The labyrinth at the front of the hospital symbolises the challenges of research with its complexities, its twists and turns, but its eventual path to the centre.
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Foreword

This is the second publication presenting research and original work undertaken by Hutt Valley DHB people. The range of contributors which includes clinicians, non-clinicians and also managers is symptomatic of a vital organisation which supports innovation and individuals undertaking such challenges. Presentations on basic research and clinical research are complemented by those relating to the delivery of treatment and care – as well as an article on the composer Scriabin!

Without such a publication there would be little awareness of the extent and quality of original work undertaken by members of the DHB. I am personally overwhelmed by the talent which is revealed. Congratulations to all contributors.

Readers are encouraged to read the different perspectives on research in the think pieces by senior members of the DHB.

My grateful thanks to Pauline Robertson for secretarial and editorial help and to Solomon Concessio and Cheryll Graham for the photography.

Dr Robert Logan
CHIEF MEDICAL ADVISOR
Introduction

As Chief Operating Officer, research is important for our hospital because it demonstrates a learning organisation which supports innovations and quality improvements while encouraging workforce retention and recruitment.

**Jill Lane**  
CHIEF OPERATING OFFICER

The amount of research that is being undertaken across the professional groups in this DHB is incredible.

**Toni Dal-Din**  
DIRECTOR OF NURSING

It is fantastic to read the research contributions made by health care professionals within Hutt Valley DHB. They reflect the supportive and collaborative ethos encouraged within the organisation. It is also an acknowledgement of the work done by senior clinicians and others in terms of fund raising and mentorship and gives great hope for the future of good clinical research within the region.

**Dr Tim Petterson**  
ASSOC DEAN OF MEDICINE

Hutt Valley DHB has developed an environment for medical trainees to develop research projects which are critically important in health care delivery.

**Dr Sisira Jayathissa and Dr Matt Kelly**  
DEPARTMENT OF MEDICINE

We all face many challenges where day to day clinical pressures are high and available time and opportunities to undertake research are overlooked but research can make a real difference to clinical practice and the health outcomes of our patients.

**Russell Simpson**  
DIRECTOR OF ALLIED HEALTH

The labyrinth featured on the front cover was moved from the garden of Frederic Wallace House when it was demolished in 2008.
Mental Health Service

**Publications**


**Presentations**
Garcia EE.  *The transformation of a psychiatric inpatient unit: Elimination of force and promotion of wellness.* THEMHS Annual Conference, Perth, Australia.

Mathew G.  *History of ECT.* 5th Annual National ECT conference.

Paediatric Service

**Presentation**

**Occupational Therapy Service**

**Presentations**

Plastic Surgery Service

Meetings
Mr C. Adams & Mr J. Armstrong organised the 2009 annual scientific meeting of the Australia and New Zealand Burns Association in Wellington.

Publications
Books and Book Chapters

Major Review Articles Published in Peer-reviewed Journals


Presentations at National and International Scientific Conferences

Royal Australasian College of Surgeons’ Annual Scientific Congress, Brisbane.


Avery, G. Training experience in breast reduction and otoplasty.

Australian and New Zealand Head & Neck Society Annual Scientific Meeting, Fremantle

Tan, S.T. Chris O’Brien Oration: In the quest to know more and do better.

Australian and New Zealand Vascular Anomalies Interest Group Meeting, Melbourne.

Australian and New Zealand Surgical Research Society meeting, Adelaide.
Itinteang, T., Tan, S.T., Day, D.J. Haemangioma is a developmental anomaly of aberrant neural crest cells proliferation and differentiation governed by the rennin-angiotensin system.

Oncoplastic and Reconstructive Breast Surgery Meeting, Nottingham, UK.
Lau, Y.S., Bisson, M., Henderson, H., Offer, G.J. Lipofilling of the breast for reconstruction after cancer excision - a 10-year series.


Davis, C. Paediatric Craniofacial Surgery in New Zealand – The evolving role of springs (invited lecture).

Paediatric Society of New Zealand, Annual Scientific Meeting, Hamilton. Davis, C. Minimising the morbidity of paediatric craniofacial surgery - the role of new technologies.

Paediatrics Teaching Meeting, Hastings. Davis, C. Differential diagnoses in paediatric craniofacial surgery.

