

# IPRU

INJURY PREVENTION RESEARCH UNIT

TE HUKA RAKAHAU ĀRAI WHARA

## 2009 ANNUAL REPORT

For the year ending 31 December 2009

The goal of the Injury Prevention Research Unit is to contribute to reducing the incidence, severity and consequences of injury in New Zealand.



Major purchasers of the IPRU's research are the Accident Compensation Corporation, the Health Research Council of New Zealand, the Alcohol Advisory Council of New Zealand and the Road Safety Trust.

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## FROM THE DIRECTOR

This introduction, my first “Director’s Report,” is being prepared after a whirlwind seven months as the new IPRU Director. There have been four trips to Wellington, two to Auckland, one to Australia, about six or seven conferences, numerous presentations at injury, transport and public health conferences, and already I am feeling more at home in the Dunedin airport than our house in Opoho! The old saying “trial by fire” does not even begin to capture the pleasure/enjoyment/excitement/challenge of coming to a new country to continue practising my injury prevention craft. But along the way that job has been made a whole lot easier by the support and focus of the IPRU staff and the remarkable structure already in place when I got here. My hat is off to John Langley and colleagues for building this remarkable intellectual and academic endeavour known as IPRU, rich in structure, history, accomplishment and promise. I am grateful to John and other experienced staff who remain involved and dedicated to its continuing success.

I had a choice before taking this position. One alternative was to build a new program from the ground up at a prestigious Midwest university, the other was to move my family and worldly goods half-way around the world to where Professor John Langley and his staff had built a solid and diverse injury research centre. Half-a-year later I have little doubt I made the right choice. Coming into the role as a newcomer to New Zealand provides a unique opportunity to observe with different eyes how health and government systems are set up, how research is conducted, and how policy evolves, while also being able to ask the questions, often naively, that allow colleagues here to sometimes view what they are doing in a different way. What this means is simple. I get to learn an incredible amount while helping others to do their job better. It is the give and take, the philosophical yin-yang, that makes being a part of the IPRU, my new Department, my new University and our new home, the joy and challenge that it is.

Working, playing and living in New Zealand has been an out of the ordinary yet also very familiar experience. Things are almost like I am use to, but the “almost” sometimes has a depth and facet that takes a while to come to grips with. Yes, the language is familiar enough, yes, the music is pretty much the same, and yes the deep aspirations, desires and wants of people are pretty similar wherever you go once basic human needs are met. But Kiwis definitely put a spin on life all their own. It crops up in the zesty way they drive their cars, tramp their trails, and sail their boats. It shows up in the kindness to strangers, the hearty attitude towards a better self-made tomorrow and an almost quaint sense and need of community. It is revealed in their acceptance of diversity as a formula for mutual growth, despite the challenges. Yes, these are stereotypes, and Kiwi culture is certainly as diverse as any complex multi-dimensional society, but nevertheless, these are my first impressions.

Despite the genuine excitement and pleasures of meeting new people, settling into a new community, taking on a new role and seeing new places, it becomes clearer every day that there are big changes in the wind. Across the globe, societies face immense challenges for stability and sustainability. These challenges are manifested in the land of the long-white-cloud as well. While a remote island nation, there is no escaping international impacts and responsibilities. We are interlocked with the global community of ideas, images, fears, information, pollution, resource constraints and struggling economies, so we face trying times that manifest themselves in academia in two important ways. First, it limits the resources we have to work with, so we have to be even more creative, work harder and more efficiently and aggressively seek out new partners where the mutual corroboration makes sense. Secondly, we have to think about marketing and applying what we do in injury prevention in new ways that resonate with the times. You will see this mirrored, for example, in IPRU moving from a motor-vehicle/road safety emphasis to a transport safety emphasis; so that we can capture and address concerns related to active transport safety (biking and walking) and new ways of thinking about how to make transportation safer by encouraging changes in travel modes and urban planning. It is my hope you will also see it mirrored with more emphasis on training the next generation of injury researchers and working more with potential clinical partners. Big changes lie ahead and we will need to adapt if we are to thrive and play a meaningful role for injury prevention research and public health as a whole.

While browsing for material on violence prevention on the web I found a Māori saying. It says: “*Kotahi anō te kaupapa: ko te oraka ki te iwi*” “*There is only one purpose to our work: it is the wellness and the well being of the people.*” It appeared as the New Zealand Department of Corrections’ kaupapa or foundation philosophy and it probably goes much further back in oral traditions and dreams, but it struck me as also perfectly capturing the essence of what we do and what unfolds on the pages that follow in the IPRU annual report. The variety and quality of the efforts and products produced over the past year from a dedicated IPRU staff is their work, but it is the purpose of that work and adapting it to the times, that must be appreciated between the lines of the accomplishments and numerous publications listed herein. Let me go through some of those highlights with you.

## Transport Safety

Our main research focus in the transport safety area was the New Zealand Drivers Study (NZDS) which is a large follow-up study of 3992 newly licensed drivers, 824 of whom self-identified as Māori. The tracking of the study participants continues to be done by the Driver Licence Registry with the follow-up telephone interviews being undertaken by local Dunedin people who are employed part-time for this task. In addition to the routine follow-up interviews, we have also started contacting those who have not progressed to their restricted licence, after two years of being eligible to do so, to find out their reasons as to why they have not progressed.

The dissemination of the first findings from the NZDS began in 2009. Anna McDowell was awarded her Masters degree in Public Health, her thesis being based on the baseline interview data from the Māori participants. Also during the year, several papers were published in peer reviewed journals (two of which examined issues associated with the minimum driver licence age) and presentations were made at conferences and seminars. Of particular note was a very well attended seminar organised by the Ministry of Transport in Wellington which ensured the results were disseminated directly to the potential end-users of our research.

Motorcyclists are the other road users that have received some research attention during 2009. An Accident Compensation Corporation (ACC) funded project was completed and the writing of papers arising from this research is continuing.

## Sport and Recreation

In sport and recreation injury prevention programmes in New Zealand, the emphasis has been on developing injury prevention strategies for organised sports. This has been channelled through national bodies to regional and local levels and from there to the coaches and the team players. A considerable part of IPRU's sport and recreation research in the last few years has focused on a very different aspect of sport: variously labelled non-organised, social, casual or informal sport. Increasingly people are recognising that physical activity is critical for maintaining or improving health. This can, however, result in injury. The ACC was seeking information on the large and potentially increasing group of people who are paying heed to messages to be physically active. The concern is that this group will not be receiving advice on injury prevention through the more traditional conduits of sports clubs and coaches. IPRU's work will provide ACC with a better understanding of this population thereby contributing to the development of targeted advice on how to avoid unnecessary injury.

## Child Safety

In New Zealand, we have a reasonable knowledge of the main causes of injury to children. We also have most of the interventions known to reduce child injury that are advocated in international reports such as the World Health Organization World Report on Child Injury Prevention in legislation or policy. Despite this, we have a long way to go to reach the success in child safety that some comparable countries have achieved. To contribute to exploring why that might be, and to identify ways for us to improve this for young children, IPRU's current research on child injury prevention adds a further dimension with qualitative research into safety decisions and practice from the perspective of parents and those who work closely with them. The inclusion of the observation, knowledge and experience of these stakeholders provides further insights that will contribute to the design, development and delivery of strategies for improving child safety in the home environment.

## Injury Surveillance

The highlights of the year for staff associated with injury surveillance were attendance at, and involvement in, three meetings. The first of these was a combined meeting of the International Collaborative Effort on Injury Statistics and the Global Burden of Diseases-Injury Expert Group, held at Harvard University, Boston, in October. IPRU is leading the international agenda on indicator and severity measurement and members of the injury surveillance team made significant contributions to the thinking at that forum.

The second and third of these meetings, the Australasian Mortality Data Interest Group (AMDIG) "Reaping the Rewards" and the New Zealand Injury Information Forum 2009 were both held at the Westpac Stadium in Wellington in December. Pauline Gulliver made a significant contribution as Chair of the organising committee for the AMDIG meeting which was rated extremely successful by those who attended. Both meetings, and the presentations we made at them, provided excellent opportunities to influence key decision makers in New Zealand and to enhance our knowledge of key data systems in Australasia.

### **Occupational Injury**

Agriculture is a vitally important industry to New Zealand with primary exports from this sector being New Zealand's main source of export income. Injury rates in agriculture are disproportionately high and remain high despite declining injury rates in other high risk industries. 2009 saw the successful completion of the "Effective Occupational Health and Safety Interventions in Agriculture" project jointly sponsored by the Health Research Council, ACC and Department of Labour. This project broke new ground providing a comprehensive account of both injury and disease risks and outcomes in farming, as well as examining behavioural factors and the cultural and social context that farmers are working in. This project found farmers and farm workers are exposed to a complex web of occupational health and injury hazards while at work. Barriers to safe work on the farm included time, financial and social pressures and unsuitable, modified or poorly maintained equipment compromising safety. The research team made a number of recommendations aimed at sustaining a healthy workforce in agriculture including a coordinated agricultural health and safety strategy based on research evidence and development of new multi-faceted interventions piloted in the New Zealand context to prove their effectiveness before becoming part of a national strategy. The results of this study received considerable media attention reflecting the importance of agriculture to New Zealand's economy.

### **Intentional Injury**

We reached a significant milestone for the Recovery via Internet from Depression (RID) trial by recruiting just over 700 trial participants from across the country. Our feasibility study to examine whether an online education training programme (I-MEDIC) would have a good uptake by local doctors and trainee interns produced some interesting findings with respect to the barriers that general practitioners may have with using online educational training programmes. However, a patient satisfaction survey we developed to trial with the local community suggested that patients do appreciate doctors asking them about partner/family violence as part of a routine consultation. Collectively, we hope these two studies, in the context of the government's focus on primary care initiatives, will improve the accessibility for using credible therapeutic programmes. These in turn might contribute to better assessment and treatment of common mental health disorders in relation to preventing self-directed and other forms of violence and their consequences.

### **Alcohol**

In 2009 the Law Commission published Alcohol In Our Lives: an Issues Paper on the Reform of New Zealand's Liquor Laws, as part of a once-in-a-generation "root and branch" review of the way in which alcohol is sold, promoted, and consumed in New Zealand. This 279 page document reflects strong desire for change among the many sectors of society that deal with alcohol-related harm every day, including the police, the judiciary, health and social service providers, and the general public. Central to the Issues Paper is research evidence on the causes of and interventions to prevent alcohol-related injury, a substantial amount of which has been produced by IPRU scientists in the last 20 years. By the end of 2010 we should know whether government has acted in accordance with the Law Commission's advice. Determining the efficacy of resulting changes in the regulation of alcohol availability, promotion, and consumer behaviour and thereby building on the research evidence base will continue to be core business for IPRU.

### **Biomechanics**

Our research into the biomechanics of intentional injury has been extended to encompass forensic firearm wounding. In collaboration with the ESR (Environmental Science Research) forensic service team, the IPRU biomechanics group is developing models to identify processes potentially involved in the formation of the bolus of blood and other materials ejected retrogradely from a gunshot entrance wound as backspatter. Elucidating a relationship between bullet penetration characteristics and backspatter formation would contribute significantly to identifying the origin of particular patterns of backspatter, and thus the circumstances of the injury event.

### **Disability and Rehabilitation**

The impact of disability on individuals, and the population in general, has been receiving increasing attention nationally and internationally, and as a consequence, the importance of rehabilitation. The IPRU has continued to respond to this with the Prospective Outcomes of Injury Study (POIS). A significant milestone for the research team on this major study was reached mid-year, with the last injured participant being recruited to the longitudinal study comprising 2860 people. Another highlight was the official recognition in February by the EuroQol Committee of the translation into Māori of the widely-used general health status measure - the EQ-5D. This is not a simple process, and the IPRU was delighted that the hard work undertaken by the collaborative team was able to achieve this result.

## FROM DIRECTOR ...

### Professor John Langley

*Director: Injury Prevention Research Unit 1990 - 2009*

Professor John Langley stepped down as Director of the Injury Prevention Research Unit (IPRU) in August 2009 having held this position from the Unit's inception in October 1990. In the intervening years, the IPRU grew from a small group to the over 30 academic and support staff in 2009 with expertise in epidemiology, injury surveillance, health promotion and biomechanics. Research interests in the group encompass road transport safety, child safety, intentional harm, occupational, sport and recreational injury, alcohol and injury, biomechanics, rehabilitation and injury surveillance.

The University of Otago recognised John's considerable contribution to the institution by awarding him a Personal Chair in 2000. In 2004, the Injury Control and Emergency Health Services Section of the American Public Health Association recognised his international standing in injury prevention, presenting him with an International Distinguished Career Award. His contribution to public health in New Zealand has been substantial, whether on the Health Research Council Public Health Committee, advising the New Zealand Injury Prevention Strategy, or serving on one of the many national advisory bodies for which he committed his time, energy and thought. John has consistently advocated for legislative, policy and practical decisions to be based on science, but he retains a very practical perspective: these decisions also need to be feasible and sustainable in the long term.

The beginning of his injury prevention research was in the context of the Dunedin Multidisciplinary Health and Development Study, the internationally acclaimed longitudinal study of Dunedin children born in 1972/73. In addition to describing injury in this cohort, John examined risk factors for injury in childhood and this was the topic of his PhD, conferred in 1985. In 1989, John led a successful University of Otago bid for a national prevention research group to be funded by the Medical Research Council (MRC) and the Accident Compensation Corporation (ACC). With Dr David Chalmers as Deputy Director, he established the IPRU with the aim to "reduce the frequency, severity, and consequences of injury (irrespective of intent) in New Zealand" through research and the promotion of injury prevention measures.

