

# OUTCOMES OF INJURY STUDY

OCTOBER 2011  
UNIVERSITY OF OTAGO

## CONTENTS

Thank You

The Research Team

Professor Shanthi Ameratunga

Ross Wilson

Radilaite Delaibatiki

Professor John Langley

Overview of published results

## Thank You

The Outcomes of Injury Study team has recently finished interviewing the people taking part in the study. Most participants have had four interviews over a two year period. Some of you took part in the smaller Pilot (Pre-testing) Study or Group Meeting which helped develop the main study methods and questions. We know how busy life is for people these days. We, and our team of interviewers, sincerely appreciate your time and contribution. We want to take this opportunity to thank you all for your generosity and to let you know some of the early results.

In this newsletter we provide an overview of results that have been published in scientific journals. More papers will be written as members of the research team undertake more analysis. We also plan to disseminate results to community groups and general media.

The study is important because it is the first to follow up people who have experienced a range of injury types and causes in New Zealand. Learning about injured peoples' outcomes – good and bad – will be of great interest in New Zealand and internationally. One of

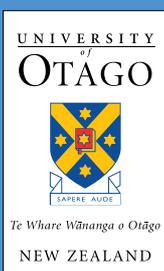
the ways in which you and the other study participants have helped is by being willing to be interviewed (or by completing a written questionnaire) several times over the two years following your injury – the injury that led to your becoming part of the study. Eighty percent of the 2856 people taking part in the first interview took part in further interviews, which is excellent for a study like this one.

It is also important that 20% of the study participants are Māori which provides important information about outcomes specific to Māori – again something that we need to know much more about in order to contribute to improvements in services and outcomes for injured people in the future. We also have a considerable proportion (8%) of participants who are Pacific which makes possible analysis for Pacific people.

Many of you have said you are willing to be contacted by us again if we obtain necessary further funding. Thank you for that. If we do contact you it is likely to be in 2013 or after.

Yours sincerely

*Sarah Derrett*



**Dr Sarah Derrett** (Principal investigator), Injury Prevention Research Unit, University of Otago

On behalf of the Health Research Council of New Zealand-funded research team: John Langley, Shanthi Ameratunga, Brendan Hokowhitu, Gabrielle Davie, Paul Hansen, Emma Wyeth, Rebecca Lilley; and associated investigators: Radilaite Delaibatiki, Tai Sopoaga, Ross Wilson, Mary Butler, Sue McAllister, Sarah Colhoun, Ari Samaranayaka, James Black and Sue Wilson.

## From The Research Team

### Professor Shanthi Ameratunga

Deputy Head – School of Population Health, University of Auckland

Greetings from Auckland to all the participants, research team and ‘Friends of the Outcomes of Injury Study’!

It has been a real privilege to be part of the team involved in this study. There are many reasons, and I am delighted to share just a few thoughts. I got involved with this project when it was just an idea in Prof John Langley’s head many years ago. It was at a time when I was reflecting on the many things I had learned from another research project which explored the impact car crash injuries have on people’s lives. I was keen to consider the issues more widely.

The discussions we had led to a grant to test the feasibility of undertaking this research. With the wonderful Dr Sarah Derrett recruited to lead this, and buoyed by the very positive response to the pilot phase, the full study was developed and funded, bringing to life a project we now know as the ‘Outcomes of Injury Study’.

Having just spent several days in Dunedin working with the main team, I am even more confident than at the start, of the opportunity this study has to add new knowledge that can make a difference to the lives of many in our country. And this could not happen, of course, without the time, effort, and contributions of many different kinds, that each and every one of you provide. Thank you most warmly for this.

A real strength of this research is the wide range of injuries covered involving the experiences of people from all walks of life. The research and research team are likewise multi-disciplinary – which means the skills and expertise involved in working with the information collected is also wide-ranging. This makes it possible to make the most of the research to eventually inform better policies and services to improve the health and wellbeing of injured people. I have been a co-author on several of the published papers from this study, and I am writing or developing several others.

It may surprise you to know that my background is as a paediatrician. But as children and young people I have worked with have taught me over the years, we are never too young or old to learn new things about ourselves as well as the work we do, and can do better. Thank you for making this possible.

### Ross Wilson

Formerly Injury Prevention Research Unit, University of Otago; now Lund University, Sweden

I joined the Outcomes of Injury research team in February of this year after completing an Honours degree in economics at the University of Otago. My research focuses on the costs, both financial and non-financial, faced by people as a result of their injury, and how well those costs are being met by ACC. I have been looking at the costs you told us you had paid yourselves, and the costs for the



medical treatment and other support that ACC told us they provided. I have also looked at health-related quality of life and disability outcomes faced after injury. I hope to identify any relationships between costs and health outcomes, and the importance of the ACC scheme in affecting these outcomes.

I am also interested in looking at the differences between how injured people view their own health and how their health is viewed by the general public. This is important when we want to investigate the value of, for example, a new injury treatment: if the treatment improves the health of those recovering from injury, how do we (and, importantly, the injured people themselves) value that health improvement? A related question I have also been looking at is how well people recall their pre-injury health after they have had their injury.