Paediatrics Nurses Course, Hutt Hospital. Davis, C. Nursing care for paediatric craniofacial cases.


Davis, C. Craniocerebral and skull base trauma.

General Practice Teaching, Wellington. Davis, C. Deformational plagiocephaly.

Research Grants Awarded
Reconstructive Plastic Surgery Research Foundation
Wellington Regional Plastic Surgery Unit Education and Research Trust
Surgical Research Trust
Wellington Medical Research Foundation
Cancer Society
Henry Cotton Trust

Prizes and Honours
Prize for the best poster, Australian and New Zealand Head & Neck Society Annual Scientific Meeting, Freemantle.


Australian and New Zealand Head & Neck Society Annual Scientific Meeting, Freemantle
The Chris O’Brien Oration: Tan, S.T. In the quest to know more and do better.

University of Otago
1. S. Ch’ng – Mast cells and cutaneous malignancies (PhD).
2. N. Brougham – Epidemiology of non-melanoma skin cancers (BMedSc).

University of Victoria
1. A. Vishvanath – Molecular mechanisms of haemangioma (PhD).
2. T. Itinteang – Biology of Haemangioma (PhD).

Collaborators
Dr P. Davis, Department of Medicine, Wellington School of Medicine. Collaborative projects on skin cancers (PhD project).
Dr H. Brasch, Department of Pathology, Hutt Hospital
Collaborative project on:

a) Vascular anomalies (PhD project).
b) Skin cancer epidemiology (BMedSc project).
c) Skin cancer biology (PhD project).

Dr E. Dennett, Department of Surgery, Wellington School of Medicine
Collaborative project on skin cancer epidemiology (BMedSc project).

Dr D. Day, Department of Biological Sciences, Victoria University
Collaborative project on molecular mechanisms of haemangioma (PhD project).

Dr M. Sullivan, Children’s Cancer Research Group, Christchurch School of Medicine & Health Sciences, University of Otago, Christchurch
Collaborative project on biology of skin cancers.

Dr Rod Lea, Environmental Science & Research
Kenepuru Science Centre, Wellington
Collaboration on metastatic head and neck cancer research.

Drs Robert Allison, John Chaplin, Theo Gregor, Head and Neck Surgery Units, Christchurch Hospital, Auckland City Hospital, Waikato Hospital
Collaboration on metastatic head and neck cancer research.

Member of the Cannabis Respiratory Research Group (Regional Coordinator)
Cannabis and respiratory tract cancer: a case-control study.

Work in progress
Brougham, N.D.L., Dennett, E, Tan S.T.


Cardiology Service

Meeting
Drs T. O’Meeghan, K. Ferrier & R. Anscombe as well as J. Dean and J. Dewar from Hutt Cardiology Services were members of the committee for the Australasian CSANZ conference held in Wellington assisting chairman Andrew Aitken.

Presentations

Hawkins M. Heart Failure support service, HVDHB. CSANZ conference, Wellington.

Respiratory Service

Publications


Central Regional Eating Disorders Service

Presentation
Sutich E. Managing extreme emotions: group based therapy for clients with eating disorders and emotional dysregulation. 7th Annual Conference of the Australian & New Zealand Academy for eating disorders, Brisbane.
Regional Public Health

Public health research spans a wide area including epidemiology, service evaluation, health impact assessment and qualitative research. Collaboration between clinicians and public health practitioners has often led to huge advances in population health. An early and dramatic example is the work of Richard Doll, Bradford Hill and other clinicians and epidemiologists in the UK, which in 1950 established the link between smoking and lung cancer. A local example, more humble one could argue, but important for New Zealand, is an evaluation of the Smoking Cessation Education in the Hutt Hospital which will contribute to reduction in chronic disease in the region.

As well as scientific and health service advancement, clinician involvement in public health research is important on another level. Most clinicians are motivated by the desire to reduce the suffering of individuals. Public health practitioners have a similar motivation but on a population-wide level. Often from the same starting point, we have been trained to operate at different levels of focus: the clinician looking up-close at organ systems and individuals, and the public health practitioner looking wider at social systems and the distribution of disease in the population. Collaborations are professionally rewarding (a new perspective!) and can gradually lead to improvements in the health of the population, which of course is made up of individual patients or, ideally, people whose admissions have been, thanks to our joint work, avoided.

