

Editorial

Welcome to this our 4th research newsletter. 2003 was another busy year with a number of studies coming to an end and others coming on stream.

We have also had a number of staff changes. In May we said a sad farewell to Margaret Sutherland who had worked within the Department for a number of years. We wish her well in her position as Nurse Manager at Rhodes Memorial Rest Home in Cashmere.

We welcome Toni Stewart, who is employed as a Research Nurse. Many of you will have had the pleasure of meeting Toni on her visits to a number of surgeries in the last few months. Toni and Felicity have been working hard on the Pneumonia study and revitalising the Sentinel Network. Felicity has recently left the Department to take up music teaching full time and we wish her well in her new venture. Toni has extended her

hours and can be contacted on 364 3638. Robin Dawson, our Research Fellow, has also finished his year with us and is working with the Canterbury Respiratory Research Group.

Thanks to the generosity of the Canterbury Chair of General Practice Trust we have been able to offer a research scholarship this year to assist a young practitioner to dip his/her toes into research and we welcome Dr Geraldine Mackle into this position of Research Fellow. Geraldine can be contacted on 364 3650. We also have the pleasure of welcoming Anne Delwynen who is employed as a Research Assistant. Anne will be involved in the psychometric testing for the infant iron study. She can be contacted on 364 3649. Anne will be working closely with Claire Dowson, Clinical Psychologist who has also recently joined the research team within the Department.

Thanks once again to all General Practitioners and Practice Nurses who have given their time and energy to enable much needed research to be produced from primary care. We try to focus on clinically based research that provides answers to questions that relate directly and usefully to practice.

Les Toop
Head of Department



Update on Pneumonia and Cellulitis Studies

Over the last two years GPs in Christchurch and Kaiapoi may have had some of their patients enrolled in the pneumonia or cellulitis studies.

Both studies commenced in June 2002 as randomised-controlled trials comparing hospital with home intravenous antibiotic treatment. The Pegasus Extended Care Programme provided the home based nursing care with GP or Extended Care medical input. This is being compared to normal treatment at Christchurch Public Hospital. The area for inclusion in the cellulitis study was increased to include Kaiapoi in late 2002, with the support of Nurse Maude and the Kaiapoi GPs.

While intravenous antibiotic treatment at home has been widely used in other parts of the world with early hospital discharge, there is no reported information worldwide from controlled studies where the care is GP based. We hope the information that we have gathered during these studies will quantify any differences in clinical, functional and economic outcomes. We hope to show that home treatment of cellulitis or pneumonia by GPs in selected cases severe enough to require IV antibiotics is as safe as hospital.

Cellulitis Study

This trial has been completed. 200 patients were recruited and randomised to either home or hospital (100 in each arm). Results have shown equivalent outcomes in both groups and a higher level of patient satisfaction with home care.

The study has shown that treatment of cellulitis requiring intravenous antibiotics can be safely delivered at home at a considerably reduced cost and with home care being preferred by patients. Since the completion of the trial GPs have been able to access the IV antibiotic programme through Pegasus Extended Care. The paper for this study has been written and will be published in 2004.

Please contact Paul Corwin on 364 3607 for further information.

Pneumonia Study

The pneumonia study enrolments reached 55. Patient feedback has been very positive regarding their care, with many patients appreciating the opportunity to be treated in their own home setting. The findings of this study are also currently being written and initial results indicate equal safety of treatment in hospital or home. Presently any patients with pneumonia severe enough to require IV antibiotics, should be admitted to Christchurch Public Hospital. However we hope that in 2004 ongoing provision of home care may be negotiated on the basis of these results.

Please contact Dee Richards on 364 3636 for further details.

GP support acknowledged

The study team is particularly grateful to GPs who have been involved in the clinical care of their patients with cellulitis where they have been allocated to home care. Patients have responded positively to GP involvement enhancing continuity of care.

These studies are a collaborative project of the Dept of General Practice, Pegasus Health and Christchurch Hospital.