I am now about to commence my PhD studies at Lund University in Sweden. I have gained a lot from my time on the project, and will continue my involvement from afar as there is much more to learn from the data about health outcomes from an economic perspective. I will be involved in ongoing work within the project looking at the role of economic and social conditions in determining injured people’s ability to access health care services under the ACC scheme.

### Radilaite Delaibatiki

Department of Preventive and Social Medicine, University of Otago

My research journey began in a village outside the capital of Fiji. Four years ago, I was part of a health promotion project in Fiji. The Fiji Village project gave me the opportunity to listen to the experiences of villagers and discuss the importance of health services. Apart from the obvious research experience gained from the project, I began to foster an appreciation of the importance of people and the value their experiences have in providing knowledge and understanding for research. The beauty of the Outcomes of Injury Study is that it is based on participant responses and brings together peoples’ experiences. Within the project, I look at the experiences of Pacific people. Pacific people on average suffer poor health outcomes compared with national populations. Research involving Pacific peoples therefore requires robust and culturally sensitive approaches. So far, we have identified 239 participants of Pacific ethnicity within the Outcomes of Injury Study and used a Pacific model of health to assess the study questionnaire to see whether it addresses Pacific values. We hope that with further analysis we will be able to identify, using Pacific health frameworks, the factors associated with Pacific peoples and injury. Such analyses may help us understand the factors associated with poor health outcomes and help inform services.

It has been a valuable experience working on the study and with this Pacific cohort. I am now studying towards a PhD in Public Health in which I will look at women’s experiences with family planning services. I hope that this will, like the Outcomes of Injury project, bring to light the experiences of people and help inform service providers of the importance of addressing Pacific peoples’ health. There is a lot to be learnt and shared from the Outcomes of Injury project and I look forward to being a part of that into the future.



## Professor John Langley

Injury Prevention Research Unit,  
University of Otago



Most of you would have heard or read comments like “overweight people take longer to recover from injury” or “injured people who have good social support recover quicker” or “having multiple injuries makes for slower recovery”. Statements like these have what scientists describe as ‘high face validity’. In other words, there is logic behind them, they make sense. The trouble is that this logic alone is not sufficient to conclude that they are ‘fact’. What we need is evidence of the association and that, quite often, is lacking or of poor quality. An example of poor quality evidence is a study which shows that older people are more likely to take longer to recover but fails to consider other factors which may be related. For example, let’s assume that another study has shown that if you get a fracture to your hip you are going to take longer to recover. Well, we know that older people are more likely to fracture their hips, so the question is how much of the slow recovery is due to the hip fracture alone and how much is due to being an older age alone. It is questions like this that we have recently examined.

Some of you will recall that when we first interviewed you (on average 3 months after injury), we asked if you had difficulty doing a range of things such as walking and self-care. We compared those who had some difficulties with those who did not, in terms of personal factors (e.g. age, financial status), health factors (e.g. body weight, alcohol use) and injury factors (e.g. type of injury, access to health services).

What we found is that few of the personal factors seemed important. There was one notable exception; females were likely to have a slower recovery. Other studies have also reported this finding. Why this is the case is not understood, although there are lots of theories! In terms of health factors, having two or more prior chronic illnesses (e.g. asthma, diabetes) was associated with slower recovery. Among injury factors, admission to hospital, your view of how serious the injury was in terms of risk of disability, and difficulties you may have had accessing the health services you needed were the most significant of the lot.

Where to from here? First off, we want to see if we get similar findings if we look at another measure of daily functioning. If that is the case we can be confident that what we have discovered is very unlikely to be due to chance or the way we measured things. Watch this space...

## Overview of published results

For the research team, this newsletter is important because it is a way of providing you (the study participants) with information about the study. Sharing results also occurs by presentations at relevant conferences, meetings with community groups, organisations and policy-makers, and public media.

Publishing results of studies in scientific journals is another important way of sharing results with researchers, policy-makers and health professionals. There are several steps involved in publishing papers in journals. Firstly, the purpose of the paper is specified, analysis undertaken and the paper written and submitted to a journal. The journal editor decides if the paper is relevant to their journal and, if so, the paper is then sent to two or three (usually anonymous) reviewers who comment on (critique) its merits. Reviewers usually have questions that need to be satisfactorily answered by us before the paper can be accepted for publication.

Eight papers related to the Outcomes of Injury Study have been published in scientific journals to date, with a further 11 submitted to journals or about to be. Several of the papers report on the pilot study, and background to, and procedures for, the Outcomes of Injury Study. The more recently published papers, and those in preparation, report results.

Our published papers are described briefly below.

1. Derrett S, Black J, Herbison GP (2009). Outcome Following Injury – A Systematic Literature Search of Studies Using the EQ-5D. *Journal of Trauma: Injury, Infection and Critical Care*; 67(4): 883–890.

This study was undertaken in the early stages of the Outcomes of Injury Study. We searched in the scientific literature for other studies of injury outcome to examine the use of a particular general health measure (the EQ-5D, which has questions about mobility, self-care, usual activities, pain or discomfort, and anxiety or depression) in obtaining information about recovery after injury.