Early in his career, John recognised the potential of various national databases for investigating the epidemiology of injury: for example, health mortality and morbidity, ACC compensated claims and traffic accident reports. Descriptive studies from these have contributed considerably to injury prevention policy and practice in New Zealand and internationally. Increasing familiarity with these and other datasets led to John focusing his attention, and that of his colleagues in biostatistics, on ways to improve the validity and reliability of methods used in analysing these data. This work, and many academic articles published as a consequence have contributed to John being recognised as a leading thinker in the area of injury surveillance especially in relation to improving analytical methods both nationally and internationally. His contribution to the International Collaborative Effort on Injury Statistics (ICE) is considerable and he has been convenor of the ICE Injury Indicators Group since 2001.

John is not retiring. He has, however, been recalibrating the 'work – life' balance so it favours the latter rather more than it has over the last 19 years. As staff and colleagues, we thank John for his leadership, but expect to continue working with him. Stepping down as Director does not equate to stepping away from collaborating, challenging and supporting the ongoing demands of injury control.





## **...TO DIRECTOR**

### **Professor Hank Weiss**

Professor Weiss officially became Director of the Injury Prevention Research Unit in August 2009, taking over from Professor John Langley. He brings to the IPRU a wealth of experience from both public health and injury prevention. He received a Masters Degree in Environmental Health and Epidemiology at the University of Minnesota (1975-6) and his PhD in Epidemiology at the University of Pittsburgh (1999). He has over 33 years of experience in public health, 26 of those in injury prevention. He founded and directed the state injury program in Wisconsin (1983) and since 1993 has been in academia. He joined the University of Pittsburgh Center for Injury Research and Control (CIRC) in 1993 and was its Director from 2002-2008. During this time, his research has included injury surveillance, violence and domestic violence, traumatic brain injuries, baby walkers, poisonings, bicycles, farm injuries, hospital discharge data, data linkage, falls in the elderly and recreational injuries.

Hank is aware of a number of possible research issues in New Zealand that invite his attention. He is keen too, to continue work he began in the United States (US) in relation to maternal car crash injury as New Zealand has a rate of car ownership similar to the US. This leaves the foetus vulnerable when the mother is in a crash. Some preliminary research suggests that there are indeed more foetal deaths from car crashes in New Zealand than there are infants dying in car crashes. He envisages future research to prevent these losses will involve working with women and families to reduce their crash risk. Hank is also keen to reduce the general crash injury burden by promoting safe transport alternatives and integrating injury prevention with sustainability efforts. Another area of particular interest is measuring and preventing traumatic brain injury, one of the most devastating of all injuries. He is currently determining how his expertise can contribute in this issue in the New Zealand setting.

An area of increasing importance in the communication of injury prevention, and indeed public health globally, is the use of the world wide web. The author of several injury and public health related websites, Hank has also led the development of the largest archive of injury internet lectures. He has also contributed to international organisations, chairing the APHA Injury Control and Emergency Health Services section (ICEHS) early in its existence and more recently as president of the Society for Advancement of Violence and Injury Research (SAVIR). In 2009 he was awarded the Alex Kelter Visionary Award from the State and Territorial Injury Prevention Directors Association (STIPDA). This award recognises individuals who have brought leadership and vision to the field of injury and violence prevention.

The IPRU is fortunate to have a new Director of this calibre, and staff and colleagues, both national and international, look forward to working with Hank well into the future.



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# ROAD AND TRANSPORT SAFETY

Traffic crash injury is a leading cause of death and serious injury among the adolescent and young adult population of New Zealand. Since 1987, when graduated driver licensing was first introduced, the rate of serious traffic injury has significantly decreased. Nevertheless, there is still much room for improvement. To achieve this improvement we need to identify how we can modify the early driving experience of our young people, which is the time when they are at greatest risk of crash involvement. The primary focus of our main research project, the New Zealand Drivers Study, was designed to provide scientific evidence that is directly relevant to the development of policy and programmes for newly licensed young drivers in New Zealand.

## YOUNG DRIVERS

### The New Zealand Drivers Study (NZDS): A Follow-up Study of Newly Licensed Drivers



The New Zealand Drivers Study is a prospective cohort study of 3992 newly licensed car drivers. The study participants are being followed up as they progress through the graduated driver licensing system (GDLS) to obtain detailed information on the driving and driving-related behaviours of novice drivers. This information is obtained in a series of interviews which are linked to the three licensing stages of the graduated driver licensing system. Stage 1: Face-to-face recruitment of the study participants took place after passing the learner licence test, at which time signed consents and a baseline questionnaire were completed. Stage 2: The first follow-up interviews take place after the restricted licence test has been passed. This telephone interview includes items relating to driving behaviour and driving related attitudes and experiences during the learner licence period, and expectations of the restricted licence stage. In addition, 1200 parents/caregivers of young drivers were interviewed at this stage to examine the role of parents/caregivers as the supervisor of a young learner driver. Stage 3: The second follow-up interview (also a telephone interview, corresponds to passing the full licence test. This interview includes items relating to experiences as a restricted licence driver. Consent was obtained from virtually all study participants to follow up their traffic records using national traffic crash and injury databases for ten years after they gain their full licence.

#### Primary Aim:

To explore the relationship between a comprehensive range of driving and traffic safety related factors, for example, driving experience, motivation for driver licensing, driver training, alcohol and drug use, risk-taking, and subsequent traffic crashes and convictions among newly licensed drivers; and from this, to identify specific areas that can be targeted to reduce traffic-related injury among this high-risk group.

#### Secondary Aims:

- ~ To examine this relationship specifically for newly licensed Māori drivers (see below);
- ~ To examine the role of parents/caregivers as supervisors of newly licensed drivers (see below); and
- ~ To evaluate the impact of current novice driver training programmes on driving-related outcomes.



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**Project Team:** Dorothy Begg, John Langley, John Broughton, Rebecca Brookland, Shanthi Ameratunga, Anna McDowell

**Funding:** Health Research Council of New Zealand, Accident Compensation Corporation, Road Safety Trust.

**Additional Support:** The Driver Licence Registry (DLR) maintains a database of the NZDS study participants and tracks their progress through the licensing system. New Zealand Automobile Association accommodated the recruitment of study participants at their agencies throughout New Zealand.

**Progress:** Stage 1, recruitment of the newly licensed driver cohort, was completed in January 2008. By the end of 2009 two thirds of the cohort had passed their restricted licence test and 88% of these had completed the stage 2 interview. Around 28% had gained their full licence and 94% of these had completed stage 3, the second follow-up interview. Analysis of the baseline data was undertaken, the first papers published in peer-reviewed journals and findings were presented at conferences and seminars. Why learner drivers do not progress to a restricted licence is not always apparent. Attempts have been made to conduct telephone interviews with study members who have not progressed to a restricted licence after two years of being eligible to do so. By the end of 2009, 118 interviews had been completed, 16 refused to participate, and 88 were unable to be traced.

### Parental Influence on the Driving Experiences of Young Newly Licensed Drivers

Parents potentially play an important role in influencing adolescent driving experiences, given that the young driver may still live at home and parents are generally involved in the driving process from the beginning. For example, parents often teach adolescents how to drive and manage early driving experience by limiting vehicle access, placing restrictions on when, where, and with whom, driving may occur, and by the driving behaviours they model.

For the Parent Study, which is part of the New Zealand Drivers Study (NZDS) 1200 young drivers (aged 15-17 years at learner licence stage) and their parents were interviewed at the restricted licence stage. Data on young driver crashes, convictions, and infringements during their first 12 months of unsupervised driving will be obtained from national traffic crash and injury databases.

**Aims:**

To examine the influence of parents' driving related attitudes and experiences on driving experiences and the negative traffic-related outcomes of adolescents as newly licensed drivers.



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Specifically this study aims:

- ~ To describe parents' knowledge, opinions, and experience with licensure;
- ~ To explore the relationship between parents' and young drivers' attitudes and behaviours relating to driving related issues; and
- ~ To examine the influence of parental driving related attitudes and behaviours on subsequent negative driving related outcomes of young drivers (such as traffic violations and crashes).

**Project Team:** Rebecca Brookland, Dorothy Begg, John Langley, Shanthi Ameratunga

**Funding:** Health Research Council of New Zealand, Accident Compensation Corporation, Road Safety Trust

**Progress:** One paper was published in a peer-reviewed journal and several presentations were given at national conferences and other meetings.

### Newly Licensed Rural and Urban Māori Drivers: New Zealand Drivers Study

**Aims:**

To examine the experiences and opinions of newly licensed Māori drivers in New Zealand in order to identify some of the underlying behaviours and beliefs within this high risk group.

Specifically the two core objectives are:

- ~ To examine the experiences and opinions of newly licensed Māori and non-Māori drivers to provide an overall New Zealand context; and
- ~ To describe and compare driving, behavioural and personality related factors between newly licensed Māori drivers in rural and urban areas.

**Project Team:** Anna McDowell, Dorothy Begg, Jennie Connor, John Broughton

**Funding:** Health Research Council of New Zealand, Accident Compensation Corporation, Road Safety Trust

**Progress:** The cohort of newly licensed Māori drivers is part of the New Zealand Drivers Study cohort, and comprises 824 participants who identified Māori as either their sole ethnic group, or one of the ethnic groups to which they belong. Data from the baseline questionnaire was written up as a Masters thesis, a lay summary factsheet prepared for Māori communities involved with this study, a paper published in a peer-reviewed journal, and presentations were made at Hui, seminars and conferences.



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## **DUNEDIN MULTIDISCIPLINARY HEALTH AND DEVELOPMENT STUDY (DMHDS)**

The DMHDS is a longitudinal study of a birth cohort of 1037 people born in Dunedin between 1 April 1972 and 31 March 1973. This cohort was interviewed every two years from age 3 to 15 years, and again at ages 18, 21, 26 and 32 years.

Road safety research has been part of the DMHDS for many years, and the period from ages 15 to 26 years was a rich source of data providing the opportunity to continue exploring a range of topics on various aspects of road safety for young drivers. The aims and investigators for the various studies involved can be found in previous annual reports.

**Progress:** A paper using data from this study on the study members' parents attitudes to the graduated driver licensing system (GDLS) was prepared for submission to a peer-reviewed journal. A seminar on the DMHDS young driver research from phases XV to XXVI was presented.

## **MOTORCYCLE INJURIES AND DEATHS: PREVENTION, POLICY AND LEGISLATIVE DEVELOPMENT**

Motorcyclists are seriously over-represented in traffic crash statistics and ACC compensation claims. In recent years there appears to have been a revival in motorcycling in New Zealand but because of a lack of research, much of our knowledge about the nature and extent and what is influencing it, is anecdotal or speculative. This programme of research was designed to address the knowledge gaps and provide the ACC and other potential stakeholders with a sound evidence base for the development of policies and programmes to reduce motorcycling injury in New Zealand.

This programme of research has three main components: an epidemiological study, a systematic review and a qualitative study.

### **Epidemiology of Motorcycling Injury in New Zealand**

**Aim:**

To provide an overview of the epidemiology of motorcycling injury crashes in New Zealand, with an emphasis on serious injury crashes, and to examine the association between motorcycle crash characteristics and severity of injury.

**Project Team:** Dorothy Begg, Gabrielle Davie, John Langley, Ari Samaranayaka, Brandon de Graaf

**Funding:** Accident Compensation Corporation

**Progress:** An examination of crash risk factors in relation to injury severity was completed and a report written for the funding agency.



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## A Systematic Review and Comparative Analysis of Motorcycle Legislation, Policies and Programmes

**Aim:**

To provide an up-to-date overview of international research, policies, programmes and legislation that is of relevance to motorcycling in New Zealand.

**Project Team:** Pam Smartt, Suzanne Wilson, Bronwen McNoe

**Funding:** Accident Compensation Corporation

**Progress:** This review was completed in the previous year. A report was written for the funding agency.

## Qualitative Study of Trends and Culture of Motorcycling in New Zealand

**Aim:**

To describe reasons for riding motorcycles, attitudes and behaviour towards safety, perception of risk and predicted future trends for the motorcycling population in New Zealand.

**Project Team:** Jean Simpson, Nandika Currey, Sue Wilson

**Funding:** Accident Compensation Corporation

**Progress:** This study was completed and a report written for the funding agency.



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## PUBLICATIONS

**Thesis**

TH21 McDowell A. "Newly licensed urban and rural Māori drivers: New Zealand Drivers Study." Thesis accepted for the degree of Master of Public Health, University of Otago, Dunedin, New Zealand, 2008

**Refereed Journals**

RJ399 Begg D, Langley J. A critical examination of the arguments against raising the car driver licensing age in New Zealand. *Traffic Injury Prevention*, 2009, 10:1-8

RJ345 McDonald G, Davie G, Langley J. Validity of police-reported information on injury severity for those hospitalised from motor vehicle traffic crashes. *Traffic Injury Prevention*, 2009, 10:184-190

RJ346 McDowell A, Begg D, Connor J, Broughton J. Unlicensed driving among newly licensed urban and rural Māori drivers: New Zealand Drivers Study. *Traffic Injury Prevention*, 2009, 10(6):538–545

RJ355 Begg D, Langley J, Broughton J, Brookland R, Ameratunga S, McDowell A. New Zealand Drivers Study: a follow-up study of newly licensed drivers. *Injury Prevention*, 2009, 15:1-9

RJ356 Brookland R, Begg D, Langley J, Ameratunga S. Parent and adolescent risky driving behaviours: New Zealand Drivers Study. *Journal of the Australasian College of Road Safety*, 2009, 20(1):52-59

RJ377 Begg D, Langley J, Brookland R, McDowell A, Ameratunga S, Broughton J. The opinions of newly licensed drivers in New Zealand on the minimum car driver licensing age and reasons for getting a licence. *New Zealand Medical Journal*, 2009, 122(1306):1-15

RJ376 Tin Tin S, Woodward A, Thornley S, Langley J, Rodgers A, Ameratunga S. Cyclists' attitudes towards policies encouraging bicycle travel: Findings from the Taupo bicycles in New Zealand. *Health Promotion International*, (in press)

### **Professional Publications**

PP135 Brookland R. "Parents as driving models." *University of Otago Magazine* Issue 23 June 2009

PP136 Begg D. Is 15 too young to drive? *Otago Bulletin*. Issue 11 12 June 2009

PP137 McDowell A, Begg D, Broughton J, Connor J. Fact sheet: "Driving experience among newly licensed Māori drivers." *Injury Prevention Research Unit, University of Otago*, 2009

PP138 Brookland R. Health Research Council of New Zealand "Parents as driving models." *HRC News* Issue, No. 65 September, Auckland, 2009

PP139 Health Research Council of New Zealand (HRC) Performance Highlights 2008/9 "Team drives study forward". Auckland, 2009

### **Submissions**

SUB102 Begg D, Simpson J, Brookland R, Wilson S. Submission to Ministry of Transport. Discussion Document: '2020 Safer Journeys', October 2009



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## PRESENTATIONS OF NOTE

Canterbury Region Road Safety Forum, Christchurch, June 12, 2009

Jean Simpson

*Invited speaker*

“Motorcyclists’ perspectives on risk and safety in New Zealand”

Rebecca Brookland

*Invited speaker*

“Attitudes of parents and young drivers towards the minimum car driver licensing age and youth blood alcohol (BAC) limits: New Zealand Drivers Study.”