Dr Margot McLean
REGIONAL PUBLIC HEALTH
Presentations

Boston A, Coury A. How effectively are we using alcohol policy at the local level? Session presentation at the national Public Health Association Conference, Dunedin.


Kuresa C. Healthy Porirua Project. Session presentation at the national Public Health Association Conference, Dunedin.


Roseveare C, Langford B. Managing for Outcomes in Public Health Planning. Presentation at the national Public Health Association Conference, Dunedin.


Sety MS. Upstream Public Health: Primary Prevention Solutions to Family Violence. 8th ISPCAN Asia-Pacific Regional Conference on Child Abuse and Neglect. Perth, Australia.

Vega S. Changing Policy; Becoming a Smokefree Hospital. Oceania Tobacco Control Conference, Darwin.


Publications


Nursing

I was asked to comment on the importance of research to nurses, however I would like to turn that around to comment on the importance of research for patients. It is my belief that research is conducted for the benefit of patient care.

It has clearly been demonstrated over many years that data and evidence obtained through nursing research provide the foundation for good practice. In 1859 Florence Nightingale published Notes on Nursing: What it is and what it is not. This book presents the conclusions of 14 years of observation and thought on the subject of bedside care of the sick. It is reported that this book was not written solely “as a manual to teach nurses to nurse”, but more as an aid to assist millions of women who had charge of their families to “think how to nurse”. Many of the improvements that have taken place in nursing and public health can be attributed to this work.

Clinical research needs to be undertaken at all levels of practice from direct care at the patient’s bedside through to the various senior nurses’ roles. This must be done in conjunction with the other members of the wider health care team in order to provide the best care and treatment to the people that seek our expertise, our community.

Toni Dal-Din
DIRECTOR OF NURSING
Presentations – 
Daly M. The name’s Bond, visible Bond. National Care Management Conference.

Mary is a nurse practitioner in Older Persons & Rehabilitation Services, working with the vulnerable elderly across the primary/secondary interface and residential age care sectors. This is a broad role which incorporates clinical skills, leadership, mentorship and research, and has a focus on building nursing capacity and expertise with the aim of improving outcomes.

Publications

Dental Service

Publications
Mahoney EK, Morrison D. The prevalence of Molar Incisor Hypomineralisation (MID) in Wainuiomata children. NZ Dental Journal, 105, no. 4: 121-27.

Work in progress
Whyman RA, Mahoney EK. A 20-year review of hospital admissions for dental care in New Zealand.
Service Quality

Presentations

Presentations


Logan RL. Bad SMO behaviour – a cause for concern. RACP meeting, Auckland.

Logan RL. Clinical Leadership – lessons from the Kalahari bushmen. RACP meeting, Auckland.

Anaesthetics

Presentation
Eames P. Increasing rates of day surgery at Hutt Hospital. Productivity, Quality and Performance Improvement National Summit meeting.
Allied Health

Allied Health professions make up a significant proportion of the clinical workforce within this DHB. Many allied health professionals have post-graduate qualifications as an option to advance practice and they usually involve a research component. Important innovations in clinical practice require cohesive partnerships within and between allied health staff, managers and our colleagues from the medical and nursing professions. Allied staff undertake relatively little research within New Zealand despite their major contributions to patient outcomes. Showcasing our work, therefore, in publications and presentations, not only provides evidence of the dedication of individual allied health professionals but also contributes to improving the quality of care for our patients.

Russell Simpson
DIRECTOR, ALLIED HEALTH

Presentation

Physiotherapy
Callear R. Presentation at the Australian and NZ Rheumatology Association Paediatric Satellite meeting on Benign Joint Hypermobility Syndrome.
Older Persons & Rehabilitation Service

Presentations
Korte C, Hale L. *Mirror therapy for the upper limb of a patient following a stroke.* NZ Neurology Special Interest Group neurosymposium, Auckland.