2. Derrett S, Langley J, Hokowhitu B, Ameratunga S, Hansen P, Davie G, Wyeth E, Lilley R (2009). Prospective Outcomes of Injury Study. *Injury Prevention*;15 (e3) {<http://injuryprevention.bmj.com/cgi/content/full/15/5/e3>}.

This paper describes the objectives of the Outcomes of Injury study, along with the intended procedures, outcome measures and analytical approaches to be used.

3. Derrett S, Davie G, Ameratunga S, Langley J (2010). Capturing Outcomes Following Injury: A New Zealand Pilot Study. *NZMJ*;123:No1316.

Some of you were involved in a ‘pilot’ study (smaller pre-study) undertaken in 2006/07 before the Outcomes of Injury Study began. The purpose of the pilot, described in this paper, was to trial and refine procedures and questions for the larger Outcomes of Injury Study.

4. Wyeth E, Derrett S, Hokowhitu B, Hall C, Langley J (2010). Rangatiratanga and Ōritetanga: Responses to the Treaty of Waitangi in a New Zealand Study. *Ethnicity & Health*;15(3):303-316.

This paper reports how, in developing the protocols for the Outcomes of Injury Study, the research team endeavoured to respond to the Treaty of Waitangi so that the research was acceptable, accountable and relevant for Māori. Responses included consultation with Māori groups, translation of questionnaires into Māori language (te reo), appointment of interviewers fluent in te reo Māori and recruitment of sufficient Māori participants to allow specific analyses of Māori outcomes to be undertaken.

5. Black J, Herbison GP, Lyons R, Polinder S, Derrett S (2011). Recovery after Injury: An individual patient data meta-analysis of general health status using the EuroQol-5D. *Journal of Trauma: Injury, Infection and Critical Care*; 71(4): 1003-1010.

This paper examined the general health outcomes from 10,496 injured people throughout the world (and including participants in the Outcomes of Injury Study and the pilot study) to assess recovery from injury. Researchers provided anonymous data allowing us to estimate impairment and recovery at different times after injury. The aspects of general health (EQ-5D) most commonly affected after injury were pain or discomfort, usual activities and mobility. Peoples' recovery was still incomplete 360 days after injury for many types of injury.

6. Butler M, Derrett S, Colhoun S (2011). The lived experience of patients with uncertain medical diagnosis following a serious injury: A qualitative study. *Disability and Rehabilitation*; Early online.

This paper describes the experiences of a subset of participants without a clear injury diagnosis, or with difficulty obtaining a diagnosis, who were interviewed face-to-face approximately six months after being injured. It identifies their particular issues dealing with ACC, healthcare professionals and workplace colleagues, and in accessing medical and rehabilitative resources, and examines the emotional and social impact of having an uncertain injury diagnosis.

7. Derrett S, Davie G, Ameratunga S, Wyeth E, Colhoun S, Wilson S, Samaranayaka A, Lilley R, Hokowhitu B, Hansen P, Langley J (2011). Prospective Outcomes of Injury Study: Recruitment, and participant characteristics, health and disability status. *Injury Prevention*; Early online.

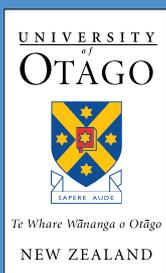
This paper describes changes that were made to the intended Outcomes of Injury Study methods (as

described in Paper 2). It also describes key pre-injury and injury characteristics of the 2856 study participants, and their general health and disability levels before and soon after injury. At the time of the first interview (on average, three months after injury), most participants were experiencing worse health and increased disability than they were before injury, despite only 30% reporting that their injury resulted in them being admitted to hospital.

8. Langley J, Derrett S, Davie G, Ameratunga S, Wyeth E (2011). A cohort study of short-term functional outcomes following injury: the role of pre-injury socio-demographic and health characteristics, injury and injury-related healthcare. *Health and Quality of Life Outcomes*, 9:68 doi:10.1186/1477-7525-9-68.

In this paper we sought to identify the role of pre-injury, injury and healthcare factors in determining outcomes. Substantial portions of participants continued to have adverse outcomes approximately three months after their injury. Key factors predicting poor outcomes were: being female, prior chronic illness, injuries to multiple body regions, being hospitalised for injury, self-perceived threat to life, and difficulty accessing health services. It has been believed that the injuries of greatest importance are those that have resulted in admission to hospital. Our results indicate that, while people admitted to hospital because of injury are at risk of poor outcomes three months after injury, considerable burdens are also experienced by injured people who have not been hospitalised. We hope more studies in New Zealand and elsewhere will also consider outcomes for injured people admitted, or not admitted, to hospital.

**Thank you from the research team for your valuable contributions to the Outcomes of Injury Study.**



#### CONTACT US:

If you have moved, or changed your phone number or email address, please contact us so we can update your details. We hope to extend this research and will be seeking funding for this. If successful, more information and newsletters will be sent to you.

EMAIL: [outcomes@otago.ac.nz](mailto:outcomes@otago.ac.nz)

POST: Dr S Derrett  
Injury Prevention Research Unit  
Dunedin School of Medicine  
University of Otago  
PO Box 56  
Dunedin 9054