18th Australasian Epidemiological Association Annual Scientific Meeting, Dunedin, August 30-September 1, 2009

Gabrielle McDonald

*Presentation*

“Validity of police-reported information on injury severity for those hospitalised from motor vehicle traffic crashes”

Rebecca Brookland

*Presentation*

“The opinions of newly licensed drivers and parents in New Zealand on the minimum car driver licensing age”

Public Health Association Conference, Dunedin, September 1-4, 2009

Rebecca Brookland

*Presentation*

“Research to inform policy: newly licensed drivers and parents opinions on the minimum car driver licensing age.”

Transport Research Institute, Merchiston Campus, Napier University, Edinburgh, Scotland. September 10, 2009

Dorothy Begg

*Presentation*

“New Zealand’s experience with graduated driver licensing”

Social Conditions Business Unit, Statistics House, Wellington, September 23, 2009

Anna McDowell

*Presentation*

“Driving experience among newly licensed Māori drivers: New Zealand Drivers Study.”

2nd Injury Prevention Conference for United Kingdom and Ireland, Cardiff, Wales, September 24, 2009

Dorothy Begg and Sarah Jones

*Presentation*

“Should Wales adopt graduated driver licensing?”

Injury Prevention Network Aotearoa New Zealand (IPNANZ) Auckland, New Zealand, October 7-9, 2009

Rebecca Brookland

*Presentation*

“Parents’ knowledge, attitudes and experiences regarding graduated driver licensing”

Psychology Department, University of Hertfordshire, Hatfield, Hertfordshire, England. October 29, 2009

Dorothy Begg

*Presentation*

“Dunedin Multidisciplinary Health and Development Study: young driver research”



# SPORT AND RECREATION

Sporting and recreational activities account for almost one-fifth of all injury hospitalisations in New Zealand and account for a similar proportion of ACC compensation claims. The IPRU's sport and recreational injury research programme has three main objectives: to facilitate improvements in injury surveillance, identify risk factors and evaluate injury prevention measures. Over the past year, the programme's emphasis was on new projects in the areas of water safety and non-organised sport.

## SURVEILLANCE

### Sport and Recreational Injury: Monitoring National Data

New Zealand has a number of national injury databases that can be used to describe the burden of injury occurring in sport and recreation. This project has built on the IPRU's experience in working with national databases and has contributed to methodological developments in this area.

**Aim:**

To develop a means for routinely monitoring the incidence, nature, circumstances, severity and outcomes of sports injuries in New Zealand using routinely collected data.

**Project Team:** Pam Smartt, David Chalmers, Pauline Gulliver, Dave Barson

**Funding:** Accident Compensation Corporation

**Progress:** Two papers were prepared for submission to peer-reviewed journals.



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### Routine Surveillance of Injury and Safety Behaviour in Rugby Union Football and Soccer

In 2001 the New Zealand Rugby Union (NZRU) launched its injury prevention programme 'RugbySmart' but it lacked a means for routinely monitoring injury and safety behaviour among club level players at whom it was aimed. The development of a surveillance system to address this shortcoming builds on a decade of research on rugby injury undertaken by the IPRU. More recently the system has been adapted for use in soccer.

**Aim:**

To develop and evaluate a method for undertaking routine surveillance of injury and safety behaviour in rugby as a model for other high risk sports in New Zealand.

**Project Team:** David Chalmers, Bronwen McNoe, Dave Barson, Ari Samaranayaka, Pauline Gulliver

**Funding:** Health Research Council of New Zealand

**Progress:** One paper was submitted and further papers were prepared for submission to peer-reviewed journals.

## **WATER SPORT AND RECREATION**

### **Identification of Risk Factors for Non-Submersion Swimming Injury**

Swimming ranks second among the activities contributing to the incidence of aquatic recreational injury. While many risk factors for the injuries have been postulated in the literature, few have been confirmed through analytic studies. There is a need, therefore, for well-designed analytic studies to confirm the significance and contribution of such risk factors.

**Aim:**

To identify risk factors for injuries in recreational swimming as a means of facilitating the development of targeted interventions aimed at reducing these injuries.

**Project Team:** David Chalmers, Pauline Gulliver, Bronwen McNoe, Gabrielle Davie

**Funding:** Accident Compensation Corporation

**Progress:** A paper was prepared for submission to a peer-reviewed journal.



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### **Fencing of Swimming Pools: Local Authority Survey**

The Fencing of Swimming Pools Act has served New Zealand since 1987, but inconsistencies between this Act and the New Zealand Building Code prompted moves to review the legislation. A survey of territorial local authorities undertaken by IPRU in 1997 showed that enforcement of the Act was inconsistent across authorities and that numerous pools failed to comply with the requirements of the Act. As part of the review process, Water Safety New Zealand commissioned the IPRU to undertake a replication of the 1997 survey of territorial local authorities.

**Aim:**

To identify the current status of compliance and enforcement of the Fencing of Swimming Pools Act 1987 by local authorities.

**Project Team:** David Chalmers, Pauline Gulliver, Kimberly Cousins

**Funding:** Water Safety New Zealand

**Progress:** A paper was published in a peer-reviewed journal.



## NON-ORGANISED SPORT

### Extending the Reach of SportSmart: A Survey of ACC Sport and Recreation Claimants

In its sport and recreation injury prevention programme, the primary strategy adopted by ACC is coach education delivered through national sports organisations. Not all sport and recreational activities are carried out under the auspices of national sporting organisations however, and many participants in these activities cannot be reached through coach education programmes. The purpose of this project was to provide ACC with a profile of claimants falling into this 'non-coached' category – variously labelled non-organised, social, casual or informal sport – so they can better target this large and potentially growing group.

#### Aims:

- ~ To determine the relative size and population characteristics of claimants who are reached, and not reached, through ACC's current methods of delivering injury prevention messages and programmes, for four popular sport and recreational activities (football, netball, equestrian activities, cycling);
- ~ To determine the relative size and characteristics of ACC claimants involved, and not involved, in organised activity for the nominated sport and recreational activities; and
- ~ To identify potential avenues through which to communicate ACC's injury prevention messages and programmes to those not reached through ACC's traditional approach for the nominated sport and recreational activities.

**Project Team:** Bronwen McNoe, Melissa Purnell, Pam Smartt, David Chalmers

**Funding:** Accident Compensation Corporation

**Progress:** The project was completed during the year. Three papers were prepared for submission to peer-reviewed journals.



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## Review of Literature on Injury Prevention in “Non-Organised” Sport and Recreation

Complementing the study described above was a literature review.

### **Aim:**

To undertake a literature review to determine what is already known about preventing or reducing injury and injury risk in those who participate in “non-organised” sport and active recreation, either socially or informally.

**Project Team:** Melissa Purnell, Bronwen McNoe, Pam Smartt, David Chalmers

**Funding:** Accident Compensation Corporation

**Progress:** The project was completed during the year and the final report was delivered to ACC.

## **PUBLICATIONS**

### **Refereed Journals**

RJ366 Gulliver P, Cousins K, Chalmers D. Achieving compliance with pool fencing legislation in New Zealand: how much progress has been made in ten years? *International Journal of Injury Control and Safety Promotion*, 2009 16(3):127-132

RJ389 Smartt P, Chalmers D. Searching for ski-lift injury: an uphill struggle? *Journal of Science and Medicine in Sport*, 2009, 13(2010):205-209

## **PRESENTATION OF NOTE**

Science and Medicine in Sport Conference, Brisbane, Australia, October 14-17, 2009

Bronwen McNoe

*Presentation*

“Extending the reach of SportSmart: a survey of ACC claimants engaged in organised and non-organised sporting and recreation activity”

# CHILD SAFETY

Children under five years of age carry a disproportionate burden of injury. In New Zealand, of children aged 0-14 years, nearly a quarter are under 5 years, but this age group contributes half the injury deaths and one in three of the injury hospitalisations for those under 15 years. IPRU's research is focused on how to develop and implement effective interventions for this vulnerable group.

## CHILD HOME INJURY RESEARCH PROJECT

Children under 5 years are often injured at home. While the mechanism of injury and the risk factors for injury may be known, the context and circumstances of the injury events, what affects parental decisions about safety and how to improve the management of risk, requires investigation.

### Circumstances of Home Injury

The context and circumstances of an injury event to a child at home can provide clues as to how interventions could be developed or work more effectively for this complex environment that has both physical and social elements interacting. This study analysed the responses from 100 parents who were asked about what was happening when their child was injured.

**Aim:**

To describe the nature and circumstances of injury that occurred in the home to children under 5 years of age, who presented at an emergency department for treatment.

**Project Team:** Jean Simpson, Bianca Turnbull, Michael Ardagh, Sandra Richardson

**Funding:** Accident Compensation Corporation, University of Otago

**Progress:** A paper was published in a peer-reviewed journal.



### Interventions for Child Safety at Home

Reductions in injury to young children at home have been achieved with the implementation of a number of passive interventions. Interventions operating in New Zealand were examined in light of best practice reported in the scientific literature.

**Aim:**

To identify effective strategies for reducing unintentional childhood injury to children under 5 years (excluding motor vehicle traffic crashes) and compare current New Zealand interventions for unintentional childhood injury prevention with these.

**Project Team:** Jean Simpson, Jane Nicholls

**Funding:** Accident Compensation Corporation

**Progress:** A paper is under consideration by a peer-reviewed journal.

## Factors Affecting Parental Perception and Response to Risk

Current research on how parents practice safety and their response to the risk of unintentional injury among young children has much to offer the development of effective interventions. This qualitative study explores how factors identified in the literature fit the experience of New Zealand parents and identifies additional influences that may impact on how parents perceive and respond to injury risk in the home environment.

### Aims:

- ~ To identify from the literature factors that may influence parental perception of, and response to, risk of unintentional injury among preschool children in the home environment; and
- ~ To explore aspects of these factors in depth to obtain an understanding from parents of how they aid or hinder perceptions and responses to risk.

**Project Team:** Jean Simpson, Rob McGee, Geoff Fougere, Chrystal Jaye

**Funding:** Accident Compensation Corporation, Hawke's Bay Medical Research Foundation, Hawkes Bay District Health Board, University of Otago

**Progress:** Analyses and writing up were continued.

## CHILD CAR RESTRAINTS

Child restraints help reduce injury to children in motor vehicle crashes. Surveys in New Zealand have been used to observe their use and their findings suggest that restraint use is relatively high. These surveys do not show whether the restraints are correctly used. This study investigated misuse of, and barriers to, using child restraints. Methods used were reviewed with respect to their suitability for undertaking research within Māori and Pacific communities.

### Aims:

- ~ To identify the rates of correct and incorrect use of infant and child restraint devices in the Wellington region;
- ~ To identify the barriers to the use of child restraint devices; and
- ~ To assess the suitability of various data collection methods for use in a national study.

**Project Team:** Jean Simpson, Nite Fuamatu, Anne-Allan Moctana, Margaret Southwick

**Funding:** Health Research Council of New Zealand

**Progress:** A paper was published in a peer-reviewed journal.



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## **PUBLICATIONS**

### **Refereed Journals**

RJ365 Simpson JC, Turnbull BL, Ardagh M, Richardson S. Child home injury prevention: Understanding the context of unintentional injuries to preschool children. *International Journal of Injury Control and Safety Promotion*, 2009, 16(3):127-132

RJ393 Fuamatu N, Simpson J, Allan-Moetaua A, Southwick M. The Pacific Advisory Group: reflections on its utility in health research. *Pacific Health Dialog*, 2009, 15(2):107-115

## **PRESENTATION OF NOTE**

Safe2Go Conference, Wellington, September 7-8, 2009

Jean Simpson

*Invited Speaker*

“Restraint surveys past and future: what have they told us and where to from here?”





# INJURY SURVEILLANCE

The IPRU has two key surveillance goals. The first is to improve New Zealand's ability to readily determine the incidence, circumstances, severity, and outcome of injuries. The second is to ensure that the Government, its agencies and other organisations with an interest in injury prevention, receive evidence-based advice for improving injury surveillance and for informing public policy and practice in injury prevention and treatment. In particular, the IPRU has contributed to the New Zealand Injury Prevention Strategy (NZIPS).

The surveillance research has a methodological focus with an emphasis on research relevant to the development of robust indicators for measuring performance in reducing injury. (See also Sport and Recreation for other surveillance projects.)

