CANCER SOCIETY SOCIAL & BEHAVIOURAL RESEARCH UNIT (SBRU)
Te Hunga Rangahau Ārai Mate Pukupuku

Department of Preventive and Social Medicine,
University of Otago, New Zealand

ANNUAL REPORT

2009
Annual Report
2009

Cancer Society Social & Behavioural Research Unit,
Te Hunga Rangahau Arai Mate Pukupuku
research projects, activities, publications and media reports
January to December 2009.

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PART III Media Reports

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With support from: 1 the Cancer Society of New Zealand Inc. (see also specific projects/activities for details of support from Centres and Divisions); 2 Health Research Council; 3 University of Otago; 4 University of Otago Health Sciences Career Development Programme Postdoctoral Fellowship; 5 Genesis Oncology Trust; 6 Health Sponsorship Council;
7 Ministry of Health HEHA Innovations Fund; 8 Southland District Health Board; 9 Sport Southland; 10 University of Otago Māori Postgraduate Scholarship and Dunedin School of Medicine PhD Start-Up Scholarship; 11 HealthCare Otago Charitable Trust, 12 Otago District Health Board, 13 SFARC, 14 Mental Health Foundation, 15 Dunedin School of Medicine Bequest Fund.
Foreword

The Cancer Society Social & Behavioural Research Unit is approaching its 20th anniversary in 2010. The core funding received from the Cancer Society during this time, along with the support of the University of Otago, has resulted in an increasingly comprehensive programme of social and behavioural research in cancer control. This continuity has been vital to the success of the Unit as project funding, alone, can only sustain fragmented research and is inadequate as a sound basis for cancer control workforce development.

The development of an experienced team of cancer control researchers has been a focus of the Unit in recent times. This is now coming to fruition with individuals trained within the Unit taking up more senior research roles. Alongside our core business of providing timely, high quality research outputs there is also an emphasis on research training in cancer control. The Unit is a place where postgraduate research students can gain and share experiences, provide mutual support and receive informed guidance. This year, Jackie Guo is to be congratulated on her MPH thesis, Factors associated with nicotine dependence among New Zealand secondary school students, for which she was awarded a credit. That research provided valuable information for the development of appropriate tobacco control policies and practices. During 2009, Unit staff provided supervision for another MPH candidate, as well as one MA and five PhD candidates working in the diverse fields of healthy physical activity and nutrition, solar ultraviolet radiation exposure / protection, and psycho-oncology.

Staff and students contribute to the teaching of medical students and health promotion practitioners by presenting their research in seminars. Also, within our host department, Unit staff serve on advisory groups and committees which facilitate departmental processes for research and collaboration. External to the University of Otago, Unit staff and students participate in advocacy, advisory groups and other community service activities that advance health promotion strategies relevant to cancer control.

This report provides a brief summary of the projects that have been underway in the past year and gives an insight into the interests and enthusiasm of the researchers based in the Unit. We welcome the opportunity to talk with others about our work and would be pleased to be contacted about any projects here that are of interest.

Tony Reeder & Rose Richards, March 2010
Part I

SBRU activities by major topic area
1 Healthy Physical Activity & Nutrition

Achieving appropriate nutrition, physical activity and body weight at population level is associated with potentially substantial gains for cancer control in New Zealand.\(^1\) However, moving towards this goal requires strengthening of policy and practice across multiple sectors to ensure that healthy choices are the easy choices.

The physical activity and nutrition research programme within the SBRU aims to inform policy and practice with evidence about the personal, social, economic and physical environments that support health and wellbeing. From this, stems research based in diverse locations such as gardens, playgrounds and city streets and involving children, adolescents, adults, schools and communities. In addition to our traditional focus on healthy physical activity and nutrition to reduce the risk of developing cancer, our research programme is now extending across the cancer control spectrum to explore the role of physical activity and nutrition in supporting health and well-being among cancer survivors.

An honourable mention is due for two of our research staff, Ms Qa-t-a Amun, and Dr Ewa Szymlek-Gay, who left us at the end of 2009 to pursue well-deserved other research and training opportunities. We are very grateful for their contribution to the Unit and look forward to maintaining our links with them as they continue on in their careers.

1.1 **Project Reports:**

**Healthy Physical Activity and Nutrition**

### 1.1.1 Edible Gardens in New Zealand Schools

#### Staff & Collaborators

Ms Carly Shaw, with supervisors Dr Rose Richards, Dr Tony Reeder, & Mr Andrew Gray (biostatistician), Dept. of Preventive & Social Medicine.