Catherine Korte, PG Cert Physio (*endorsed in Neurorehabilitation*) BPhy, *is a Senior Physiotherapist for the Community Rehabilitation Team. She is interested in neuro-physiotherapy, particularly in relation to strokes.*

Contractor Z, Lord A. *Stakeholders’ views on current services in the Hutt Valley for people with Parkinson’s.* AFRM Rehabilitation Conference, Queenstown.


Current research by postgraduates
Master of Physiotherapy, Liz Kemp; *The Patient-Specific Functional Scale: testing the psychometric properties compared with the Lower Extremity Functional Scale in patients presenting for Physiotherapy with lower limb conditions, University of Otago.* Supervisors: William Taylor, J. Haxby Abbott.


Publications
Rheumatology Service

Meeting
Australian Rheumatology Association and New Zealand Rheumatology Association Combined Annual Scientific Meeting, Wellington, May 2009. The Wellington Regional Rheumatology Unit comprised the Organising Committee for this meeting which was chaired by Dr Andrew Harrison. The meeting was attended by 350 delegates from all over the world, with invited guest speakers from England, Ireland, Denmark, Spain, Austria, Canada, USA and Australia. The themes of the meeting were gout, imaging and scleroderma. The meeting was held in conjunction with the Rheumatology Health Professionals organisations of Australia and New Zealand. The success of the meeting - academically, professionally and socially - was a fitting reward to the committee for the three years of work that went into organising it.

Presentations
Rajapakse C, Jayamaha D. *PJP, severe infection (i.e. needing hospitalisation) and bladder toxicity risk of IV Cyclophosphamide pulse therapy in treatment of collagen/vascular disease.* EULAR (European League Against Rheumatism) Annual Scientific Meeting, Copenhagen.


No evidence for association of the W64R variant of the adrenergic receptor beta 3 gene and the A222V variant of the methylenetetrahydrofolate reductase gene with gout in New Zealand Maori, Pacific Island and Caucasian case-control cohorts. ARA/NZRA Combined Annual Scientific Meeting, Wellington.


**Publications**


Paul Healy and Andrew Harrison


Work in progress

Genetics of gout in New Zealand - in collaboration with Dr Tony Merriman, Biochemistry, University of Otago and the New Zealand Rheumatology Network. Supported by an HRC Programme grant.

Genetics of rheumatoid arthritis - in collaboration with Dr Tony Merriman, Biochemistry, University of Otago and the New Zealand Rheumatology Network. Supported by an HRC Programme grant.

Cellular immunity in gout – in collaboration with the Malaghan Institute. Supported by a grant from Arthritis New Zealand.

Spondyloarthritis genes and the environment – In collaboration with Dr Simon Stebbings, Dunedin School of Medicine.

Ultrasound validation of the Leeds Enthesitis Index in psoriatic arthritis – in collaboration with Dr Philip Helliwell, Leeds UK.

A pilot study of a randomised controlled trial of an occupational therapy intervention to prevent work disability in people with newly diagnosed rheumatoid arthritis, Supported by the Faculty of Medicine Mini-Grant.

The ICF checklist in Psoriatic Arthritis, Supported by Group for Research and Assessment of Psoriasis and Psoriatic Arthritis Research Grant (publication under review) – in collaboration with ICF Research Centre, University of Munich.

Longitudinal study of outcome in gout. Supported by the Harry Cotton Charitable Trust – in collaboration with Dr Nicola Dalbeth, University of Auckland.
A feasibility study of a structured means of eliciting goals in rehabilitation, funded by a Health Research Council Feasibility Grant.

Goals and self regulation skills in brain injury rehabilitation: an RCT, funded by a Health Research Council Project Grant – in collaboration with Prof. Kath McPherson, AUT University.

A feasibility study of a structured means of eliciting goals in rehabilitation: exploring patient experiences, funded by a University of Otago Research Grant.

Development of a composite responder index for chronic gout treatment studies, supported by the American College of Rheumatology – in collaboration with Prof. Ralph Schumacher, University of Pennsylvania.

A phase 3 randomised clinical trial of ustekinumab for psoriatic arthritis, supported by Janssen-Cilag, in association with P3 Research.

A phase 3 randomised clinical trial of a JAK-3 kinase inhibitor for rheumatoid arthritis, supported by Pfizer, in association with P3 Research.