## INDICATORS

### Probability of Admission: Empirical Validation of the NZIPS Serious Non-Fatal Injury Indicators

The NZIPS serious non-fatal injury indicators are based on counts of incident cases discharged from hospital who have a serious injury as defined by an ICISS threshold. (International Classification of Diseases (ICD) based Injury Severity Score.) The threshold was set to count only injuries with diagnoses that have a high probability of admission so that the effects of any extraneous influences on the hospital data-based indicator trends would be removed (for example, changes in health service provision). The ability of this process to achieve this end has not been tested empirically although it appears to do so. Estimates of the diagnosis-specific probabilities of admission would increase our confidence in the NZIPS indicators, but require emergency department (ED) data that are accurately coded to ICD and are known to have resulted in subsequent admission to hospital. Because such data were not available in New Zealand international partners for this project were sought.



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#### **Aims:**

- ~ To validate the existing NZIPS serious non-fatal injury indicators;
- ~ To provide the opportunity to develop serious injury indicators which capture a greater number of serious injuries; and
- ~ To develop methods for international comparisons.

**Project Team:** Colin Cryer, Pauline Gulliver, Brandon de Graaf, Gabrielle Davie, John Langley

**Funding:** Accident Compensation Corporation

**Progress:** Detailed methods and specifications for data extraction were circulated among the seven international collaborators, and data received from each collaborating centre. These data were checked and analysis commenced.



## Impairment Indicators: Production of a Chartbook

The NZIPS serious non-fatal injury outcome indicators define 'seriousness' in terms of threat to life. Serious injuries should not, however, be considered only in terms of threat to life. Injuries that result in long term disability and substantial cost are also serious. Relatively minor injuries in terms of threat to life may result in long term disability without adequate management and rehabilitation.

**Aim:**

To produce a chartbook of impairment-related injury (annual frequencies and age standardized rates) for all hospitalised, non-fatal injury for each of the NZIPS priority areas.

**Project Team:** Pauline Gulliver, Colin Cryer, Gabrielle Davie

**Funding:** Accident Compensation Corporation

**Progress:** A literature review was conducted to ensure adequate scope of the injury-related impairment indicators originally developed in 2008. Additional diagnoses were identified, a draft chartbook was produced, and the prototype for a future injury related impairment indicator chartbook developed.

## Investigation of the Provisional Status of the NZIPS Serious Non-Fatal Self Harm and Assault Indicators

In 2004, the IPRU developed a set of fatal and serious non-fatal indicators to monitor the implementation of NZIPS. Concerns were expressed, however, about the validity of the serious non-fatal indicators of injury incidence for assault and self-harm and IPRU recommended that these be designated provisional.

**Aim:**

To test the following hypotheses:

- ~ That there had been an increased likelihood of serious non-fatal self harm cases being recorded with a principal diagnosis of a mental health disorder; and
- ~ Given that a serious non-fatal assault related injury had occurred, that there had been an increase in the reporting of serious non-fatal assault related injuries.

**Project Team:** Pauline Gulliver, Colin Cryer, Gabrielle Davie

**Funding:** Accident Compensation Corporation

**Progress:** The provisional status of the indicators has been reviewed by assessing the proportion of people with key 'indicator' diagnoses that were recorded with a self-harm or assault external cause code over time (2001-2007). On the basis of feedback received, the draft report prepared was further reviewed.





## **SURVEILLANCE METHODS**

Injury surveillance stands or falls according to the strength of the methods used. The following projects are directed at assessing the validity of length of stay in hospital as a proxy for severity of injury, exploring improved case definitions of injury death and serious non-fatal injury, as well as assessing the accuracy and identifying ways to improve IPRU's hospital readmission indicator.

### **Is Length of Stay in Hospital a Stable Proxy for Injury Severity?**

A number of agencies have used length of stay in hospital (LoS) as a proxy for severity in their national indicators: but is LoS a good proxy measure for severity? Work to date suggests that it is not, but definitive proof is needed to confirm this.

**Aim:**

For selected diagnoses, to investigate trends over time in the proportion of admitted cases that exceed a number of selected LoS thresholds.

**Project Team:** Colin Cryer, Pauline Gulliver, Gabrielle Davie, John Langley

**Funding:** Accident Compensation Corporation

**Progress:** A paper was under consideration by a peer-reviewed journal.

**Findings:** Findings were presented in a previous annual report.

### **NZIPS Indicators of Injury Death: Are We Missing a Significant Number of Cases?**

Recent work has exposed apparent contradictions in the diagnostic data: for many of the 'injury' cases that die in hospital, there is a mismatch between the hospital principal diagnosis and underlying cause of death recorded on the New Zealand Mortality Collection. This project seeks to identify the sources of bias when estimating the size and nature of the burden of fatal injury and calculating the NZ injury indicators used for policy making and priority setting. A method of identifying cases of injury death that is more consistent with definitions used by injury epidemiologists was investigated.

**Aims:**

- ~ To characterize the subgroups where there is a discrepancy between the National Minimum Data Set (NMDS) primary diagnosis coded to injury and the Mortality Collection underlying cause of death coded to other than an external cause; and
- ~ To describe any lack of concordance between data captured in both the Mortality Collection and the NMDS (e.g. age, gender) to highlight any potential concerns regarding the validity of the NZIPS fatal injury indicators.

**Project Team:** Colin Cryer, Pauline Gulliver, Ari Samaranayaka, Gabrielle Davie, John Langley

**Funding:** Accident Compensation Corporation

**Progress:** The report was submitted to the ACC, and a summary presented at a conference.

## Case Definition of Serious Non-fatal Injury

Recent debate questions whether the operational definition of serious injury used in the specifications of the NZIPS indicators captures all cases of serious injury of interest recorded in the NMDS. This project seeks to provide recommendations regarding the quality of existing indicators and possible changes that could be made.

### Aims:

- ~ To evaluate alternative case definitions of injury for the NZIPS serious non-fatal injury outcome indicators; and
- ~ To seek agreement from stakeholders on a common definition of injury for the NZIPS serious non-fatal injury indicators applicable across the NZIPS priority areas.

**Project Team:** Colin Cryer, Pauline Gulliver, Ari Samaranayaka, Gabrielle Davie, John Langley

**Funding:** Accident Compensation Corporation

**Progress:** Detailed methods for the study were developed and analysis was almost completed. A stakeholder meeting was held to discuss results.

## Accuracy of IPRU's Hospital Discharge Readmissions Indicator

IPRU relies heavily on a programming code to identify first admissions from readmissions using variables in NZ hospital discharge data. As IPRU and others depend on this code being accurate, this project aims to assess how well our readmissions code is working.

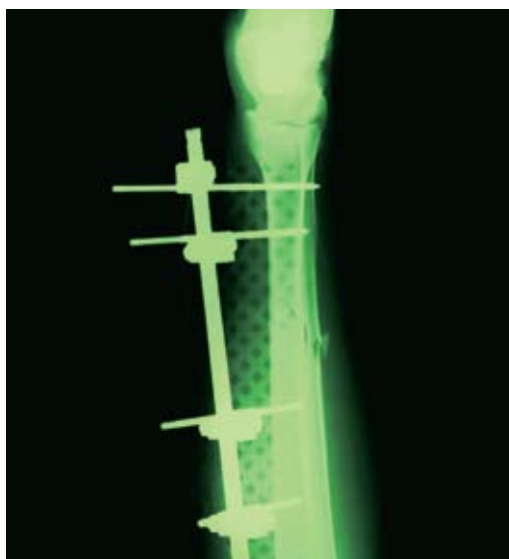
### Aims:

- ~ To estimate the overall accuracy of IPRU's readmissions indicator;
- ~ To investigate how the accuracy of IPRU's readmissions indicator varies by diagnosis, external cause and age group; and
- ~ To identify possible ways to improve the readmission indicator if the accuracy of the present indicator is found to be unacceptable.

**Project Team:** Gabrielle Davie, John Langley, Ari Samaranayaka, Dave Barson

**Funding:** University of Otago

**Progress:** A random sample of hospital discharges with a principal diagnosis of injury were classified as first admissions or readmissions by two independent coders blind to the readmission status allocated by IPRU's readmission code.



## **PUBLICATIONS**

### **Refereed Journal**

RJ353 Langley J, Simpson J. Injury Surveillance: unrealistic expectations of safe communities. *Injury Prevention*, 2009, 15:146-149

### **Submission**

SUB101 Simpson J, Weiss H, Gulliver P, Davie G. Submission to the New Zealand Injury Prevention Strategy – Future Directions for Injury Prevention in New Zealand, September 30, 2009

## **PRESENTATIONS OF NOTE**

State and Territorial Injury Prevention Directors Association (STIPDA) and Centre for International Research and Control (CIRCL) Webinar, May 5, 2009

Colin Cryer and John Langley

*Presentation*

“Nonfatal injury indicators: valid indicators of injury incidence of hospitalisations data to inform prevention”

17th Annual Scientific Meeting of the Australasian Faculty of Rehabilitation (AFRM), National Institute of Rehabilitation Research (NIRR-NZ), and New Zealand Rehabilitation Association (NZRA), Queenstown, July 22-25, 2009

Pauline Gulliver

*Presentation*

“The development of injury related impairment indicators for New Zealand”

9th National Conference on Injury Prevention and Safety Promotion, Melbourne, Australia, July 26-28, 2009

Colin Cryer and Lois Fingerhut

*Presentation*

“The International Collaborative Effort (ICE) on injury statistics and its role in the development of injury indicators”

18th Australasian Epidemiological Association Annual Scientific Meeting (AEA), Dunedin, August 30-September 1, 2009

Gabrielle Davie

*Presentation*

“Accuracy of injury coding under ICD-10-AM for New Zealand public hospital discharges”

Pauline Gulliver

*Presentation*

“Length of stay as a proxy for injury severity”

“Weaving the Strands 2009” Injury Prevention Network Aotearoa New Zealand (IPNANZ), Auckland, October 7-9, 2009

Jean Simpson

*Presentation*

“Injury Surveillance: unrealistic expectations of safe communities”

Gabrielle Davie

*Presentation*

“NZIPS indicators of injury death: are we counting all the cases?”

Global Burden of Disease/International Collaborative Effort on Injury Statistics (GBD-ICE), Boston, USA, October 8-10, 2009

Colin Cryer

*Presentations*

“Injury mortality indicators”

“Injury morbidity indicators: how should incident cases of injury be defined?”

“Probability of admission: update”

“Findings from linkage of diagnostic and ACC claims data: is it possible to identify diagnoses with high probabilities of disability?”

John Langley

*Presentations*

“How accurate are ICD codes in hospital discharge data: the fundamental building blocks for severity estimates”

“Accuracy of external cause coding under ICD10-AM”

Official Statistics Injury Information Forum 2010, Wellington, December 1, 2009

Colin Cryer

*Presentation*

“Improving injury data: an agenda”

Pauline Gulliver

*Chair, Conference Organising Committee*

The Australasian Mortality Data Interest Group (AMDIG), Wellington, December 2-3, 2009

Hank Weiss

*Keynote speaker*

“Maternal and foetal injury: understanding and tracking the hidden epidemic”

Colin Cryer

*Presentation*

“NZIPS indicators of injury death: are we counting all the cases?”

Pauline Gulliver

*Chair, Conference Organising Committee*



# OCCUPATIONAL

Occupational injury is of considerable concern to various government agencies particularly the Accident Compensation Corporation and the Department of Labour. Some occupations are more hazardous than others, and in 2009, IPRU continued to focus on farming.

## FARM OCCUPATIONAL INJURY

The risk of fatal and non-fatal injury to those living and working on farms in New Zealand is very high, yet there has been little progress in reducing these risks. The following projects seek to develop an understanding of factors that contribute to farm-related injury and to evaluate the effectiveness of farm safety interventions.

### Effective Occupational Health Interventions in Agriculture

Occupational ill-health in agriculture is a serious problem and costs the country millions of dollars each year. Currently, there is insufficient knowledge of the best ways to prevent these problems and previous research is limited. This study seeks to take stock and to generate new knowledge of the best way to address occupational ill-health in this sector.

**Aim:**

To provide an up-to-date knowledge base from which the ACC, Department of Labour and other stakeholders will be able to introduce or modify targeted interventions to reduce the rates of injury and other harm to members of the target population.

**Project Team:** Kirsten Lovelock, Colin Cryer, Stephan Milosavljevic, David McBride, Peter Davidson, Kate Morgaine, Gabrielle Davie, Rebecca Lilley

**Funding:** Health and Safety Joint Research Portfolio (Health Research Council of New Zealand, Accident Compensation Corporation, Department of Labour)

**Progress:** Results of this project were presented through presentations and reports to the project funders. Findings have received extensive local and Australasian media coverage and papers were prepared for submission to peer-reviewed journals.



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## Saskatchewan Farm Injury Cohort Study<sup>1</sup>

Farming is one of the most hazardous occupations in Canada, accounting for an average of 114 injury-related deaths and some 1400 traumatic hospitalizations annually. Despite its burden to public health, the etiology of farm injury remains poorly understood. In this project, a large cohort of Saskatchewan farmers, farm workers and their families are being followed longitudinally to study the determinants of farm injury. The study is investigating the importance of operational risk factors as potential causes of injury with a particular focus on vulnerable groups within the farm population (children, farm owner/operators, young workers, and the elderly).

### **Aim:**

To understand the individual operational risk factors and settings associated with agricultural injury, with the long-term goal of informing the development of interventions directed at the prevention of injury in both farm populations and agricultural production settings.

**Project Team:** William Pickett, James Dosman, Louise Hagel, Barbara Marlenga, Rob Brison, Trever Crowe, Lesley Day, Punam Pahwa, Jay Biem, Neils Koehncke, Don Voaklander, Murray Purcell, Rebecca Lilley.

**Funding:** Canadian Institutes of Health Research

**Progress:** Over 5,000 people were recruited from 2,422 farms in Saskatchewan. Papers were prepared for submission to peer-reviewed journals on the results of the baseline data. Analyses of results of the follow up phases of the cohort study commenced.