#### Funding

Cancer Society SBRU Core funding grant and Department of Preventive and Social Medicine Masters Student Support.

#### Rationale

Edible gardens are described positively in educational, nutrition and public health journals as playing an important role in educating young people about healthy eating, food preparation, creativity and problem solving. Furthermore, the World Cancer Research Fund encourages schools to be a setting which promotes ‘food systems, food, nutrition and physical activity as essential parts of school life and learning’ (WCRF and AICR, 2009)\(^2\). Anecdotal evidence shows that many New Zealand schools are now developing edible gardens alongside the introduction of EnviroSchools and other ecological sustainability programs.

#### Study Aims

This research aimed to examine the proportion of New Zealand primary and secondary schools with projects that involve children/adolescents in either growing food or other types of gardening initiatives. The survey explored how edible gardens are supported and funded, why they were initiated, as well as examining barriers, student participation and the distribution of harvested crops. Links to current curriculum areas were also investigated, with a focus on the provision of cooking lessons and healthy eating messages based around edible garden initiatives.

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Progress / Results
A national postal survey of 764 randomly selected primary and secondary schools was conducted. Preliminary findings suggest that over half of primary and secondary schools have a garden which involves students in growing edible foods. More than half (52%) of participating schools reported that their edible gardens were less than three years old. Four factors emerged as having generated the most interest in edible gardens: potential curriculum links, links with environmental education and sustainability, links with lifeskills and interest from staff members. Time constraints, money and lack of resources were barriers to starting edible gardens.

Dissemination
Ms Shaw has presented the methods and preliminary findings from this study at the 2009 Public Health Association Conference, Cancer Society Health Promotor’s Hui and a Department of Preventive and Social Medicine student seminar. This study is being prepared for submission as a Masters in Public Health thesis, and will also be presented at the 2010 Behavioural Research in Cancer Control Conference in Perth. A paper will also be prepared for publication.

1.1.2 School gardens: an opportunity for indigenous health perspectives

Staff & Collaborators
Ms Sam Jackson (Summer Intern Student), with supervision from Dr Rose Richards, and, Dr Joanne Baxter (Centre for Hauora Māori, Department of Preventive & Social Medicine).

Funding
Cancer Society Maori Nutrition Grant, University of Otago, Division of Health Sciences: matched funding for Summer Intern Students, Cancer Society SBRU Core funding grant.

Rationale
There is a growing body of literature that suggests a number of potential health and educational advantages of garden-based learning in schools. These advantages include enhancing a child’s ability to learn in core curricular areas including mathematics, English, science, design and art. In terms of health and nutrition, children are more likely to make more positive food choices, and gardening can promote physical activity. This project uses indigenous models of health to further investigate the advantages of having a school garden- from an indigenous perspective. The main model being used is Mason Durie’s Te Whare Tapa Whā. In the Te Whare Tapa Whā model of health, health is conceptualised as a house that needs four strong walls in order to remain solid and standing.
These four walls or four cornerstones of health are Taha Tinana (Physical Health); Taha Hinengaro (Mental Health); Taha Wairua (Spiritual health) and Taha whanau (family health.) This project uses the term whanaunatanga instead of whanau to depart from the nuclear family concept and acknowledge the value of collectiveness, kinship and solid relationships with others.

Furthermore, this study uses Kaupapa Māori Research and Action-Research Methodologies, which aim to give agency to and consult participants at all stages of the research process from project design to information dissemination. Building relationships on an informal level with communities and schools is an important part of the methodology of this project in order for communities to share their knowledge, and trust that it will be used and returned in a respectful and meaningful manner.

**Study Aims**

There are several aims of this project. The first is to conduct in-depth interviews with key informants from two school communities and use indigenous health perspectives to interpret the health benefits of having a school garden. The second aim is to ensure that there is consultation and engagement at a school, community and runanga level. This is to ensure the project’s usefulness for the communities who are sharing their knowledge. The final aim is to disseminate the information in ways that are suitable and meaningful for the participants and communities involved, this could potentially be in the form of a recipe book, help with strategic planning for the schools, help with funding applications, a website, etc.

