800 primary care doctors and nurses to a celebration of innovation. We were treated to over 300 presentations on diverse areas of research and education. The opportunity to network with overseas colleagues was invaluable.

I would like to take the opportunity to thank all of the staff in the department and Margaret Sutherland in particular, for all the hard work they put in to pull the scientific programme together.

As you read through the newsletter it will be clear that it has been a busy year. Much of our focus remains on clinical research and there are new projects on asthma, on skin surgery and on monitoring antibiotic resistance using a new sentinel group of practices. Other projects are progressing and some nearing completion. We await the analysis of these with interest.

We would like to thank all of you who have recruited patients for our heart failure (BNP) study and encourage you all to continue to recruit for our H Pylori/Urea Breath Test study.

We are completing some refurbishment of the East End of the first floor of St Elmos which has been vacated by the rural unit who now reside on the sixth floor. This will give us significantly greater research space to accommodate a number of new staff who have joined the research team.

Research links with the public health part of the department are growing and we are involved in and planning several joint projects.

Les Toop



Antibiotic resistance research



There is mounting concern about the increasing emergence of antibiotic resistant bacteria, and the potential impact of this on treatment outcomes for serious bacterial disease.

The availability of data on antibiotic resistance levels in the community is limited, both in its accuracy, and its ability to act as an early warning system to predict the appearance of newly resistant bacteria in the community "carried" by healthy individuals. Local, national and international literature on antibiotic resistance is derived largely from laboratory utilisation data. Given this is usually 'normal clinical practice data' the unknown and variable indications for microbiological testing make interpretation difficult. While this may be the only warning of the increasing level of antibiotic resistance of bacteria to antibiotics, it may not give an accurate picture of the extent to which resistance is prevalent in the wider community. We aim to set up a surveillance system in general practice for ongoing monitoring of antibiotic resistance levels in the community in order to inform clinical practice.

The aim of the first project was to determine the levels of antibiotic resistance in organisms causing complicated urinary tract infections which present to general practitioners in Christchurch. A group of randomly selected Christchurch GPs (the Sentinel Network) have collected MSU specimens on all patients presenting with symptoms and dipstick results indicating an uncomplicated urinary tract infection. Detailed resistance testing has just been completed by Steve Chambers and Barbara Peddie and the results are about to be released.

FUNDED BY PEGASUS HEALTH

Team members: Les Toop, Steve Chambers, Rosemary Ikram, Mark Jones, Graham McGeoch, Chris Leathart, Harsed Chima.

Contact: Dee Richards

Iron deficiency study update

This study is looking at prevalence of iron deficiency and the relative importance of different dietary risk factors, as well as links with infection rates in a cohort of 500 Christchurch infants.

The study is progressing well. Recruitment is proceeding at the expected rate with 400 of the 500 infants now enrolled. 200 of these infants have reached the 15 month point when they are tested for iron deficiency. A small (less than half a ml) amount of blood is collected and tested for anaemia, iron deficiency and lead levels (as high lead levels interfere with one of the iron deficiency tests). We have already found a number of children with iron deficiency. These children have all been referred back to their GP for further management. A number of children have also been



found to have an elevated blood level and have also been referred back to their GP for follow up to ensure there is no source of ongoing lead exposure.

The response rate to the offer of the fingerprick test has been 97% which has exceeded expectations and we are delighted with the support from parents and from GPs who have kept us posted with follow up of the children with iron deficiency.

FUNDED BY THE CMRF

The Department would like to acknowledge the generous sponsorship of
Medlab South
in supporting the activities of the clinical research unit, many of which are reported in this newsletter.

Teamwork in the general practice setting

Jean Ross, Lecturer in Rural Health in the Department of Public Health and General Practice, has been researching teamwork in the general practice setting as the topic for her Master's thesis. The literature identifies a number of barriers to collaborative teamwork. One of these, the lack of role clarity, is the subject of her research.

A number of Canterbury general practitioners and practice nurses participated in this research, the aim of which was to determine the level of understanding of their own and each other's roles in the GP team. Expansion of the concept of role beyond merely the sum of tasks, led to some useful insights into why teams often do not work as they might. She plans further research to examine how personality affects each team member's expression of role.

Contact: Jean Ross

Smoking cessation programme outcome study underway

Pegasus Health run a smoking cessation programme. The programme uses nicotine replacement therapy as well as systematic supportive counselling following a behavioural approach. We are currently undertaking a project to investigate the effectiveness of this type of smoking cessation programme when delivered in a primary care setting.