## NEW ZEALAND WORKING LIFE PROJECT

Recent reviews of the state of occupational health and safety surveillance in New Zealand by the National Occupational Health and Safety Advisory Committee have revealed a woeful state of occupational hazard surveillance. This is a significant impediment to progression of health and safety initiatives in NZ. This feasibility project extends previous developmental projects by undertaking further work with a view to establishing a national survey aimed at determining the patterns of exposure to suspected and known occupational health and safety risks in NZ. This knowledge base will contribute to a broader understanding of the underlying causes of work-related injuries and disease and the possibilities for prevention.



### **Aim:**

To undertake development work with a view to establishing a national survey aimed at determining the patterns of exposure to suspected and known occupational health and safety risks in the NZ workforce.

**Project Team:** Rebecca Lilley, Colin Cryer, Gabrielle Davie, Hilda Firth

**Funding:** Health Research Council Feasibility Grant, ACC Post Doctoral Fellowship (Rebecca Lilley)

**Progress:** The feasibility project was started.

<sup>1</sup> This is not managed by IPRU staff, however IPRU staff are scientific collaborators on the project.

## **PUBLICATIONS**

### **Refereed Journals**

RJ352 Day L, Voaklander D, Sim M, Wolfe R, Langley J, Dosman J, Hagel L, Ozanne-Smith J. Risk factors for work-related injury among male farmers. *Occupational and Environmental Medicine*, 2009, 66:312-318

RJ383 Lovelock K, Leopold T. Labour shortages in rural New Zealand: temporary migration and the recognised seasonal employer (RSE) work policy. *New Zealand Population Review*, Vol.33&34:213-234

### **Occasional Reports**

The following reports were prepared for the Health Research Council, Department of Labour and Accident Compensation Corporation Partnership:

OR072 Lovelock K, Cryer C. Effective occupational health in agriculture: Report Summary. Injury Prevention Research Unit, Dunedin, 2009

OR073 Lovelock K. Effective occupational health interventions in agriculture: Stakeholders, sector dynamics, intra-sector collaborations and emergent issues for injury and disease prevention in the agricultural sector. Injury Prevention Research Unit, Dunedin, 2009

OR075 Lilley R, Cryer C, Lovelock K, Davidson P, McBride D, Milosavljevic S, Morgaine K. Effective occupational health interventions in agriculture: An international literature review of primary interventions designed to reduce injury and disease in agriculture. Injury Prevention Research Unit, Dunedin, 2009

OR076 Cryer C, Lovelock K, Lilley R, Davidson P, Davie G, Samaranyaka A, McBride D, Milosavljevic S, Morgaine K. Effective occupational health interventions in agriculture – Report of a survey of risk factors and exposures on farms. Injury Prevention Research Unit, Dunedin, 2009

OR077 Lovelock K, Lilley R, McBride D, Milosavljevic S, Yates H, Cryer C. Effective occupational health interventions in agriculture: Risk factors for occupational injury and disease in agriculture in North America, Europe and Australasia: A review of the literature. Injury Prevention Research Unit, Dunedin, 2009

### **Submissions**

SUB098 Lilley R. Submission to the Department of Labour on the Workplace Health and Safety Strategy, May 15, 2009

## **PRESENTATION OF NOTE**

18th Australasian Epidemiological Association Annual Scientific Meeting, Dunedin, August 30-September 1, 2009

Rebecca Lilley

*Presentation*

“Combined exposures to workplace psychosocial stressors: relationships with mental health in a sample of NZ cleaners and clerical workers”





# INTENTIONAL INJURY

Self-harm, suicidal behaviours and assault are important national priorities highlighted in New Zealand's health strategies. Their occurrence and impact on individuals and our communities were again reported in the media. The role of the internet has been highlighted as a way of increasing the risk of such violence but is also being used as a tool to deliver promising therapeutic programmes that may help to reduce the risk of violence and its related risk factors.

## SELF-HARM



### An Internet-Based Cognitive Behaviour Therapy Self-Help for Depression

Depression is a major risk factor for self-harm and the leading cause of disability. Online Cognitive Behaviour Therapy (CBT) has been demonstrated as being effective for overcoming depression. This study, known as Recovery via Internet from Depression (RID), is using a randomised controlled trial to evaluate two promising interventions.

#### **Aims:**

- ~ To adapt two existing internet-based, interactive and personalised CBT and depression literacy programmes for depression and related problems;
- ~ To explore the acceptability of the two programmes for the population as a whole and for Māori;
- ~ To conduct a randomised controlled trial to test the effectiveness of both interventions; and
- ~ To promote the results through a variety of fora.

**Project Team:** Shyamala Nada-Raja, Rob McGee, John Langley, Helen Christensen, Andrew Mackinnon, Dannette Marie, Karen Knightbridge

**Funding:** Health Research Council of New Zealand, Accident Compensation Corporation, Ministry of Health

**Progress:** Recruitment of the trial sample of at least 700 participants was completed this year. More than half of this sample was eligible for and received access to their follow-up online mental health assessment six months after commencing the trial and a third received access to their 12 month follow-up mental health assessment. The initial group of trial participants commenced their 18 month follow-up mental health assessment in late 2009.

## Protective Factors for Self-Harm

This study was designed to follow-up a birth cohort of individuals in the Dunedin Multidisciplinary Health and Development Study (DMHDS) from ages 26 to 32 years with respect to continuities and discontinuities in self-harmful behaviours, and risk and protective factors. The DMHDS is a longitudinal study of a birth cohort of 1037 people born in Dunedin between 1 April 1972 and 31 March 1973. The cohort members have been interviewed every two years from age 3 to 15 years, and again at ages 18, 21, 26 and recently at age 32 years. Supplementary data were also collected on addictive behaviours including out-of-control sexual behaviours.

### Aims:

- ~ To examine patterns of self-harmful thoughts and behaviours from ages 26 to 32 years; and
- ~ To examine factors that may increase or mitigate risk of self-harmful thoughts and behaviours from ages 26 to 32 years.

**Project Team:** Shyamala Nada-Raja, Rob McGee, Keren Skegg, John Langley

**Funding:** Health Research Council of New Zealand

**Progress:** A paper on out-of-control sexual behaviours and its associations with other sexual behaviours and mental health was published online in an international peer reviewed journal. Further analyses were conducted to examine the persistence of different types of self-harmful behaviours over a six year period, including desistance of such behaviours in adulthood. Analysis was completed for a new study to examine early predictors for well-being in adulthood and a paper was prepared for submission to a peer-reviewed journal.

## Non-Fatal Deliberate Self-Harm in the Community: Occurrence, Nature, and Risk Factors

Non-fatal self-harm is a very important risk factor for suicide. In recent years, studies have begun to explore the nature of non-suicidal self-harm in its non-fatal forms as potential risk factors for suicidal behaviours and in relation to conventional risk factors for suicidality. Self-harm comprises all behaviours defined as 'intentional self-harm' in the International Classification of Diseases, including traditional methods of suicide, self-battery and intoxication by substances.

### Aims:

- ~ To determine the frequency and nature of self-harm (suicidal, non-suicidal in intent);
- ~ To explore whether suicidal and non-suicidal self-harm are associated or whether they largely occur in separate populations;
- ~ To identify individual, familial, and social risk factors for self-harm in adulthood from self- and parent-report data gathered at previous phases of the DMHDS;
- ~ To determine which behavioural, social and environmental factors triggered or averted incidents of self-harm; and
- ~ To identify sources of help reported by individuals who engage in self-harm, their satisfaction with treatment received for deliberate self-harm (DSH) and barriers to seeking help for DSH.

**Project Team:** Shyamala Nada-Raja, Keren Skegg, John Langley

**Funding:** Health Research Council of New Zealand, Community Trust of Otago

**Progress:** A paper was submitted to a peer-reviewed journal.

## Evaluation of the Usability of Depression Websites

Many people these days access the Web for information on health. In New Zealand, nearly two-thirds of all households have access to the internet. It is therefore, important that health websites are developed with the aims of being easily accessible for a variety of potential health consumers. Although there are several mental health websites, most have not been evaluated in terms of their content reliability and effectiveness. In New Zealand there has not been any examination of the usability of such sites, particularly as they are an important component in e-therapy research for preventing mental health problems and related intentional injury.

### **Aims:**

- ~ To develop a cost-effective methodology for measuring and improving the usability of three national depression literacy web sites;
- ~ To assess the usability of the National Online Depression Initiative (developed by the Ministry of Health) web sites and a depression literacy web site developed by the Mental Health Foundation with local samples; and
- ~ To make recommendations to modify or further develop the sites to suit New Zealand users, thus making them easier to use.

**Project Team:** Karen Knightbridge, Rob Lawson, Ken Deans, Shyamala Nada-Raja

**Funding:** University of Otago

**Progress:** Data collection was completed and analysis commenced.

## **GAMBLING**

### **Gambling and Problem Gambling Behaviour and their Associations with Self-Harm**

While gambling continues to be a popular recreational activity in New Zealand, for a significant proportion it can become an addictive behaviour with serious mental health and financial consequences. This study's main aim was to examine pathways to problem gambling in a representative sample of 32 year olds from the DMHDS.

### **Aims:**

- ~ To determine childhood, adolescence, and early adulthood risk and protective factors for gambling, problem gambling and pathological gambling; and
- ~ To examine the associations between problem gambling and self-harmful thoughts and behaviours.

**Project Team:** Shyamala Nada-Raja, Alex Blaszczynski, Keren Skegg, Chikako van Koten

**Funding:** Problem Gambling Committee (PGC) through the Health Research Council of New Zealand and Ministry of Health

**Progress:** A paper was drafted for submission to a peer-reviewed journal.



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## ASSAULT

### Physical Aggression and Associated Characteristics among High School Students in Otago<sup>1</sup>

Reducing violence in interpersonal relationships, families, schools, and communities is one of the priority goals of the New Zealand Health Strategy. Physical fighting and aggressive behaviours in general were noted as serious problems in our schools. This study investigated the extent to which school and family factors could protect young people from aggression and violence in and out of the school setting.

#### Aims:

- ~ To investigate the meaning of physical aggression by year 11 high school students in Otago;
- ~ To identify associations between physical fighting and weapon carrying, and other risk behaviours and demographic characteristics (based on the DMHDS data);
- ~ To determine the prevalence of physical fighting and weapon carrying among year 11 high school students in Otago in 2005; To identify associations between physical fighting and weapon carrying and other associated factors that may increase or decrease these behaviours; and
- ~ To identify students', teachers', school counsellors', and principals' views on preventive measures for reducing physical aggression among high school students.

**Project Team:** Louise Marsh, Rob McGee, Shyamala Nada-Raja, Sheila Williams

**Funding:** University of Otago PhD Scholarship (Louise Marsh)

**Progress:** Three papers were accepted for publication by peer reviewed journals.



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<sup>1</sup> This is not managed by IPRU staff, however IPRU staff are scientific collaborators on the project.

## I-MEDIC

INTERNET MEDICAL EDUCATION FOR DOCTORS REDUCING  
INTIMATE PARTNER VIOLENCE THROUGH COLLABORATION



### Internet Medical Education for Doctors Reducing Intimate Partner Violence through Collaboration: I-MEDIC Study

Primary health care professionals are in a unique position to play a major role in preventing and managing intimate partner violence (IPV). Under the Violence Intervention Programme developed by the Ministry of Health, all New Zealand doctors are expected to screen women presenting to their practices or hospitals for IPV. This study aimed to explore practical aspects related to doctors' screening for IPV and the feasibility of providing them with better access to training programmes through the internet. These may complement existing training programmes for responding effectively to IPV in the clinical setting. Also to be tested is a survey assessing patients' attitudes to being asked by their doctors about family/partner violence and their satisfaction with any support and treatment received.

#### **Aims:**

- ~ To examine Dunedin general practitioners' (GPs) and trainee interns' (TIs) responsiveness to detecting and managing IPV;
- ~ To test and adapt an online continuing medical education intervention programme to measure changes in GPs and TIs educational outcomes in managing IPV;
- ~ To discuss with GPs and TIs the barriers they perceive in detecting and managing IPV;
- ~ To make recommendations to modify or further develop the tools to suit New Zealand GP standards and practices and the medical education curriculum; and
- ~ To use findings from this study to conduct a larger scale randomised control trial to test the adapted programmes.

**Project Team:** Shyamala Nada-Raja, Nandika Currey, Heather Dunn, Rob McGee, John Langley

**Funding:** Dunedin School of Medicine Dean's Bequest Fund

**Progress:** Data collection was completed and analysis commenced.

## PUBLICATIONS

### Thesis

TH22 Marsh L. Physical aggression among high school students in New Zealand. Thesis accepted for the degree of Doctor of Philosophy, University of Otago, Dunedin, New Zealand, 2008.