**Current research by postgraduates**


Value of research for medical trainees
To be successful doctors need to translate scientific knowledge and critical thinking in clinical practice. They also need a good understanding of how the health system works to deliver effective health care. With rapid advancement in science we have a lot of background information on the scientific basis of medicine. However essential elements to optimise health care delivery in local settings are lacking. All doctors including trainees are in a privileged position to develop research into this important area of medicine.

Research stimulates reading and critical appraisal. Trainees are ideally placed to conduct research. They are up to date with current medical knowledge and are in a position to translate research findings into clinical practice. The benefits of trainee involvement in research are vast, both for the trainee and the DHB. Research adds variety to the trainees’ job and gives them an opportunity to understand and strengthen the health system they work in. Publication of results and presentation at scientific meetings exposes the trainee to the process of peer review and gives trainees a tangible reward for their work.

The organisation that supports trainee research fosters a reputation as a centre of excellence and develops an environment which attracts the highest calibre of staff.

Dr Sisira Jayathissa and Dr Matthew Kelly
DEPARTMENT OF MEDICINE
Publications


McClaren JM, Petterson T, McGouran DCR. Lead poisoning presenting as an acute severe myalgia: why was the diagnosis delayed and what lessons can we learn as acute physicians? Acute Medicine; vol 9: issue 1.


Book chapters


Presentations


Dee S. Clinical indicators in Medicine. RACP meeting Auckland.
Why should Medical students and Health Care Professionals be encouraged to do research?

Medical research should not need a sales pitch. Clinical Medicine is both art and science. It requires commitment to the ethical principles of non-malificence and beneficence. Professionals caring for patients should therefore have a “constructive discontent” about the state of knowledge within any given field. After all, persons are licensed as health care professionals after they demonstrate the acquisition of professionally validated knowledge, not after they reveal a superior capacity for guessing. A continual drive to question must be encouraged as early as possible. Students should know that all the questions are not answered. There is always the need to generate new knowledge, to resolve medical problems, and improve the evidence based clinical care of patients. A lucky few may even collect a Nobel prize and a measure of immortality along the way!

The reality is starkly different. Medical research has not been “sold” well. Students and clinicians may feel oppressed by the weight of information they have to absorb, without seeking out more. Negative images are all consuming - financial restrictions, bureaucracy, poor mentorship, limited or altered career prospects. This has to change. If clinicians are not asking Why? and How? then accepted habits will continue to go unchallenged. This would amount to a Hippocratic abandonment of patients.

Fixing this will take time. The case for re-investment in clinical science must be made forcefully. All health care curriculae should include an introduction to clinical research and an opportunity for students to “see if they like it”. A questioning ethos should be encouraged as much as proper use of the stethoscope. “This patient does not fit what I have been taught – have I been taught wrongly?” Practising clinicians should be given structured opportunities to develop ideas and answer questions. Clinical mentorship must include the ability to direct and nurture the talented researcher.

Dr Tim Petterson
ASSOCIATE DEAN OF MEDICINE

Wellington School of Medicine

If clinicians are not asking Why? and How? then accepted habits will continue to go unchallenged... ...A questioning ethos should be encouraged as much as proper use of the stethoscope.
Emergency Department

Publications

The LIPID registry: Intravenous Lipid Emulsion as Antidote (letter). Emergency Medicine Australasia. Harvey M, Cave G. Accepted for publication.

A Novel Method to Assist Gastric Tube Insertion: A Case Series. Emergency Medicine Journal. Harvey M, Cave G. Accepted for publication.


Intravenous lipid emulsion as antidote beyond local anaesthetic toxicity: a systematic review. Academic Emergency Medicine, in press, accepted for publication. G. Cave, M. Harvey.

Estimation of Peripheral Venous Pressure (PVP) and Cuff Occluded Rate of Rise of PVP in Healthy Adults (letter). European Journal of Anaesthesia, in press. Wei Tan, M. Harvey, G. Cave.


Correlation of plasma and peritoneal diosylate concentrations with haemodynamic recovery in rabbit clomipramine toxicity. Academic Emergency Medicine; 16 (2) 2009: 151-156. M. Harvey, G. Cave.