A cohort of patients who have enrolled in the programme are being systematically followed up. Patients (who have previously consented) are contacted by telephone 6 months after enrolling in the programme and are asked a series of questions. We will measure 6 month quit rates as well as overall quit rates. We are also looking at factors which may influence these quit rates including characteristics of the patient and their environment, programme delivery, motivating factors for quitting and reasons for relapse if this has occurred.

We hope the results will provide evidence about the effectiveness of this type of programme in general practice as well as providing more information on what may influence the response to this kind of intervention.



FUNDED BY PEGASUS HEALTH

Contact: Dee Richards

Time to give teddy the boot from waiting rooms



This past summer Eileen Merriman, a fifth year medical student with a microbiology background, worked with Rosemary Ikram and myself looking at the bacteriology of toys in general practice waiting rooms as well as other public places. We found that hard toys had much lower rates of contamination than soft toys and were easily decontaminated by regular cleaning with sodium hypochlorite. Soft toys showed high levels of contamination with coliforms and other bacteria and were difficult to decontaminate and became rapidly re-contaminated in the waiting room. Toys from other public places showed similar levels of contamination.

There was considerable interest in this research from the media after they attended the student presentations of their summers' work. The results have not been published yet and therefore I did not release any details of this study to the media as I strongly feel general practitioners should be able to read about this before their patients! In view of the media publicity I sent all Christchurch GPs a brief summary of the research before the media publicity which I suspect led to the demise of quite a few Teddy Bears.

FUNDED BY A COMMUNITY TRUST/CHILD HEALTH RESEARCH FOUNDATION SUMMER SPONSORSHIP

Contact: Paul Corwin

CMRF – Canterbury Medical Research Foundation

You will notice that a number of these research projects have been funded by grants from the Canterbury Medical Research Foundation (CMRF). The CMRF is a local charitable organisation which provides financial assistance for health research and health research facilities in Canterbury. The CMRF have recently acknowledged the importance of community based research by ring fencing a third of their grant money for community health projects.

The foundation relies on donations, bequests and fundraising activities and we encourage you to acknowledge their support of primary care research by supporting their activities wherever possible. Their website can be accessed at <http://www.cmrf.org.nz>

Chlamydia prevalence

A study of chlamydia prevalence in high school students in Christchurch has been funded by the CMRF for 2001. This study will use urine tests of sexually active males and females randomly chosen from sixth and seventh forms in Christchurch to identify those with chlamydia infections. This study will be coordinated from the Department of Public Health and General Practice. Investigators are Dr. Ed Coughlan from the Christchurch Sexual Health Clinic, Dr Paul Corwin, Dr. Sue Bagshaw, Dr. Libby Plumridge and Mrs. Gillian Abel all from the Department. It is hoped that results of this study will inform us as regarding the necessity for screening sexually active adolescents in Chch.

Measurable & meaningful outcomes for asthma in primary care

The research team is currently developing a process model for optimising the quality of asthma care within the Primary Health sector. The first step is to gain consensus on meaningful outcomes for asthma care. The qualitative method used to gain consensus is the Delphi technique, which is a way to gain consensus from different population groups with a single common factor, asthma. The study focuses on people who deal with asthma in a variety of ways, in this case participants are patients, health care providers (GPs, practice nurses and educators) and funders (MoH & HFA).

Two rounds of questionnaires based on this list have been sent to groups of patients, GPs, practice nurses, educators and other asthma care providers, and 'purchasers'. These questionnaire rounds have generated a smaller list of important outcomes agreed by all groups. This list has been reviewed by an expert group to determine whether and how these outcomes could be measured.

The survey has now been completed for both the Christchurch and Hawke's Bay regions. This process will also be repeated in South Auckland, with support from local health-workers within the area. It is hoped that the results will inform the development of agreed practical clinical indicators. A literature search is currently underway to provide information on other studies that have used this process to bring about consensus. If the Delphi technique is a useful method for agreement between population groups for asthma, we will explore its use in other situations.

FUNDED BY THE NATIONAL ASTHMA WORKING GROUP

Research team: Les Toop, Dee Richards, Jean Ross, Lynette Murdoch, Graham McGeoch, Isobel Martin
Full time researcher/contact: Mary-Ann Wilson

What's happening in rural health? ... an update on research at the National Centre for Rural Health

Health services in rural communities

The Centre's two-part community project focuses on what constitutes success for both rural health professionals and rural health service users, and on community input into both the design and the delivery of services.