**Progress / Results**

Members of the participant school communities have expressed an interest in involvement and commented on the project development. Key informant interviews will take place in early 2010.
1.1.3 Children’s activity in their local environment (CALE)

Staff, Student & Collaborators
Robin Quigg (PhD Candidate), Dr Tony Reeder (Principal Investigator and Primary PhD Supervisor), with Dr Debra Waters (PhD Co-supervisor) and Andrew Gray (PhD Co-supervisor, biostatistician), Dept. of Preventive & Social Medicine, Alec Holt (PhD Co-supervisor, Dept. of Information Science), Ros Herbison (Research Assistant, data collection) and Nathalie Huston (Research Support), Dept. of Preventive & Social Medicine.

Funding
Otago District Health Board through the Ministry of Health’s Healthy Eating Healthy Activity (HEHA) Evaluation Fund, University of Otago Māori Postgraduate Scholarship, Healthcare Otago Charitable Trust, Dunedin City Council (DCC) and Sport and Recreation New Zealand (SPARC).

Rationale
Little is known about the amounts and types of activity undertaken by ‘free-living’ children, nor where these activities happen – indoors or outdoors, at home, in parks and playgrounds, or at school and other places. There is also little information about variation in the amount and site of such activities that may be attributable to potentially modifiable community and individual characteristics. Lifetime healthy physical activity is a cancer control priority.

Study Aims
To quantify the physical activities of children living in two spatially defined communities (intervention and control) and improve understanding about the environmental settings of their activities.

Progress / Results
The intervention (upgrading of community playgrounds) was completed on time and loss to follow-up did not exceed levels permitted in the study design. Demographic, anthropometric and objectively measured physical activity data - both the amount (from accelerometers) and the location (from GPS units) were collected from 184 and 162 children at baseline (2007) and follow up (2008), respectively. These data were successfully matched and the combined dataset prepared for analysis. Preliminary results indicate that playgrounds were used for physical activity by a wide range of children, irrespective of individual, family and community differences.
However, the proportion of activity taking place in playgrounds within community parks was low, although this may be important for some subgroups. Analyses are continuing and the related PhD thesis is scheduled for submission by 31st May 2010.

Dissemination

During 2009, Robin Quigg presented a poster on playgrounds and children’s physical activity to the Active Living Conference, San Diego, USA and made two oral presentations about children’s physical activity and territorial authority playgrounds, one at the Australasian Epidemiological Association Annual Scientific Meeting and another at the New Zealand Public Health Association National Conference. Ms Quigg also presented in the plenary session of the Outdoor Environments Early Childhood Reference Group Dunedin Symposium, on ‘Children’s Changing Lives’, half of which was about the CALE, and gave a guest lecture for PUBH 411 on the development and implementation of a parent/caregiver questionnaire. A paper on the ‘cutting-edge’ linkage of accelerometer and GPS data at baseline was prepared, submitted for publication and is currently being peer reviewed. Key goals for 2010 will be completion of the PhD thesis; capitalisation on the rich PhD project dataset in the preparation of further scientific papers for publication and presentation as well as community dissemination.

1.1.4 Evaluating the Southland Healthy Eating Healthy Action Programme designed for primary caregivers based in the home setting with children under 5 years.

Staff, Student & Collaborators

Leanne Liggett (PhD Candidate), Prof. Rob McGee (primary PhD supervisor), Dr Winsome Parnell (co-supervisor, Department of Human Nutrition), Andrew Gray (co-supervisor, biostatistician), Yvette McKenzie (Physical Activity Advisor), Nikki Willis (Childcare Advisor), Katie Jahnke (Research Assistant) and contracted dietitians.

Funding

The Southland HEHA Programme has three funding sources; nationally via the HEHA Innovations Fund (Ministry of Health) and locally from the Southland District Health Board and Sport Southland. Funding varied between 30-36 months.
Rationale

The Healthy Eating Healthy Action (HEHA) Strategy and HEHA Implementation Plan addresses three of the 13 priority population objectives in the New Zealand Health Strategy - improving nutrition, reducing obesity and increasing the level of exercise. The Southland HEHA Programme has been developed to assist addressing these population objectives in Southland and this research aligns closely with its second phase which is a short comprehensive healthy lifestyle programme entitled Healthy Me and You. This six-week programme has been specifically designed for primary caregivers of children aged 3-4 years, in particular Māori, Pacific or low socioeconomic families.

Evaluating the effectiveness of “Healthy Me and You” in relation to fruit and vegetable consumption and activity levels is the primary focus of the doctoral study.