### Refereed Journals

RJ340 Marsh L, McGee R, Nada-Raja S, Williams S. Principals' and counsellors' perceptions of physical aggression among secondary school students: a New Zealand view. *NZ Journal of Education Studies* (in press)

RJ362 Marsh L, McGee R, Nada-Raja S, Williams S. Text bullying and traditional bullying among New Zealand secondary school students. *Journal of Adolescence* (in press)

RJ363 Skegg K, Nada-Raja S, Dickson N, Paul C. Perceived 'out of control' sexual behavior in a cohort of young adults from the Dunedin Multidisciplinary Health and Development Study. *Archives of Sexual Behavior* (in press)

## PRESENTATIONS OF NOTE

18th Australasian Epidemiological Association Annual Scientific Meeting, Dunedin, August 30-September 1, 2009

Shyamala Nada-Raja

*Presentation*

"Recovery via internet from depression (RID) trial: opportunities challenges and rewards"

Otago International Health Research Network Conference, Dunedin, New Zealand, November 9-10, 2009

Shyamala Nada-Raja

*Presentation*

"An injury prevention framework to address self-inflicted violence in developing countries"

"I've been made fun of ever since I can remember and they still do it today. Yah I've gotten bigger, but it still makes me mad when they do that. See, I don't make fun of anybody. I tease people. I don't really make fun of them about their learning habits cause I know how it feels to be put down a lot and I don't like that".  
(Lovell, Plavins & Cushing, 1999)

**HOW CAN WE COMBAT BULLYING AT SCHOOL?**

A comprehensive British study *The Life of a Disabled Child* found the 300 participants had one thing in common:  
"We all got picked on".  
(Watson et al., 2000, p. 13)

"Picking on" included exclusion from peer groups, being called names, being hit or teased, and having property taken or damaged. In a New Zealand study, nine out of the eleven students with disabilities interviewed described being bullied when asked about their experiences at school.  
(MacArthur & Gaffney, 2001)

**Bullying**

**MINISTRY OF EDUCATION**  
Wellington, New Zealand



# ALCOHOL-RELATED HARM

Former Surgeon General in the USA, William Foege, once described alcohol as the “AIDS of injury control” because it “lowers the defenses and immunity to injury”. In New Zealand, alcohol consumption has risen by 10% in the last decade, and the prevalence of heavy episodic drinking among youth has increased. Addressing alcohol-related harm has become a national priority. Notably, in 2009, the Law Commission undertook a once-in-a-generation review of New Zealand’s liquor laws at the behest of Government. The IPRU’s research on alcohol-related harm offers much to this process with its range of policy- and practice-relevant projects including studies of risk factors for hazardous drinking, clinical trials of interventions, evaluations of policy changes, and studies of alcohol problem regulation.

## DRINKING PATTERNS AND CONSEQUENCES

### Tertiary Student Health Project: Alcohol-Related Harmful Sexual Behaviours



As part of the Tertiary Student Health Project, web surveys were undertaken with random samples of university students throughout New Zealand in 2005, 2007, and 2009. Questionnaires included measures of drinking history, current drinking, and a range of sexual risk behaviours and harms.

#### Aims:

- ~ To estimate the prevalence of potentially harmful sexual behaviours attributed to drinking; and
- ~ To examine their relationship with current drinking, high school binge drinking and age at first drink.

**Project Team:** Jennie Connor, Kypros Kypri, Andrew Gray

**Funding:** Health Research Council of New Zealand, Alcohol Advisory Council of New Zealand

**Progress:** Analyses were conducted, a paper was submitted to a peer-reviewed journal, and findings were presented at two international conferences.

**Findings:** Of respondents who had drunk any alcohol in the preceding 4 weeks, 5% of women and 8% of men reported unsafe sex as a result of drinking, 3% of women and 4% of men reported having sex they were unhappy about at the time, and 8% of women and 9% of men reported sex they later regretted. One in five women (21%) and 12% of men reported unwanted sexual advances due to someone else’s drinking, and about 0.5 % of both men and women reported sexual assault. Each of these outcomes was significantly associated with current level of drinking, and this was strongest for unsafe sex. Binge drinking at high school and early age at first drink were also associated with each outcome, and these associations were only partly explained by current patterns of drinking.

## Gender, Drinking Patterns and Alcohol-Related Harm

Much of the burden of alcohol-related harm in interpersonal relationships is uncounted and poorly understood. In 2007, a nationally representative survey was conducted of 2000 adults using a postal questionnaire adapted from *Gender, Alcohol and Culture: An International Study* (GENACIS). This project examines gender differences in alcohol consumption and patterns of alcohol-related behaviour in close relationships.

#### Aims:

- ~ To measure alcohol consumption, drinking patterns, and drinking environments in a representative sample of New Zealanders (aged 18-70 years), and to compare patterns in men and women;
- ~ To examine the association of hazardous drinking patterns with attitudes to drinking and the presence or absence of informal controls on drinking;
- ~ To estimate the prevalence of alcohol-related problems with sexual health and behaviour, and aggression in the general population; and
- ~ To contribute data to *Gender, Alcohol and Culture: An International Study* (GENACIS).

**Project team:** Jennie Connor, Kypros Kypri, Kimberly Cousins, Jess Meiklejohn

**Funding:** University of Otago Research Grant, Dunedin School of Medicine ‘Start Up Award’ and Bequest Funds, Alcohol Advisory Council of New Zealand.

**Progress:** Patterns of drinking amongst intimate partners, informal controls on drinking, and response bias in alcohol surveys were analysed as were data on partner aggression. Findings of the latter were presented at a conference. NZ survey data contributed to the international project and published as part of a multinational comparison.

## **ALCOHOL PROBLEM REGULATION**

Laws governing access to, and promotion of, alcohol have been relaxed over the past 20 years in New Zealand and there has been devolution of responsibility to local government to regulate the sale of alcohol. The effects of these changes have relevance to New Zealand and other countries. There is little evidence at present, to guide the development of healthy policy at the local level.

### **Local Government Alcohol Policy**

Since 1989, local governments in New Zealand have been responsible for administering and enforcing aspects of legislation concerning the sale of alcohol. The rationale behind this devolution of responsibility from central government was that it would facilitate greater community control over the sale of alcohol. More recently, local governments were given the power to adopt bylaws to control alcohol in public places, protect the public from nuisance, and protect and promote public health. These statutory responsibilities and legislative powers provide local governments with the opportunity to adopt policies to restrict the availability of alcohol in their communities. These can complement other local strategies aimed at reducing alcohol-related harm.

#### **Aims:**

- ~ To measure public sentiment on alcohol issues in a diverse set of New Zealand communities;
- ~ To identify factors underlying public sentiment toward local government alcohol policies;
- ~ To examine the association between public sentiment and local government policies; and
- ~ To investigate local authority responses to alcohol issues in selected communities, and the process by which alcohol policies and strategies are developed and adopted.

**Project Team:** Brett Maclennan, Kypros Kypri, John Langley, Robin Room

**Funding:** Accident Compensation Corporation PhD scholarship (Brett Maclennan)

**Progress:** Case studies investigating the response of selected local governments to community alcohol issues were conducted. This involved document analysis and face-to-face interviews with key informants. Analyses of interview and community survey data were performed and results were written-up.



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## Geospatial Aspects of Alcohol-Related Harm

There is a large international evidence-base on the association between the physical availability of alcohol and levels of alcohol-related harm. This project provided evidence to inform policy and practice aimed at modifying the environment to reduce alcohol-related harm.

### Aims:

- ~ To investigate the quality of administrative data needed to examine the association between alcohol outlet locations and the incidence of assault; and
- ~ To examine the association between area deprivation and alcohol outlet density.

**Project Team:** John Langley, Kypros Kypri, Peter Whigham, Geoff Hay

**Funding:** Distinguished Researcher Fund, Dunedin School of Medicine

**Progress:** Papers were published in peer-reviewed journals.

**Findings:** Findings have been presented in previous annual report.

## Alcohol Outlet Accessibility, Area Deprivation, and Adult Drinking Patterns

A second project combined the geocoded alcohol outlet data with individual level data from the GENACIS project (above), to investigate harm associated with outlet density.

### Aims:

- ~ To examine the association of outlet density with alcohol consumption and self-reported alcohol-related harm over the whole of New Zealand; and
- ~ To investigate the role of individual and neighbourhood socioeconomic status in these relationships.

**Project Team:** Jennie Connor, Kypros Kypri, Melanie Bell, Kimberly Cousins

**Funding:** Lotteries Health

**Progress:** The project was completed. A paper was submitted to a peer-reviewed journal and a presentation made at an international conference.

**Findings:** No statistically significant association was seen between outlet density and either average alcohol consumption or risky drinking. Density of off-licences was positively associated with binge drinking, and density of all types of outlet was associated with alcohol-related harm scores, before and after adjustment for socioeconomic status.



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## Evaluation of *Campus Watch*

Campus Watch, a community-based initiative implemented by the University of Otago, was started in 2007 to improve the safety of the North Dunedin area by reducing alcohol-related harm and social disorder. This evaluation, which includes process, impact and outcome measures, compares the programme implementation area (North Dunedin) with similar high-risk communities across the country (other university campus areas), as well as with South Dunedin, a non-student area. Surveys of North Dunedin residents and businesses and South Dunedin residents were conducted in 2008 and repeated in 2009.

### **Aim:**

To determine:

- ~ How the initiative has been implemented;
- ~ What the mechanisms are by which the initiative has affected the behaviour of individuals and the safety of the community as a whole; and
- ~ What impact the initiative has had on specific outcome variables of alcohol-related harm and social disorder.

**Project Team:** Kimberly Cousins, Jennie Connor, Kypros Kypri

**Funding:** Accident Compensation Corporation PhD scholarship (Kimberley Cousins); National Drug Policy Discretionary Fund, Interagency Committee on Drug Policy; Alcohol Advisory Council of New Zealand

**Progress:** All primary data collection, comprising two waves of community surveys, and a web-based survey of students at eight university campuses was completed. A paper summarising the project's rationale and methods was presented at two conferences and submitted to a peer-reviewed journal.

## Submissions on the Sale of Liquor Amendment Bill to Increase Minimum Purchase Age

In 2005 a bill was introduced to the New Zealand Parliament to increase the minimum purchase age for alcohol from 18 to 20 years, and submissions were invited from interested parties. This study sought to characterise the arguments tendered for and against the proposal according to who made them.

### **Aims:**

- ~ To determine the degree of support in submissions for increasing the minimum purchase age; and
- ~ To characterise arguments used for and against the law change according to who made them.

**Project Team:** Kypros Kypri, Bob Voas, John Langley, Luke Wolfenden

**Funding:** National Institute for Alcohol Abuse and Alcoholism, USA

**Progress:** Independent raters examined all 178 submissions, and coded them according to the source, whether for or opposed, and the arguments employed. The results have been summarised.



## **SCREENING AND BRIEF INTERVENTION FOR UNHEALTHY ALCOHOL USE**

### **e-SBI National Trial**

The IPRU has conducted three randomised controlled trials of electronic screening and brief intervention (e-SBI) in the university student health service. This intervention, which takes 10 minutes to deliver, was found to produce a reduction in unhealthy alcohol use lasting for at least 12 months. A trial of e-SBI conducted at an Australian university showed that e-SBI was effective when administered pro-actively, i.e., on the basis of invitations to participate in screening delivered by e-mail. This approach creates an opportunity for broad implementation but it was not known whether it was effective across a range of campus settings and among both Māori and non-Māori students in New Zealand.

#### **Aim:**

To determine the effectiveness of e-SBI at multiple universities for Māori and non-Māori university students.

**Investigators:** Kypros Kypri, Jim McCambridge, John Cunningham, Hank Weiss

**Funding:** Alcohol Advisory Council of New Zealand

**Progress:** Funding was obtained, a research assistant recruited, a trial protocol and a specification of the web instrument were produced, and consultation was undertaken with universities.

## **PUBLICATIONS**

### **Refereed Journals**

RJ357 Foxcroft D, Kypri K, Simonite V. Bayes Theorem to estimate population prevalence from Alcohol Use Disorders Identification Test (AUDIT) scores. *Addiction*, 2009, 104 (7):1132-1137

RJ360 Hay G, Whigham P, Kypri K, Langley J. Neighbourhood deprivation and access to alcohol outlets: a national study. *Health & Place*, 2009, 15(4):1086-1093

RJ370 Paschall M, Grube W, Kypri K. Alcohol control policies and alcohol consumption by youth: a multi-national study. *Addiction*, 2009, 104:1849-1855

RJ372 Kypri K, Hallett J, Howart P, McManus A, Maycock B, Bowe S, Horton N. Randomized controlled trial of proactive web-based alcohol screening and brief intervention for university students. *Arch Intern Med*, 2009, 169(16):1508-1514

### **Submissions**

SUB100 Kypri K, Connor J, Langley J. Submission to Justice and Electoral Committee. Sale and supply of Liquor and Liquor Enforcement Bill, May, 2009

SUB103 Kypri K, Connor J, Langley J. Submission to Law Commission. Alcohol in our lives: issue paper on the reform of New Zealand's liquor laws. November, 2009

## PRESENTATIONS OF NOTE

Vice-Chancellor's Sponsored Welcome Back Lecture Series, University of Otago, February 19, 2009

Kypros Kypri

*Presentation*

"Reflections on a decade of research on New Zealand tertiary student drinking: 10 years of Otago Research"

35th Annual Alcohol Symposium, Copenhagen, Denmark, June 1-5, 2009

Kimberly Cousins

*Presentation*

"Reducing alcohol-related harm and social disorder in the university setting: a framework for evaluation"

Centre for Addiction and Mental Health, Toronto, Canada, June 26, 2009

Kypros Kypri

*Invited speaker*

"Dying for a drink in the land of the long white cloud: reflections on the effects and politics of lowering the minimum purchase age in New Zealand"

18th Australasian Epidemiological Association Annual Scientific Meeting, Dunedin, August 30-September 1, 2009

Jennie Connor

*Presentations*

"Alcohol outlet density, levels of drinking and alcohol-related harm in New Zealand"

"Alcohol and partner aggression in NZ: a national survey"

Kypros Kypri

*Presentation*

"Alcohol research and public policy"

Public Health Association Conference, Dunedin, September 1-4, 2009

Kimberly Cousins

*Presentation*

"Reducing alcohol-related harm and social disorder in the university setting: A framework for evaluation"

National Conference for Māori doctoral students, Puketeraki Marae, Otago, October 8-11, 2009

Julia Wilson

*Presentation*

"Hazardous drinking among Māori university students: approaches and challenges"

Te Toi Tauira mo te Matariki, Waipapa Marae, University of Auckland, November 17-19, 2009

Julia Wilson

*Presentation*

"Hazardous drinking among Māori university students: approaches and challenges"



# BIOMECHANICS OF INJURY

All mechanical injury arises from the body's incapacity to handle forces and motion imposed on tissues. Biomechanics, the study of forces and motion in the human body, allows us to understand the injury process and can lead to alternative means of assessing risk factors and developing new injury prevention strategies. At the IPRU, this approach contributes to several areas of research including intentional injury, child and adolescent injury, sport and recreational injury and occupational injury.