To date, rural GP questionnaire responses on practice success have been written up and distributed widely, and face to face interviews with community representatives have been carried out and included with the GP questionnaire write-up.

Rural nurses' questionnaire responses have also been written up. Alongside questionnaire results, the report presently being distributed contains material from Rural Health Diploma students' profiles and from The Role of Rural Nurses National Survey.

International literature on models of rural health service delivery and community involvement in same has been secured and is now being reviewed.

Dr Nick Taylor of Taylor Baines Associates and Sue Dawson have identified rural communities of common interest. Profiling of the health services of these communities has now begun and will carry on into the New Year.

Sue Dawson has also been working with Ron Janes on a paper about what constitutes health service delivery success. The writers have focussed on untangling the strands of what "success" means to a broad range of interested parties, exploring the common confusion of performance indicators with health outcomes and developing tables of working definitions by which practitioners, service users and others can assess whether or not a rural health service delivery system or practice is successful.

Contact: Sue Dawson

What's new in rural research?

During the period 1999-2000, information has been gathered about the role of rural nursing, the health care nurses provide and their involvement in the community. The intention has been to develop as detailed a picture as possible of what makes for successful health service delivery in rural communities.

This has been achieved by using a three way approach : a national questionnaire has been distributed, rural nurses have been invited to share a detailed description of their practice by completing a written exemplar or telling their stories to one of the researchers, and rural nurses have been invited to attend one of two story workshops held in Dargaville and Wanaka.

In the project on nurse role evolution, a number of the key features of existing models of rural nursing practice are currently being worked up and will be measured against the criteria for successful rural health services. In addition, work is in progress in conjunction with rural nurses and the Nursing Council of New Zealand on the development of a systematic career framework for rural nurses. Rural nurses' input will be sought.

Another of the Centre's rural nursing research projects focuses on team effectiveness in rural health services. International literature is currently being reviewed. A model of the essential elements for teamwork will be tested against a teamwork questionnaire, permission for the use of which is presently being sought from its UK authors. Data from the focus group on rural teamwork at the June WONCA conference is currently being analysed. This information will be used to upgrade the questionnaire. It is envisaged the questionnaire will be distributed to rural practitioners in December 2000.

Contact: Jean Ross

The effect of medical undergraduate education on student attitudes to a rural general practice career

This research project is planned as the initial stage of a longer prospective study, which will examine a range of factors that may influence the student's choice of a rural general practice career.

While there has been little research in New Zealand on the effect of the medical undergraduate education, including the selection process and curricula, in determining a student's final career choice, overseas literature is clear on the educational strategies which encourage students into rural general practice

One overseas article has suggested that 12% of students have selected their specialty before entering medical school and at least 40% have declared their chosen career on graduation. Colwill has noted that entering students see themselves as specialists or generalists. Certain personal characteristics are associated with these choices and medical selection criteria on purely academic grounds disadvantages students who are more likely to be generalists.

Demographic factors may also be influenced by selection criteria : doctors with a non-metropolitan background are two to three times more likely than doctors with an urban background to choose rural practice. Also, students selected on a rural background and a commitment to a career in family medicine, are five times more likely to practise primary care medicine in a rural area.

In the US, Canada and Australia, rural origin students are under-represented in medical school and strategies such as affirmative action for rural origin students have been introduced. Other factors described in the literature as influencing the specialty career decision are personal attitudes and values, personality attributes, economic expectations, debt loading and the medical school curriculum. Exposure to a significant medical undergraduate experience in rural practice has a significant positive correlation to a student choosing a rural general practice career.

As part of the Master of General Practice qualification, I am undertaking a survey which examines some of the above factors in the present Otago second and fifth year medical students. The initial part of the programme has involved collecting data from the present Otago second year students, prior to their being influenced by the medical curriculum. There have been questions on demographics, students' attitudes to certain career choices, factors they consider important in their choice, their site of preferred practice and students' perceptions of their personal attributes.

The fifth year questionnaire also maps the medical curriculum and examines the influence on student choice of a general practice and rural general practice career of the three different Otago medical undergraduate programmes, particularly with the development of the new rural undergraduate programme in Dunedin.

Contact: Janne Bills

HP Trial Update



GPs who are members of our H. Pylori Trial research group will be aware that recruitment has continued to be much slower than we had anticipated. We were concerned that the prevalence of dyspepsia may have dropped since the estimates we made before commencing the trial, and that this could explain our recruitment problems. But this does not seem to be the explanation as some general practitioners have recruited 10 or more patients (the range is from zero to 15).