Study Aims

The proposed research aims to evaluate the effectiveness of the Healthy Me and You programme. Two of the eight HEHA Strategy population objectives are being investigated through this doctorate; fruit and vegetable intake (for children foods offered rather than consumed) and daily exercise levels.

Potential outcomes from the evaluation will be as follows:

- improved fruit and vegetable consumption for target audience (caregiver and child)
- improved uptake of physical activity messages (caregiver and child)
- enhanced attitudes and behaviours around lifestyle physical activity and healthy eating with target population (caregiver and child)

These outcomes will subsequently lead to increased likelihood of caregivers and children making healthy eating and physical activity choices and this will be achieved by increasing the capability and capacity of the target audience so that the above outcomes can be achieved.

Each caregiver and study child was followed for a six month period (n=67). Data were collected at baseline and six months in the form of 1) face to face interviews with the participating caregiver, 2) seven day accelerometer activity minutes on both the study child and caregiver and 3) five day fruit and vegetable tick-list for foods offered by the caregiver to the child. Caregiver fruit and vegetable intake questions were incorporated into the interview schedule.

A comparison group in the wider Dunedin metropolitan region was recruited (n=68) and identical measures were captured. These participants were matched at an individual level based on ethnicity and gender of child and NZDep06 census area units (CAUs).
Progress / Results
The Southland HEHA Programme formally began in November 2006. Key activities undertaken in 2007 included the design and delivery of the phase one workforce development component and the completion of phase two formative evaluation activities including: 1) validating the NL1000 activity monitor against a modified Child Activity Rating Scale (CARS); 2) development of a fruit & vegetable tick-list to capture foods offered to preschoolers; 3) programme content and design based on the social cognitive theory and influenced by a literature review and five focus groups; and 4) programme piloted.

The intervention, Healthy Me and You was delivered during 2008 and 101 referrals were received by the project team from health and social service agencies in Southland. The programme ran weekly over six weeks (two hour sessions) and provided transportation and childcare for participants. Twelve courses were delivered throughout Southland and participants for the comparison group were recruited following matching. Six month follow-up data commenced in August 2008 and concluded in August 2009. All data was double entered independently prior to any analyses commencing.

Dissemination
A programme website was developed mid 07 being www.southlandheha.co.nz and every 6-8 weeks a newsletter full of helpful hints and tips was developed and circulated to recruiting agencies in Southland whilst a project team was employed. All stakeholders received either a written summary of the programme or an oral presentation was given.

In May 2009, an oral presentation was presented at the Agencies for Nutrition Action Conference in Wellington.
1.1.5 Childhood neighbourhood environments and later physical activity

Staff & Collaborator
Dr Rose Richards, Professor Richie Poulton (Director, DMHDRU; Co-Director, National Centre for Life-course Research.

Funding
The scoping study for this project was funded by the National Centre for Life-course Research (NCLR). Support is also provided by the DMHDRU. Dr Richards is co-funded by the Cancer Society of New Zealand Inc. core grant and the University of Otago Health Sciences Career Development Postdoctoral Fellowship.

Rationale
There is growing evidence to suggest that levels of physical activity are influenced by features of the neighbourhood environment, such as availability of parks and open spaces, interesting destinations and neighbourhood aesthetics. There is a unique opportunity to explore how this might impact across the life course among members of the DMHDS cohort.

Study Aims
The aim of this study is to examine how proximity to schools, parks and other recreational spaces during childhood and adolescence is associated with concurrent and long-term participation in physical activity.

Progress / Results
Data for this study is being entered for geo-coding and analysis.
1.1.6 Cycling and walking in New Zealand cities: where does health fit in?

**Staff**
Dr Rose Richards, Dr Tony Reeder, Ms Qa-t-a Amun, Dr Linda Murdoch, Ms Marieah Rosenby.

**Funding**
Department of Preventive and Social Medicine PBRF Grant, Cancer Society SBRU Core funding grant. Dr Richards is co-funded by the Cancer Society of New Zealand Inc. core grant and the University of Otago Health Sciences Career Development Postdoctoral Fellowship.

**Rationale**
The health sector has the potential to make a significant contribution to creating cities that support physical activity in the form of cycling and walking. However, to do this successfully we need to work alongside other sectors such as transport, sustainability movements and local government. One approach is to learn from the successes of other partnerships in this area and to explore how to bring an evidence-based health perspective to these discussions.