Dee Richards, Paul Corwin, Les Toop, Toni Stewart, Robin Dawson and Felicity Beats at the Dept of General Practice

Paul Abernethy, Graham McGeoch, Simon Wynn-Thomas at Pegasus Health

Ian Town, Mike Hlavac, Mike Epton, Richard Laing, Martin Than, Jan Bone, Martin Kelly, Anja Weno, David Murdoch, Kirsten Beynon, Alan Pithie and Stephen Chambers at Christchurch Hospital



Sentinel GP Network

Antibiotic Resistance Monitoring Study

Thanks to all GPs and practice nurses in the Sentinel Network who have just finished another round of MSU sample collection to assess trends in community rates of antibiotic resistance in urinary tract infection.

This is the only representative network of GPs in New Zealand who can gather this information and the practices involved have provided their time willingly. The knowledge gained has been very important in obtaining a picture of antibiotic resistance rates within the New Zealand community and informing GPs' clinical practice in antibiotic prescribing in this area. The results are currently being analysed, and will be published in 2004.

Next Project - 'The Staph Study'

Dr Dee Richards, Prof Steve Chambers, Prof Les Toop, Dr Rosemary Ikram, Dr Mark Jones, Ben Harris, Dr Phil Hider.

In the next few months the department will be launching the next antibiotic resistance study, investigating the prevalence of Methicillin resistant *Staphylococcus Aureus* (MRSA) carriage in the Christchurch community.

Carriers of MRSA are often asymptomatic, however they can provide a reservoir for infecting others especially if admitted to hospital. If someone develops an infection with MRSA, it can be difficult to treat and it may result in life threatening sepsis.

Most of the previous research into MRSA has involved hospital patients, where resistant 'staph' is thought to have emerged through the use of antibiotics in hospitalised patients. However there is now some evidence that community based strains of MRSA are emerging. In this study we will be looking at the community prevalence of MRSA nasal carriage and will explore associations with potential risk factors such as the use of oral or topical antibiotics. As well as providing a baseline from which to monitor MRSA trends over time, it is hoped that this study will help guide empiric antibiotic prescribing decisions made in the community.

Participants in this study will be recruited through the Sentinel GP Network. A research team member will visit each Sentinel GPs practice for 2 days during the data collection period. All patients presenting to their GP during this two-day period will be asked to participate in the study, which involves having a nasal swab performed and answering a short questionnaire.

Initial Funding: CMRF

Contacts: Toni Stewart (Research Nurse), Dr Geraldine Mackle (Canterbury Chair of GP Trust Research Fellow)

Geraldine Mackle

Dipstick Negative: Cystitis Study

The final part of this study involved another project that arose as a result of information gained from the first UTI sample collection.



Toni Stewart, Research Nurse

It was apparent that a significant number of women with symptoms of dysuria and frequency do not have a urinary tract infection on laboratory testing. From PreMeC case studies we know GP clinical practice is evenly split in this group - around half of GPs prescribe antibiotics empirically as they, and some women, believe they shorten the symptom duration. The other half do not, believing that in the absence of evidence of treatable infection there is no indication for antibiotics.

To provide a pragmatic answer to the question 'Do antibiotics give faster symptom resolution in women with dysuria and frequency but a negative urine dipstick?' the Sentinel Network have been doing a randomised controlled trial of antibiotics in this group. The design of the trial involved giving all women with symptoms and negative dipstick, a medication pack. This contained either an antibiotic or placebo. Patients were asked to keep a diary and our research nurse phoned them at 7 days to assess the time to resolution of their symptoms.

We are enormously grateful to all GPs and practice nurses who have had a significant input to the recruitment and practical aspects of this study. The results are currently being analysed and will be published in 2004.

Initial funding for the network projects was provided by Pegasus Health.

The Health Research Council of New Zealand funded these projects.

Dee Richards

BNP in heart failure article now published

The relationship of plasma BNP, to cardiac function in stable patients on long-term established treatment for heart failure is unknown. Plasma BNP was assessed for its ability to predict echocardiographic abnormality in 100 patients receiving long-term treatment in general practice for a provisional diagnosis of heart failure. These study findings support the view that BNP can be restored to normal levels in well-compensated patients despite persisting significant systolic dysfunction and suggest that BNP assays may be helpful for monitoring adequacy of therapy.

This project was funded by CMRF

Graham McGeoch

McGeoch, G.M Lainchbury, J. Town, G.I., Toop, L. Espiner, E. Richards, M., Plasma brain natriuretic peptide after long-term treatment for heart failure in general practice. *European J Heart Failure*; 2002; 4:479-483

General Practice

Why parents choose not to immunise?