Presentations


Intravenous lipid emulsion as antidote beyond local anaesthetic toxicity: A systematic review. JFICM annual scientific meeting, June, Brisbane, ACEM annual scientific meeting, November, Melbourne.

What I did last month: Emergency, Intensive Care and Research. ACEM annual meeting, June, Wellington.

Davies M, Clinical Nurse Manager, Emergency Dept: Improve the patients’ experience: From arrival through ED and transfer to the ward by reducing wait times. Optimising the Patient Journey Collaborative Workshop.
Grant Cave’s year

2009 was a busy year in research for our group. Our main interest is the use of the lipid emulsion Intralipid as antidotal therapy. We added to our body of animal studies - this remains the backbone of our work. It’s great to be involved in the preclinical phase - at the inception and basic testing phase of an idea you can get your brain up to full speed designing animal models and figuring out what your data means. We like to think our work has had some direct clinical influence too - there were 17 reports of use of lipid as antidote at the 2009 American College of Medical Toxicology Conference. This is the most rewarding part of the whole research process - seeing someone else apply your ideas and save lives. In the clinical sphere we started, along with a number of international colleagues, a multicentre international registry for reporting of clinical uses of lipid emulsion. I was also fortunate to be invited to be a member of the International guideline group authoring a local anaesthetic toxicity drill for the Anaesthesia Association of Great Britain and Ireland. This guideline has now been endorsed by ANZCA. I’ve also been a reviewer for a number of journals including Critical Care Medicine and the British Journal of Anaesthesia.

Dr Grant Cave
EMERGENCY MEDICINE PHYSICIAN

It’s great to be involved in the preclinical phase - at the inception and basic testing phase of an idea you can get your brain up to full speed designing animal models and figuring out what your data mean.

Presentations

Intravenous lipid emulsion as antidote beyond local anaesthetic toxicity: A systematic review. JFICM annual scientific meeting, June, Brisbane, ACEM annual scientific meeting, November, Melbourne.

What I did last month: Emergency, Intensive Care and Research. ACEM annual meeting, June, Wellington.
**Publications**


**Presentation**

King, DA. *Nurse led clinics in the Emergency Department: Small steps in a big path.* Clinical Nurse Manager and Duty Nurse Manager Section Annual Conference.

**Work in progress**

King, DA., Hume, P., Milburn, P & Gianotti, S. *Variations in injury claims and costs by ethnicity, gender, age, district, body site, injury type and occupation.*

King, DA., Hume, P., Milburn, P & Gianotti, S. *Head, knee and shoulder injuries from rugby league in New Zealand: changes over 8 years.*

King, DA., Hume, P & Milburn, P.D. *Characteristics of rugby league tackles resulting in injuries and the burden for professional players.*

King, DA., Clark, T. & Kellmann, M. *Changes in stress and recovery as a result of participating in a premier rugby league representative competition.*

King, DA. *Training injuries in women’s rugby union players.*

King, DA. *Incidence of injuries in women’s rugby union matches.*
Doug King

Doug King is the lead Clinical Nurse Specialist of the Minor Injuries Clinic in the Emergency Department. Leaving the Royal New Zealand Navy where he served as a medic, Doug went on to complete his Diploma in Nursing at Waiairiki Polytechnic in Rotorua. Following his graduation Doug was employed in various nursing positions in New Zealand and Australia before he re entered the military environment as a nursing officer for the New Zealand Army. Doug left the Army to undertake further academic studies and completed his Bachelor of Nursing (Massey University), Post Graduate Certificate in Health Sciences (Sports Medicine) (Auckland University), Post Graduate Certificate in Health Sciences endorsed in Resuscitation, Post Graduate Diploma in Sports Medicine (credit) and Masters in Health Sciences (credit) (Otago University) while still working as a nurse in the psychiatric and emergency environments.

He moved to Lower Hutt in 2007 to undertake the role of CNS in the Emergency Department and concurrently commenced his PhD in sports injury epidemiology as a full time student through AUT University looking at amateur and professional rugby league injuries. Doug was awarded the AUT University Sport Performance Research Institute New Zealand New Investigator Award in 2009. He is due to submit his PhD in 2010.
Installing clip-on operating theatres at Hutt Hospital. Another example of original thinking!