**Study Aims**
There were two parts to this study, first to describe current approaches to advocacy for cycling and walking in New Zealand, from the perspective of local advocates and city council staff. The second was to explore if an information sheet summarising the health research evidence and a means of engaging with local council would make a difference to the involvement of health sector representatives in this process.

**Progress / Results**
The findings from the key informant interviews included a range of barriers for city councils to their provision of more supportive environments for cycling and walking. These include a lack of funding, a long time-frame for development of comprehensive walking and cycling networks, a lack of political will-power and a ‘road building culture’ that is focused on moving cars rather than people. Both council staff and community advocate respondents identified the health sector as a potentially important voice in city council debate on walking and cycling issues. This included providing expert advice about the potential health benefits involved, local promotion of participation in walking/cycling and in modelling these transport choices by health sector staff.
The second stage of this project was to see if the health sector could be supported to have greater involvement in submissions to annual plans to city councils. An information sheet outlining the evidence base for physical activity, walking, cycling and health and the process for submissions to annual plans was created and circulated around health networks just prior to submissions being due for the 2009/10 city council annual plan. The Official Information Act was then used to collate all submissions for two years before and one year after to explore themes in submissions and among submitters and if there are differences that may be related to the information sheet.

**Dissemination**

The findings from the first stage of this project have been presented at the 2009 Cycling Advocate Network Conference and Agencies for Nutrition Action Conference and accepted for publication in the *International Journal for Behavioural Nutrition and Physical Activity*. A paper is being prepared based on the findings from stage two.

### 1.1.7 Physical activity and nutrition among cancer survivors

**Staff**

Dr Rose Richards, Dr Ewa Szymlek-Gay, Mr Richard Egan

**Funding**

Funding for this study was provided by a research partnership between the Cancer Society of New Zealand and Curves Gymnasium. Dr Richards is co-funded by the Cancer Society of New Zealand Inc. core grant and the University of Otago Health Sciences Career Development Postdoctoral Fellowship.

**Rationale**

There is evidence that, among cancer survivors, regular physical activity and other measures that control weight may help prevent recurrence of cancer and improve post-treatment quality of life. This population, however, may face particular challenges when managing nutritional needs and resuming (or initiating) physical activity post-treatment.

**Study Aims**

This study aims to explore specific needs of cancer survivors related to physical activity and nutrition, current programmes and referral processes and identify gaps where new services/linkages could usefully be developed.
Progress / Results
The first part of this study, a literature review of potential benefits for physical activity and nutrition for health among cancer survivors and of programmes that have targeted this group, is close to completion.

1.1.8 Screen-time and relationships with family and friends

Staff & Collaborators
Dr Rose Richards, Dr Bob Hancox (DMHDRU), A/Prof. Sheila Williams (biostatistician, Dept. of Preventive & Social Medicine), Prof. Rob McGee (Dept. of Preventive & Social Medicine), Dr David Welch (DMHDRU).

Funding
Dr Richards is co-funded by the Cancer Society of New Zealand Inc. core grant and the University of Otago Health Sciences Career Development Postdoctoral Fellowship.

Rationale
Over the last twenty years there has been a marked expansion in the screen-based education, communication and entertainment options available to adolescents. In addition to existing technologies such as television, video and computer games, it is now common for adolescents to have access to console games, text messaging, email, online instant messaging and social networking websites.

The availability and attractiveness of screen-time activities has provoked both excitement at the opportunities afforded by these options and concern about whether these activities displace or diminish other activities that are important for health and development. One area of interest is how screen-time may impact on social relationships.

Study Aims
The aim of this study was to examine associations between ‘screen time’ and parent attachment among two groups of adolescents, 16 years apart, one from the Health Sponsorship Council’s Youth Lifestyle Study (2004) and the other from the DMHDS cohort (1987/88).

Progress / Results
Adolescents who watch more television, spend more time on a computer (not for homework) and spend less time reading and doing homework are more likely to report poor parental attachment.
Dissemination
These findings have been accepted for publication in the *Archives of Adolescent and Pediatric Health*³.