Paul Corwin, Suzanne Gower and Matilda Hamilton

In 2003 Matilda Hamilton, a 4th year medical student, did a summer research studentship looking at reasons why parents choose NOT to immunise their children. About 5% of parents in New Zealand are declining immunisation now and there has been no New Zealand research looking at this group of parents and their reasons for making this choice. Matilda used the Pegasus Immunisation Database to identify "decliners" and then approached the GPs of these parents' who then asked the parents if they would participate in this research. Twenty-one parents were interviewed. Parents tended to be very highly educated and were uniformly conscientious and had done a lot of their own reading on the subject. Most found their own GP to be their best source of information but felt that the information provided by GPs was "biased." Only 57% had discussed immunisation with their lead maternity carer. Reasons given for declining immunisation centred for the most part on:

- Concerns about the contents and effectiveness of vaccines
- Belief that children's immune system would function better without immunisation
- Concerns about the side effects and complications of vaccines
- Belief that illnesses vaccinated against are rare and generally not serious
- Having known a child who was thought to have been damaged by a vaccine.

Parents expressed a desire for an independent source of information, as they consider both Health Department Immunisation and the Anti-immunisation lobby information, to be biased. One possible solution is the development of an Independent Consumer Health Information Service as a source of information regarding immunisation.

Many thanks to the busy general practitioners who helped us with this study.

Paul Corwin

Iron Study Update



Ethan Cameron and his mother Helen

We are preparing for the next few years of this study, which involves the most exciting stage - looking at cognitive and behavioural outcomes for the 500 children we have been studying since birth.

The aim is to relate continuous measures of iron status tested at 15 months to a range of outcomes at 6 years. We are preparing for the first cohort children who are

turning six this year. Claire Dowson, who is a Clinical Psychologist at the School of Medicine has joined the team for this part of the study, which involves a variety of cognitive and behavioural tests to determine whether the link seen between anaemia and poorer developmental outcomes is a threshold or dose response. At present it is not known whether lesser levels of iron depletion should be treated vigorously or just monitored and the results of this study should provide information in this area. Thank you to all GPs and practice nurses who provide support to children in this study.

The Health Research Council of New Zealand funds this project.

Dee Richards

The importance of a team approach to research in primary care

Ann Richardson, Margaret Sutherland

We carried out a study to investigate factors associated with patient recruitment by general practitioners in a randomised controlled trial in primary care.¹ The study was a cross sectional survey of 100 general practitioners who had agreed to recruit patients for a randomised controlled trial (the "HP Trial"). A postal questionnaire was sent to the 100 general practitioners to collect information on factors associated with recruitment in the HP Trial.

Results

The response rate to the survey was 97%. General practitioners who reported that practice nurses were involved in the research project were significantly more likely to have recruited patients into the trial. Age, sex, IPA membership, number of half days worked, and the number of general practitioners working in a practice were not associated with recruitment.

Conclusions

Involvement of practice nurses together with general practitioners may improve the recruitment of patients in randomised controlled trials in primary care in New Zealand.

General practitioners and practice nurses who were involved together with the research were significantly more likely to recruit patients into the trial. These results are consistent with those of Weir *et al*,² who found higher notification rates of gastrointestinal illness by Canterbury and West Coast general practitioners were associated with practice nurses being involved in notification.

Other reported factors affecting recruitment in primary care-based randomised controlled trials are unwillingness to randomise patients, and the additional workload research entails for already busy general practitioners. These factors have not been investigated in New Zealand, and could not easily be addressed in any depth in a postal survey. We intend to investigate these factors further, and to this end we hope to carry out formal interviews with general practitioners to examine the relationships and process that optimise practice nurse involvement with research in primary care.

It is important to identify factors associated with recruitment if we are to continue to undertake research in primary care. In the meantime, approaching practice nurses to seek their involvement in primary care-based research would be a sensible first step.

Acknowledgements

We thank all general practitioners that took part in this survey.

Ann Richardson

References

1. Richardson A, Sutherland M, Wells E, Toop L, Plumridge L. Factors affecting general practitioner involvement in a randomised controlled trial in primary care. *NZ Med J* 2002; 115:153-5.
2. Weir R, Williams D, Graham P. Notification of gastrointestinal illness by Canterbury and West Coast general practitioners. *NZ Med J* 2001; 114: 307-9.