## FORENSIC BIOMECHANICS

The main goal of forensic science is to interpret the circumstances of an injury after the event. One of the major challenges in this is to distinguish whether the death or injury was accidental, intentional or suicidal. There is growing recognition of the need to be able to more rigorously analyse the roles of individuals implicated in the injury or death, the circumstances of the injury, and the degree of force required to produce the injury to identify intent.

### **Aim:**

To explore the use of biomechanical techniques to recreate impact injury events and determine method and intent of injury.

**Project Team:** Peter Davidson, Michael Taylor, Jules Kieser, Suzanne Wilson

**Funding:** Dunedin School of Medicine Bequest Fund, ESR Capability Fund, Department of Preventive and Social Medicine PBRF Fund

**Progress:** To date, this research programme has focussed on examining the applicability of mathematical modelling techniques to the assessment of specific blunt force and ballistic soft tissue impacts. The ability of a simple rheological model to replicate blunt force soft tissue impacts, such as in suspected child abuse cases, has been assessed. Mechanisms which could potentially contribute to the backspatter observed with some ballistic woundings have been identified and physical and mathematical modelling techniques to assess their involvement are being investigated. Two papers were prepared for submission to a peer-reviewed journal, and a presentation made to an international conference.

**Findings:** A simple rheological model of blunt force trauma did not behave realistically on impact, most likely due to the absence of a shear strain component. This finding suggests that it may be better to use an approach such as finite element modelling to replicate these injuries.



## BIOMECHANICAL ANALYSIS OF ARM FRACTURE AND PLAYGROUND SURFACES

Fractures of the distal forearm are the leading type of paediatric fracture and the most common playground injury. Despite efforts to reduce their incidence, including the introduction of playground surface standards requiring surfaces to meet a Head Injury Criterion (HIC) score, the occurrence of such arm fractures is increasing. The current research programme utilises a computer simulation model to enhance our understanding of the impact process and to identify aspects of impact that contribute to injury risk. This approach is expected to lead to more effective methods for controlling the risk of arm fracture.

### **Aim:**

To improve the effectiveness of risk control methods, such as playground surfaces, with a view to reducing the arm fracture risk for children falling from playground equipment.

**Project Team:** Peter Davidson, Suzanne Wilson, David Chalmers, Barry Wilson, Andrew McIntosh, David Eager

**Funding:** Health Research Council of New Zealand, New Zealand Lottery Grants Board, Department of Preventive and Social Medicine PBRF Fund

**Progress:** Use of an energy approach to assess playground surfaces has been developed further. When a child falls from playground equipment and impacts the surface with an outstretched arm, the mechanical properties of the impacted surface and the impacting arm contribute to fracture risk. At the point of impact, all of the child's kinetic energy will be converted to other forms of energy. To reduce injury risk, ideally all of this energy should be absorbed by the surface on impact rather than by the wrist, and then be dissipated away from the child rather than returned as rebound. Analysing energy flow and exchange in the surface and falling body during impact and rebound may therefore allow identification of poor surfaces and prediction of injury risk. A 2-mass rheological computer model and data from headform drop tests and gymnasts performing hand-landing exercises and from gymnastic mats and in situ playground surfaces have been used to examine the impact process. Two papers examining the use of this energy approach were published in peer-reviewed journals, and two more were prepared for publication.

**Findings:** Energy flows within different impacted surfaces, and thus within bodies impacting these surfaces, can differ markedly. Analysis of energy transfers has provided information on surface properties and the impact process not available from standard playground tests. This approach has identified potentially harmful surface energy flow characteristics, and types of surfaces which minimise return of energy to the impacting child.

## **NEW ZEALAND DEFENCE FORCE LOWER LIMB INJURY PREVENTION PROJECT**

Concerns about the apparently high incidence of lower limb injuries occurring during military training led to the New Zealand Defence Force approaching the IPRU to devise a strategy for reducing these injuries.

**Aim:**

To describe the incidence and circumstances of lower limb injuries within the New Zealand Defence Force, and to devise and evaluate a strategy to reduce these injuries.

**Investigators:** Peter Davidson, Suzanne Wilson, David Chalmers, Barry Wilson, David McBride, Gabrielle Davie

**Funding:** New Zealand Defence Force

**Progress:** The project was completed and a paper published in a peer-reviewed journal.

## **PUBLICATIONS**

**Refereed Journals**

RJ354 Davidson PL, Wilson SJ, Wilson BD, Chalmers DJ. An approach to modelling impact energy absorption by surfaces. *Journal of Applied Biomechanics*, 2009, 25:351-359

RJ368 Davidson, PL, Wilson SJ, Chalmers DJ, Wilson BD, McBride D. Examination of interventions to prevent common lower-limb injuries in the New Zealand Defence Force. *Military Medicine*, 2009, 174:1196-1202

RJ373 Davidson PL, Wilson SJ, Wilson BD, Chalmers DJ. Energy analysis of wrist impact and surface rebound. *Computer Methods in Biomechanics and Biomedical Engineering* (in press)

## **PRESENTATION OF NOTE**

7th Australian Biomechanics Conference, Southport, Australia, November 29-December 1, 2009

Peter Davidson

*Presentation*

“A rheological model of blunt force trauma”

# DISABILITY AND REHABILITATION

The burden of injury in terms of deaths and disability is considerable with the World Health Organisation (WHO) attributing 9% of deaths and 12% of the 'burden of disease' to injury. Unintentional injury has been found to cause 13-18% of all disabilities world-wide. Much research has focused on the accurate description of the causes of injury, and the identification and evaluation of strategies for reducing injury and improving survival. Increasingly researchers, and the communities supporting their research, are interested in evaluating and understanding the physical, psychosocial and environmental consequences, and personal and health service costs, of injury for injured survivors and their families. This approach reflects the IPRU research focus for disability and rehabilitation.

## PROSPECTIVE OUTCOMES OF INJURY STUDY (POIS)

This study aims to recruit 2500 New Zealanders soon after they have been injured. It will follow them for a minimum of 12 months to describe their experiences and outcomes, and to determine the factors predicting outcomes after injury. Recruitment will be through the Accident Compensation Corporation (ACC) entitlement claimant register. Participants are being recruited from five regions: Auckland City, Manukau City, Gisborne, Otago and Southland, to ensure inclusion of people with a range of ethnic, socioeconomic and rural/urban characteristics.

### Aims:

- ~ To quantitatively determine the injury, rehabilitation, personal, social and economic factors leading to disability outcomes following injury in New Zealand; and
- ~ To qualitatively explore people's lived experiences and perceptions of injury-related disability outcomes.

**Project Team:** Sarah Derrett, John Langley, Brendan Hokowhitu, Shanthi Ameratunga, Paul Hansen, Gabrielle Davie, Emma Wyeth, Rebbecca Lilley, Mary Butler and Sarah Colhoun

**Funding:** Health Research Council of New Zealand, Accident Compensation Corporation, Eru Pomare Post-doctoral Fellowship (Emma Wyeth), Accident Compensation Corporation Post-doctoral Fellowships (Rebecca Lilley and Mary Butler)

**Progress:** Recruitment to the quantitative component of POIS was completed with more than 2800 people included. Interviewers use repeat computer-assisted telephone interviews (CATI) to collect information at approximately 5 and 12 months after injury. Analysis commenced for the two qualitative studies (Māori and non-Māori) involving in-depth and in-person interviews undertaken approximately 6 and 12 months after injury.



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## **DISABLED BY ILLNESS OR INJURY: DOES IT MATTER?'**

This project investigates discrepancies in levels of health and social service provision and income support available to individuals in New Zealand who have a disability caused by illness, compared with individuals who are disabled as a result of an injury. The effects of this discrepancy on the economic and social outcomes of people in the two groups – illness and injury – will be compared and described. Participants, aged 18-64 years, living in Auckland, Manukau, Gisborne, Otago and Southland with a diagnosis of stroke have an interview at 3.5 and 12 months after stroke onset. This information will be compared to that obtained from a matched sample from the Prospective Outcomes of Injury Study (POIS) who have had an injury. In addition, postal questionnaires will be sent to nominated main informal carers living in the same household as the person with the disability who requires personal care, 12 months after stroke or after injury.

### **Aims:**

- ~ To describe the health care, social services and income support received by people who (a) are admitted to a rehabilitation unit with stroke; or (b) have an injury resulting in a similar level of functional impairment, over a 12 month period;
- ~ To compare the effect of different levels of support received by people with stroke and injury on their outcome at 12 months, in terms of socioeconomic conditions of the individual and family and life satisfaction; and
- ~ To compare the effects of different levels of support received by people with stroke and injury in their informal carers at 12 months, in terms of socioeconomic situation and personal wellbeing.

**Project Team:** Sue McAllister, Sarah Derrett, Rick Audas, Charlotte Paul, Peter Herbison, Valery Feigin

**Funding:** University of Otago Research Grant, Dunedin School of Medicine Deans Bequest Fund, University of Otago Health Sciences PhD Scholarship (Sue McAllister)

**Progress:** Recruitment of participants with a stroke began in June 2009 and approximately a third of those required for the study agreed to participate.



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<sup>1</sup> This is not managed by IPRU staff, however IPRU staff are scientific collaborators on the project.

## LONGITUDINAL STUDY OF THE LIFE HISTORIES OF PEOPLE WITH SPINAL CORD IMPAIRMENT<sup>1</sup>

About 70-80 New Zealanders a year suffer spinal cord impairment (SCI): two in every three due to injury, and one in three due to disease. This study is prospectively investigating the life histories of people who have such impairment. All New Zealand residents/citizens aged 16-64 years admitted to either Burwood or Auckland Spinal Unit on or after 1 August 2007 are eligible to participate in this study, where the cause of SCI was either an injury or disease process (for example, embolism or cancer).



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### Aims:

- ~ To explore the interrelationship(s) of body, self and society for people with SCI and how these interrelationships shape their life chances, life choices and subjectivity; and
- ~ To investigate how entitlement to rehabilitation and compensation through ACC (where injury was the cause of SCI) affects socioeconomic and health outcomes compared to outcomes for people not covered by the ACC (e.g. where disease/illness was the cause of SCI).

**Project Team:** Martin Sullivan, Charlotte Paul, Sarah Derrett, Peter Herbison, Peina Tamou, Maureen Crawford, Karla Cooper, Karen Marshall, Carolyn Beaver, Pamela Fergusson

**Funding:** Health Research Council of New Zealand

**Progress:** Recruitment for the qualitative component of this study is nearly completed with 104 participants completing the first interview, nearly half the second interview and the third stage of interviews commenced (24 months after the event). The first qualitative interviews conducted with people who have been discharged from a spinal unit were completed. Two focus groups were established to explore the experience of rehabilitation.

## INTERNATIONAL SURVEY OF MUSCULOSKELETAL DISORDERS AND RELATED DISABILITY<sup>1</sup>

Musculoskeletal disorders (MSDs), including back, neck and arm pain, are the most frequently occurring occupational diseases in New Zealand. This project comprises the New Zealand arm of an international study – the International Survey of Cultural and Psychosocial Influences on Musculoskeletal Symptoms and Disability (CUPID).

### Aims:

- ~ To identify the prevalence of MSDs in three occupational groups (nurses, postal and office workers) in New Zealand, and to examine the association with risk factors; and
- ~ To identify factors associated with both ongoing disability, and new MSDs, over the course of one year.

**Project Team:** David McBride, Sarah Derrett, Helen Harcombe, Peter Herbison, Sarah Dean, David Coggon

**Funding:** Health Research Council of New Zealand (IIOF), Health Research Council of New Zealand Occupational Health Research Career Development Award (Masters Scholarship – Helen Harcombe), STAR Project (Strategy To Advance Research) (PhD Scholarship – Helen Harcombe)

**Progress:** Analysis has been undertaken on the baseline data. One paper has been published and another is in press presenting some key results. Follow-up survey data have been collected on MSDs and demographic, physical and psychosocial factors among randomly selected nurses, postal workers and office workers. This component of the study has had an 87% follow-up rate.

<sup>1</sup> This is not managed by IPRU staff, however IPRU staff are scientific collaborators on the project.

## EQ-5D GENERAL HEALTH STATUS MEASURE



The EQ-5D is widely-used, nationally and internationally, as a measure of general health status. It is one of the measures internationally recommended for use in studies of injury outcome.

### EQ-5D Translation into *Te Reo Māori*

The Prospective Outcomes of Injury Study (POIS) developed questionnaires for administration in *Te Reo Māori* (the Māori language). Formal translation of the EQ-5D, within the POIS questionnaires, was required by the EuroQol Group Translation Committee.

**Project Team:** Sarah Derrett, Craig Hall, Wahineata Smith, Maruia Jensen, Maia Wikaira

#### **Aims:**

- ~ To develop a *Te Reo Māori* version of the EQ-5D; and
- ~ To have this version approved as an official translation by the EuroQol Translation and Executive Committees.

**Funding:** University of Otago

**Progress:** The translation received EuroQol Committee approval as the official Māori language version of EQ-5D in February 2009.

### The EQ-5D and Injury Study – A Meta-Analysis

More information is required about injury survivors' pathways to recovery and outcomes experienced given the burden of injury identified internationally. The recommendation has been made to include general measures of health status, such as the EQ-5D, in studies of injury outcome. A systematic literature review revealed considerable heterogeneity within, and between, published injury outcome data sets using the EQ-5D. Consequently, a meta-analysis based on anonymous individual-person data to provide descriptive data sets of injury outcome EQ-5D norms for injured populations and specific injury-type sub-groups was undertaken.