1.2 Other Activities:

Healthy Physical Activity and Nutrition

1.2.1 Conference and workshop attendances

In 2009, Dr Rose Richards attended and gave presentations at the *Agencies for Nutrition Action Conference* and the *Cycling Advocates Network Conference*. Her attendance was supported by the Cancer Society core grant. She also attended the *Māori Cancer Congress and Psycho-oncology New Zealand Conference*, and was on the organising committee of the *2009 Public Health Association Conference*. Robin Quigg received support from the University of Otago Māori PhD Conference Fund, to present a poster on playgrounds and children’s physical activity at the *6th Active Living Research Annual Conference, The US Grant Hotel, San Diego, California, USA*. Robin also made two oral presentations about children’s physical activity and territorial authority playgrounds, one at the *Australasian Epidemiological Association Annual Scientific Meeting* and another at the *New Zealand Public Health Association National Conference*. Ms Quigg also presented in the plenary session of the *Outdoor Environments Early Childhood Reference Group Dunedin Symposium*, on ‘Children’s Changing Lives’, half of which was about the CALE project (Section1.1.3). Ms Shaw has presented preliminary findings of her Master’s project at the *2009 Public Health Association National Conference*, the *Cancer Society Health Promotor’s Hui* and a Department of Preventive and Social Medicine Student Seminar.

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1.2.2 Teaching, training, postgraduate supervision and scholarships

Dr Richards was guest lecturer to 5th year medical Students and is a member of a newly formed group of staff from the Division of Health science who are supporting the success of Pacific Students in the division. Dr Richards supervises Ms Jackson for her Summer Internship and, along with Dr Reeder, co-supervises Ms Shaw’s MPH thesis. Robin Quigg gave a guest lecture for PUBH 411 on the development and implementation of a Parent/caregiver Questionnaire. Dr Reeder supervises Ms Quigg’s PhD project.

Dr Richards continues to be supported by a University of Otago Health Sciences Career Development Postdoctoral Fellowship and Ms Quigg continues to be supported by a University of Otago Māori Postgraduate Scholarship. Ms Jackson received support from the Division of Health Sciences Summer Internship Matched Scholarship Scheme.

1.2.3 Collaboration, consultation and advocacy

Unit staff and postgraduate students continued to collaborate with CSNZ, SPARC and Ministry of Health staff. Dr Richards attends meetings of the Cancer Society Physical Activity and Nutrition Operational Group and also attends the joint the Nutrition Physical Activity and Cancer Research Network teleconference of physical activity and nutrition researchers from Australian research units similar to SBRU.
2 Ultraviolet Radiation Studies

The CSNZ commissioned 2009 revision of an earlier report on the cost of skin cancer in New Zealand updated the evidence and strengthened the case for advocacy in support of increased funding for primary prevention programmes where these are designed to incorporate convincing evaluation. This followed published evidence for the cost effectiveness of the Australian skin cancer prevention programme, the potential effectiveness (in changing risk behaviours) of programmes implemented in primary school, recreational and tourism settings, and the need for research into the effectiveness of programmes in other settings, for example, among outdoor occupations.

In New Zealand, the SunSmart Schools Programme is currently the only skin cancer primary prevention intervention programme that is subject to rigorous, peer reviewed, quantitative and qualitative evaluation. Jan Jopson and Tony Reeder began that work with a baseline survey in 2005, followed up with another survey in 2009 and site visits for in-depth, qualitative work planned during term one in early 2010.

During 2009, work continued in the area of outdoor occupations, with a paper published in the *Journal of Occupational Health* on the results of earlier research. One of the factors identified as important in predicting sun protective behaviour was a perceived supportive workplace culture. A contribution to such a culture is the resource pack, (on which we provided feedback in 2009), *Sun Protection and Outdoor Work*, prepared by the CSNZ in association with Dulux, the NZ Council of Trade Unions and Business NZ. This was an example of how health promotion resources can be produced and distributed collaboratively, but further promotion efforts and research are required.

To determine the quality of the evidence base used in some epidemiological studies and advocacy, other SBRU work in 2009 focused on the validity and reliability of specific measures commonly used in population surveys related to skin cancer risk factors. Such ‘technical’ research has tended to be allocated a ‘back seat’ in skin cancer control in NZ, whereas it should precede and underpin other research. Our work on the validity and reliability of self reports of skin colour and erythemal sensitivity, reported here, is a case in point, as is Geri Horsburgh-McLeod’s exploration of the properties of measures of sun protection attitudes and knowledge. Many population based surveys have used such measures without thorough, prior investigation of their properties. We hope that as a result of our research some measures may be able to be refined, potential biases in interpretation accommodated, and health promotion priorities more accurately identified and targeted.