Diabetes management in Christchurch rest homes

Emily Gill with Dee Richards as primary supervisor, Paul Corwin and Margaret Sutherland were the investigators of this study.



Rest home resident Ann Bruce and Margaret Sutherland, Nurse Manager

A year long study of diabetes management in Christchurch rest homes has been completed by Emily Gill who took a year away from her medical studies, to do a Bachelor of Medical Science under the auspices of the Department of General Practice.

Emily visited 39 rest homes and interviewed 167 residents, 39 senior nurses and 41 caregivers. The prevalence of known diabetes in these rest homes was 11.7% and 1/4 of these residents were on insulin. Both blood pressure and diabetic control seemed generally good with an overall average blood pressure of 134/77 and Hb1Ac of 7.3%. Sixty-nine percent of residents had routine weekly blood glucose level checks. However only 45% of patients who had recorded episodes of confusion or "turns" had a corresponding blood glucose level performed. Routine blood glucose monitoring is probably done more frequently than necessary and spot checks when patients are unwell are not done often enough! Education about managing abnormal blood glucose levels for staff in rest homes may be useful as only 58% of caregivers indicated that oral carbohydrates would be given if hypoglycaemia was suspected. This study is the most comprehensive study of diabetes management in rest homes that we are aware of and we hope the research helps to improve the care of elderly diabetics.

Paul Corwin, Dee Richards

Complementary and alternative medication and therapy use by residents of rest homes in Christchurch

During this summer Kalo Lalahi, a 4th year medical student, completed a summer research studentship, looking at the use of complementary and alternative medication and therapy by residents of Christchurch Rest Homes. The aim of this study was to describe the prevalence of complementary and alternative medication and therapy (CAM) use by these residents.

A systematic sample of Christchurch rest homes was taken excluding specialised dementia care units. Inclusion criteria for residents were that they be aged over 65 years, fluent in the English language and able to give informed consent. A single interview with each resident was conducted to administer the questionnaire, which was designed to explore residents' use of complementary and alternative medication (CAMn) and complementary and alternative therapies (CAMt). Questions included asking the residents how did they find out about CAM, what information had they received and how did they access CAM. Demographic data was also collected.

102 residents took part in the study, 26 males and 76 females. The mean age of participants was 84 years and 81% identified as New Zealand European, the rest as other European. There does not appear to be any marked difference in basic demographics between those using CAM and those not using CAM. The prevalence of complementary and alternative medication (CAMn) use in rest-home residents is 21% and the prevalence of complementary and alternative therapy (CAMt) use is 51%. The most common CAMt used is prayer and people taking a CAMn were more likely to have tried a CAMt. Friends or the rest-home nurse usually suggests CAMn use, and the most common source is the pharmacy. No harmful interactions between CAMn and prescribed medications were found and most residents had checked with their GP or nurse prior to taking CAMn.

Karoline Lalahi, Paul Corwin

Acknowledgements

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Papers published from the Department since Issue 3

Chlamydia trachomatis prevalence and sexual behaviour in Christchurch high school students. P Corwin, G Abel et al, NZMJ, 26 July 2002; 115(1158)

Do clinical practice education groups result in sustained change in GP prescribing? D Richards, L Toop, P Graham, Fam Pract 2003 April;20(2): 199-206

The leadership role of general practice in public health: advocating a ban of direct-to-consumer advertising of prescription drugs in New Zealand. 'Possums in the headlights?' L Toop, D Richards, T Dowell, BJGP April 2003; 53(489): 342-345

Improving the effectiveness of smoking cessation in primary care: lessons learned. D Richards, L Toop, K Brockway, S Graham, B McSweeney et al. NZMJ, May 2003, 116(1173)

The use of inhaled and related respiratory medications in Christchurch rest homes. C Botting, M Sutherland et al, NZMJ, December 2003, 116(1187)

Why do parents choose not to immunise their children? Matilda Hamilton, P Corwin, S Gower, S Rogers. NZMJ, Feb 2004; 117(1189)

Feedback

We would appreciate your feedback on this newsletter. Please email your comments to **Les Toop**, or Fax to: **03 364 3637**

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