#### **Aims:**

- ~ To invite researchers who have used the EQ-5D in studies of injury outcome to join an "EQ-5D and Injury Outcome Collaborators Group" and share anonymous individual person EQ-5D data; and
- ~ To undertake a meta-analysis of EQ-5D and injury outcomes using individual person EQ-5D data.

**Project Team:** James Black, Peter Herbison, Sarah Derrett, Ronan Lyons and Suzanne Polinder

**Funding:** EuroQol Executive Committee, EuroQol Foundation

**Progress:** From a potential pool of 13,785 persons across 39 datasets, individual patient data from 10,496 injured persons was sourced from 18 discrete datasets. Predictions were fitted to 25 of the 39 injury categories, covering a wide spectrum of injury types. Predictions were produced for the five EQ-5D dimensions and VAS at 3, 30, 120 and 360 days after injury. Figures were also produced of recovery pathways for different injury categories across the facets of the EQ-5D for the first year after injury.



## MOTORCYCLE INJURY OUTCOME STUDY (MINOS)

There is a clear indication that both rates and costs of motorcycle injury have increased significantly in recent years. This developmental study aimed to recruit more than 300 New Zealanders from a random sample of 1000 motorcyclists around the country who were injured in a motorcycle crash during 2007. Recruitment was through the ACC entitlement claimant register for motor vehicle crashes.

### Aims:

- ~ To increase understanding of the outcomes of motorcycle injury and the impact that this has on participation in paid employment and other valued activities;
- ~ To understand factors influencing riding and return to riding after a motorcycle crash; and
- ~ To develop new questions for inclusion in subsequent surveys of injured motorcyclists.

**Project Team:** Mary Butler, Sarah Derrett, Dorothy Begg

**Funding:** Accident Compensation Corporation Post-Doctoral Research Fellowship (Mary Butler).

**Progress:** In the current climate it is timely to look at the social and financial costs of motorcycle injury and this year we obtained ethical permission from the Multi Region Ethics Committee and the ACC Ethics Committee. The questionnaire was developed and trialed before posting to motorcyclists injured in 2007, and 455 completed questionnaires; a 54% participation rate from those eligible (n=837). Data entry was nearly completed.



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## PUBLICATIONS

### Refereed Journals

RJ358 Derrett S, Bevin T, Herbison P, Paul C. Access to elective surgery in New Zealand: considering equity and the private and public mix. *International Journal of Health Planning and Management*, 2009, 24(2):161-171

RL369 Derrett S, Black J, Herbison GP. Outcome following injury: a systematic literature search of studies using the EQ-5D. *Journal of Trauma*, 2009, 67(4):883-890

RJ359 Derrett S, Langley J, Hokowhitu B, Ameratunga S, Hansen P, Davie G, Wyeth E, Lilley R. Prospective Outcomes of Injury Study. *Injury Prevention*, 2009, 15(5):351

RJ367 Derrett S, Walley G, Bridgman S, Richards P, Maffulli N. Magnetic resonance imaging, knee arthroscopy and clinical decision-making: a descriptive study of five surgeons. *International Journal of Technology Assessment in Healthcare*, 2009, 25(4):577-583

RJ361 Harcombe H, McBride D, Derrett S, Gray A. Prevalence and impact of musculoskeletal disorders in New Zealand nurses, postal workers and office workers. *Australian & New Zealand Public Health*, 2009, 33(5):437-441

## PRESENTATIONS OF NOTE

NZ Rehabilitation Association Conference, Queenstown, July 22-25, 2009

Rebecca Lilley

*Presentation*

“Work-related injury in the Prospective Outcomes of Injury Study”

9th National Conference on Injury Prevention and Safety Promotion, Melbourne, Australia, July 26-28, 2009

James Black

*Presentation*

“Normative quality of life outcomes following injury via an individual patient data meta-analysis of studies using the EQ-5D”

Rebecca Lilley

*Presentation*

“Work-related injury in the Prospective Outcomes of Injury Study (POIS)”

Emma Wyeth (presented by Sarah Colhoun)

*Poster*

“Indigenous engagement in the development of a national injury study”

1st International Congress on Clinical Neuroepidemiology, Munich, Germany, August 27, 2009

Mary Butler

*Poster*

“Prospective Outcomes of Injury Study (POIS): provisional results from phase one of a qualitative study”

18th Australasian Epidemiological Association Annual Scientific Meeting, Dunedin, September 1, 2009

James Black

*Presentation*

“Burden on injury as measured by the EQ-5D: an individual patient data meta-analysis”

Rebecca Lilley

*Presentation*

“Work-related injury in the Prospective Outcomes of Injury Study (POIS): provisional results”

Celebrating Nursing Research: Opening Doors Conference, Nursing Research Section New Zealand Nurses Organisation, Wellington, November 20, 2009

Helen Harcombe

*Presentation*

“Musculoskeletal disorders and related disability in New Zealand nurses, postal workers and office workers”

Rehabilitation and Disability Research Theme “Growing a Rehabilitation and Disability Research Community” Colloquium, Dunedin, November 23, 2009

Sue McAllister

*Presentation*

“Disabled by illness or injury: does it matter?”

“Rethinking Community in Contemporary Anthropology” Association of Social Anthropologists of Aotearoa New Zealand, Picton, December 13-15, 2009

Mary Butler

*Presentation*

“Justice and practice of care: a literary ethnography”

# CONTRIBUTIONS TO INJURY CONTROL AND PUBLIC HEALTH

IPRU's research related to specific funded project areas has been presented earlier in this report, however some of its work is outside these specific projects. Other contributions relate to the public health community's need for reliable information on injury, the importance of maintaining a dialogue on injury prevention in relation to other health issues, and working internationally on injury prevention as a whole. IPRU staff have contributed directly to organising conferences, presenting seminars and lectures, serving on boards and on advisory panels both at a national and international level and collaborating in other areas of research.

## **PUBLIC INFORMATION, ADVICE AND SUPPORT**

IPRU Website: [www.otago.ac.nz/ipru](http://www.otago.ac.nz/ipru)

The IPRU website provides access for New Zealand practitioners, researchers, and policy makers to current research being undertaken at the IPRU. It also provides access to Health Information Service injury data. Links to other sites, both national and international that are relevant to injury prevention, are also available on-line.

## **NIQS**

NIQS, IPRU's National Injury Query System provides accessible search facilities for consistent injury data for New Zealand from the New Zealand Health Information Service. Visitors to the site can select attributes about which they want information regarding New Zealand injury statistics for minor research, policy and programme development. There are a number of limitations in using the injury data available and IPRU has been pleased to be able to offer its years of experience in working with this dataset through this contract with the Ministry of Health.

[StatsEnquiry@ipru.otago.ac.nz](mailto:StatsEnquiry@ipru.otago.ac.nz)

A few of the queries that practitioners, policy makers, students and members of the public have, cannot be answered directly from NIQS. Requests for these can be sent to [StatsEnquiry@ipru.otago.ac.nz](mailto:StatsEnquiry@ipru.otago.ac.nz) for personalised assistance. Again, the IPRU is able to assist through a contract with the Ministry of Health.

## **NZIPS CHARTBOOKS OF SERIOUS INJURY OUTCOME INDICATORS**

Each year the New Zealand Injury Prevention Strategy (NZIPS) Secretariat has commissioned IPRU to produce Chartbooks to provide trends for fatal injury, and indicators for serious non-fatal injury in New Zealand. The all-population chartbook was first produced and published in January 2006. This work has been funded by the Accident Compensation Corporation. The following are available from the NZIPS website <http://www.nzips.govt.nz/resources/publications.php>:

Chartbook of the New Zealand Injury Prevention Strategy Serious Injury Outcome Indicators for Māori; 1996-2007

Chartbook of the New Zealand Injury Prevention Strategy Serious Injury Outcome Indicators; 1994-2007

Chartbook of the New Zealand Injury Prevention Strategy Serious Injury Outcome Indicators for Children 1994-2007

## PRESENTATIONS OF NOTE

Most of IPRU's "Presentations of Note" have been identified with specific research projects, but the following lie outside those areas.

Public Health Seminar, Department of Preventive and Social Medicine in association with the Public Health Association Otago/Southland, University of Otago, Dunedin, March 12, 2009

Jennie Connor

*Presentation*

"Sleep and car crash injury"

18th Australasian Epidemiology Association Annual Scientific Meeting (AEA), Dunedin,

August 31-September 1, 2009

Hank Weiss

*Presentation*

"Development of the US injury research agenda with ramifications for New Zealand"

Public Health Association (PHA) Conference, Dunedin, September 1-4, 2009

Hank Weiss

*Presentation*

"Research and values: the underpinnings of public health practice"

Public Health Association (PHA) Conference, Dunedin, September 1-4, 2009

Workshop: "How safe is too safe? Public health, paternalism and the nanny state"

*Presenter:* Hank Weiss

*Chair:* Jean Simpson

"Weaving the Strands 2009", Injury Prevention Network of Aotearoa NZ (IPNANZ) Conference, Auckland,

October 7-9, 2009

Hank Weiss

*Presentations*

"Who killed Dr Allan Frederick Moore? An injury prevention mystery and lesson"

"Maternal and foetal injury – understanding and tracking the hidden epidemic"

## VISITOR'S SEMINAR

The IPRU was delighted to host Dr Sarah J. Jones from Cardiff University, Wales, during her visit in May.

Dr Jones presented the following seminar May 26, 2009:

"Inequalities in adolescent assault injuries"

## RESEARCH SEMINARS

IPRU staff contributed to research seminars within its own, and other University of Otago departments.

General Practice: February 10, 2009

Shyamala Nada-Raja

*Presentation*

"I-MEDIC Internet medical education for doctors reducing intimate partner violence through collaboration"

Women and Children's Health: June 25, 2009

Shyamala Nada-Raja

*Presentations*

"I-MEDIC Internet medical education for doctors reducing intimate partner violence through collaboration"

"Using web-based interventions for injury prevention: lessons from practice to address self-harm – The RID Trial"

Preventive and Social Medicine: July 16, 2009

IPRU Research Projects

John Langley

“Current HRC programme grant projects: background to the programme grant”

“Prospective Outcomes of Injury Study (POIS)”

Shyamala Nada-Raja

“Recovery via internet from depression (RID)”

Dorothy Begg

“New Zealand Drivers Study (NZDS)”

Preventive and Social Medicine: September 16, 2009

Shyamala Nada-Raja & Nic Mortland (HTV)

*Presentation*

“Recruiting participants: innovative ways to use technology”

## **CONTRIBUTIONS TO TEACHING**

IPRU is a research unit, but its staff also contribute to teaching within its own and other academic departments, particularly in post-graduate studies.

### **Shyamala Nada-Raja**

New Zealand College of Clinical Psychologists, Dunedin

“Recovery via internet from depression (RID) trial: opportunities, challenges and rewards”

January 31 – February 1, 2009

Continuing Medical Education Research Seminar for General Practitioners, Dunedin

“An overview of the RID Trial and its relevance for general practitioners and their patients”

“An overview of the I-MEDIC study of a web-based intervention for doctors to reduce partner violence”

March 10, 2009

### **Jean Simpson**

Dept of Women’s and Children’s Health: Community Child Health (CHHX701)

“Unintentional injury”

April 15 and September 9, 2009

Health Studies: Research Design and Evaluation (HASC411)

“Key conceptual approaches and issues in qualitative research”

May 13, 2009

Dept of Women’s and Children’s Health: Fifth Year Integrative Day

“Childhood injury prevention”

August 18, 2000

## **EXTERNAL REPRESENTATION**

### **Dorothy Begg**

Member of Editorial Advisory Board: Accident Analysis and Prevention  
Member of the Editorial Board: Journal of Safety Research  
Member of the International Advisory Group to the US National Safety Council on “Novice Teen Driving: Graduated Driver Licensing and Beyond”  
National Executive Member: Australasian College of Road Safety: New Zealand Chapter

### **Colin Cryer**

Associate Editor: Injury Prevention journal  
Co-convenor: International Collaborative Effort on Injury Statistics (ICE), Injury Indicators Group  
Member of the Documenting Core Injury Datasets Working Group Statistics New Zealand

### **Peter Davidson**

Honorary Advisor: Royal Society of Prevention of Accidents, Playsafe, UK  
Member of the Editorial Board: Journal of Science and Medicine in Sport  
Member of the Editorial Board: Open Biomedical Engineering Journal  
Research Associate: Institute of Sport and Recreation Research New Zealand, AUT

### **Sarah Derrett**

Editorial Board: International Journal of Health Planning and Management  
Member of the Management Committee, University of Otago Rehabilitation and Disability Research Theme  
Member of the Ministry of Health Lower South Regional Ethics Committee  
Member of the Scientific Committee EuroQol Group

### **Pauline Gulliver**

Executive member of the Australasian Mortality Data Interest Group  
Member of Statistics New Zealand Data Documentation Work Group  
Member of Statistics New Zealand Injury Outcome Monitoring Work Group

### **Kypros Kypri**

Advisor: WHO Reference Group on Alcohol Epidemiology  
Associate Editor: Alcohol and Alcoholism journal

### **John Langley**

Member of the Injury Surveillance Ministerial Advisory Panel (ISMAP)

### **Shyamala Nada-Raja**

Member of the Technical Advisory Group, Suicide Prevention Information New Zealand (SPINZ)

### **Melissa Purnell**

Member of the Drowning Prevention Council Research Advisory Committee

### **Jean Simpson**

Board Member of the International Society for Child and Adolescent Injury Prevention (ISCAIP)  
Member of the NZIPS Falls Strategy Stakeholder Reference Group  
Member of the Otago Child Mortality Group

### **Emma Wyeth**

Member of the Ngāi Tahu Research Consultation Committee