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4 O’Dea D. *The cost of skin cancer to New Zealand*. Wellington School of Medicine, University of Otago, 2009.

5 Shih STF, Carter R. *Economic Evaluation of a National SunSmart Program*. Melbourne: Health Economics Unit, School of Health & Social Development, Deakin University; 2008.


2.1 **Project Reports: UVR Studies**

### 2.1.1 Quantifying the association between sun exposure and vitamin D status in New Zealanders.

#### Staff, Student & Collaborators

Dr Tony Reeder (co-investigator), with Andrew Gray (Dept. Preventive & Social Medicine, biostatistician), Vanessa Hammond, Jan Jopson and Kenneth Gibbs (Assistant Research Fellows), Nathalie Huston (research support) in collaboration with A/Prof. Robert Scragg (School of Population Health, Auckland University, principal investigator), Dr Richard McKenzie (NIWA, Lauder, co-investigator), and co-investigators Mr Alistair Stewart (School of Population Health, Auckland University), Ben Liley (NIWA, Lauder), Dr Lorna Dyall (Māori Health, School of Population Health, Auckland University), Malakai ‘Ofanoa (Pacific Health, School of Population Health, Auckland University), Debbie Raroa, Carol Taylor, Sandar Min (Epidemiology & Biostatistics, School of Population Health, University of Auckland), Dr Michael Kimlin (Institute of Health and Biomedical Innovation, Queensland University of Technology), and Paul Johnston and Dr Gregory Bodeker (NIWA, Lauder).

#### Funding

A three-year, Health Research Council (HRC) project grant.

#### Rationale

Many New Zealanders have low vitamin D levels, particularly Pacific, Māori, South Asian and older European people. The primary source of vitamin D is exposure to ultraviolet radiation (UVR) from the sun. Low levels of vitamin D have been implicated in a wide variety of health outcomes including cancer, diabetes and cardiovascular disease.

#### Study Aims

The study aims are to: (1) relate outdoor sun exposure, measured with UVR dosimeter badges over 8 week periods, to changes in blood vitamin D levels in 500 adults aged 18-80 years (equal quotas of Māori, Pacific, Asian, & European ethnicities) in Auckland (330) and Dunedin (170); and (2) determine the wavelength dependence of UVR that produces vitamin D, and the extent to which vitamin D levels can be sustained through supplementation from artificial light sources. Results from the study should provide information on how much UVR exposure is required by all sections of the adult NZ population to maintain the vitamin D levels considered consistent with optimum health.
Progress / Results
Vanessa Hammond withdrew as a PhD candidate and was superseded in her data collection and data entry roles by Kenneth Gibbs early in 2009. The second and final wave of data collection was completed by Jan Jopson and Kenneth Gibbs late in 2009 with satisfactory participation, both overall and to meet age group and ethnic specific targets. The multiple data streams (UVR exposure, clothing and nutrition diary, questionnaire and blood tests) are currently being coded, cleaned and linked for multivariable analysis.

Dissemination
All participants receive direct, personal feedback about their vitamin D levels. In collaboration with researchers at the University of Auckland and NIWA, the results of the study will be written up for publication in international, peer reviewed journals and reported in other appropriate contexts. The first planned step is to present preliminary results at the UV Radiation and its Effects workshop in Queenstown, April 2010.

2.1.2 Sunburn in a New Zealand population, 1994-2006.

Staff, Student & Collaborators
Geri Horsburgh-McLeod (PhD candidate), Dr Tony Reeder (primary PhD supervisor), Andrew Gray (co-supervisor, biostatistician, Dept. of Preventive & Social Medicine), Prof. Rob McGee (co-supervisor, Head of Dept. of Preventive & Social Medicine), Dr Jean-Luc Bulliard (Technical Advisor, Unité d’épidémiologie du cancer, Institut universitaire de médecine sociale et préventive, Switzerland), and Nathalie Huston (research support).

Funding
Geri was supported by a PhD scholarship through the SunSmart partnership of the Health Sponsorship Council (HSC) and the CSNZ. Additional support has been provided by the HSC, the CSNZ core grant and the University of Otago.