Many of you have said that it is easy to forget about the HP Trial, so, we have decided to change our recruitment strategy. Our proposed change to the protocol is to recruit patients through newspaper advertisements. The Canterbury Respiratory Research Group has used this method very successfully in Christchurch.

We have placed advertisements in "The Press" public notices section and in community newspapers, asking people if they have indigestion and wish to help with a research project. Interested people are asked to phone Ann Richardson or Margaret Sutherland. When people contact us, we find out if their general practitioner is a member of our research group. If the person's general practitioner is not in our research group, the patients are thanked for contacting us but informed that their general practitioner is not involved in the research project. Only patients whose general practitioners are already in the research group are included.

These patients have the trial explained to them over the phone, and are asked to mention the trial the next time they visit the general practitioner. Patients who are prepared to give us their names and addresses have the information sheet and consent form posted out to them. This approach has the advantage that patients will ask you about the trial, rather than you having to ask them. We hope it will also save you a considerable amount of time, because the patients will already have had the trial explained to them before they arrive at your surgery. Thank you for your continued support of the HP Trial.

FUNDED BY THE HEALTH RESEARCH COUNCIL

Contact: Ann Richardson or Margaret Sutherland

BNP 2 recruiting finished

Recruiting for the BNP heart failure study is now complete. The aim of the study is to measure brain natriuretic peptide (BNP) levels in people presenting with suspected acute heart failure and compare this with an echocardiogram or radio-nuclide cardiac scan. Hospital studies have shown that BNP goes up in breathless patients with heart failure. The main criterion for inclusion in the study is the doctor's intention to treat their patient with suspected heart failure with an ace or diuretic.

Recruitment has finished with more than 100 people from general practices all over the Christchurch region. The research team would like to thank all the general practitioners and practice nurses who have recruited patients for the study.

We have appreciated the support of the practice teams, including the receptionists, in sending results to us as they have become available. Results of the research should become available next year.

Thank you to all of you who recruited patients for this study.

FUNDED BY THE CANTY MEDICAL RESEARCH FOUNDATION

Team members: **Graham McGeoch, Les Toop, Margaret Sutherland, Philippa Lemon, Richard Troughton**
Associate Professor: **Ian Town, & the Cardioendocrine group.**

Contact: Margaret Sutherland

Pretibial lacerations

Pretibial lacerations are a common soft tissue injury especially in elderly women. The wounds are generally slow to heal and lead to significant costs whether treated on an inpatient or outpatient basis. Despite the frequency of this type of wound there is a surprising lack of research on this condition and consequent uncertainty about the optimal management.

There are three main treatment options recommended:

1. Immediate skin grafting from a donor site.
2. Cleaning, simple debridement and replacement of the flap using sterile skin closure tapes.
3. Grafting without a donor site

There have been several studies comparing the first two treatment options, but there are no reports of trials comparing options. As both are commonly used in general practice there is a need for a trial of these two methods of treating pretibial lacerations.

Patients from three large group general practices in Christchurch will be randomised to either grafting without a donor site, or usual management.

Outcome Measures

- Healing time
- % of flap healed at day 21 for the two treatment arms
- Number of patients requiring further operative treatment, hospitalisation or antibiotics

If you see a lot of these kinds of injury and would like to be involved in this study please contact Margaret Sutherland.

Principal Investigators: Paul Corwin, Margaret Sutherland, Philippa Lemon. Contact: Margaret Sutherland

Is CME Effective?

The goal of postgraduate continuing education is to maintain and improve physician performance and so improve quality of care. There is often little evidence for its effectiveness, particularly in the general practice setting. This study measured the extent to which the Pegasus IPA peer-led small group education programme influenced the prescribing of participants, when compared to two control groups. The results conclusively support a significant effect on prescribing from the small group education programme, independent of effects generated by other Pegasus educational initiatives related to pharmaceutical budget holding.

The effect size varied between 7 and 40%. The effect seen is statistically significant, is independent of other pharmaceutical educational initiatives, and persists for at least 9-24 months of observation. A sub-analysis using the New Zealand Index of Deprivation score for practice location suggests socioeconomic practice profile may be an effect modifier and would bear more detailed scrutiny when better information is available on practice demographics.

Small group peer-led education can make an important contribution to continuing medical education.

FUNDED BY PEGASUS HEALTH

Contact: Dee Richards

Feedback

We would appreciate your feedback on our newsletter. Please E-mail your comments to **Les Toop**, or fax to: **03-364 0269**.

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