Rationale
Most skin cancers are potentially preventable through the avoidance of excessive, harmful exposure to ultraviolet radiation (UVR). Sunburn, in particular, has been associated with an increased risk of developing skin cancer. To help increase awareness of skin cancer and reduce excessive UVR exposure, health promotion programmes have been implemented in NZ since 1988. The Health Sponsorship Council (HSC) and the Cancer Society of New Zealand Inc. (CSNZ) as key implementing agencies undertook the Triennial Sun Protection Survey series (now superseded by the Sun Exposure Survey) with the aim of better understanding their target audiences.
The addition of meteorological data from the National Institute of Water and Atmospheric Research (NIWA) would enable confounding by climatic factors to be controlled in multivariable analysis of survey data.

**Study Aims**

Using the Sun Survey data collected in years 1994, 1997, 1900/00, 2002/03, and 2005/06, in conjunction with climate and UVR data from NIWA, matched to the respondents’ interview day, this project had two main research focuses. The first was to describe patterns and present graphical representations, across the survey years, of variables shown in previous literature to be associated with sunburn. Sunburn patterns across survey years were also described.

The second focus was to investigate predictors of time spent outdoors during the period of high UVR (11am to 4pm), body coverage (clothing and sunscreen), and sunburn experience using statistical modelling, controlling for weather conditions, survey timing (month & year), and location of residence. This analysis was to be undertaken in a reduced dataset of the most recent three survey waves.

**Progress / Results**

Statistically significant patterns for survey years 1994 to 2005/06 indicated that time spent outdoors decreased among males, the 20 to 29 year age group, and those not attempting to obtain a tan. However, body coverage decreased significantly among females, those aged 20 to 29 years and those with Fitzpatrick erythemal sensitivity skin Types II and III (I is the most sensitive). Sunburn occurrence increased across the years among respondents 20-49 years. Reports of sunburn declined among those with skin type I, but increased among those with moderately sun sensitive skin (Type II). Sunburn also increased among those with more positive attitudes towards tanning and those who had attempted to obtain a tan.

Using statistical modelling, study findings include that: (1.) less body coverage was associated with having a less sun-sensitive skin type, being female, being younger, having more positive attitudes towards tanning, and attempting to obtain a tan, and (2.) sunburn was more common among those with moderately sun-sensitive skin types, sales and other ‘white collar’ as well as ‘skilled’ workers (based on the Australia and New Zealand Standard Classification of Occupations), attempting to obtain a tan, undertaking passive recreation, having less body coverage, using a make-up that contained sunscreen, and undertaking the main outdoor activity in both the shade and out in the open.

**Dissemination**

A poster entitled ‘Sunburn in a New Zealand urban population, 1994—2006’ was presented at the 12th World Congress on Cancers of the Skin, Tel Aviv, Israel, May 3-6, 2009 and at the Australasian Epidemiological Association Annual Scientific Meeting, Dunedin, August 30-September 1, 2009. A paper on the psychometric qualities of a scale on attitudes towards tanning was accepted for publication by the Australasian Epidemiologist. Geri Horsburgh-McLeod’s PhD thesis is scheduled for submission early in 2010.
2.1.3 Validity and reliability of population measures for assessing skin photosensitivity

Staff & Collaborators
Dr Tony Reeder and Vanessa Hammond with Andrew Gray (biostatistician, Dept. of Preventive & Social Medicine), Nathalie Huston (research support) and Jevon Longdell (advisor on spectrometry, Dept. of Physics).

Funding
University of Otago Research Grant.

Rationale
In large population studies, measures of skin colour and erythemal sensitivity are usually obtained by self-report questionnaire items rather than measurement by instrument. There is a lack of evidence about both the validity (i.e. do they measure what they are intended to measure?) and reliability (i.e. can they be relied upon to produce the same results on different occasions?) of these self-report items and, in particular, no such evidence for the NZ population.

Study Aims
To compare responses to two brief, self-report questionnaire items (one on skin colour and the other on erythemal sensitivity) with a criterion measure (spectrophotometry).

Progress / Results
A sample of 289 students with a broad range of skin types was recruited through University of Otago Residential Colleges in 2008. Each student had their skin colour measured using a spectrophotometer and attended two brief assessments, 7 days apart, during which each of the two self-report questionnaire items were administered. The data have been analysed and prepared for publication.

Dissemination
All participants were provided with feedback which included: 1). a brief personal report about their skin type, and 2). summary guidelines about UVR exposure under NZ conditions for reducing the risks associated with that exposure. A scientific paper is currently under review for publication in an international, peer reviewed journal. Other forms of dissemination will be considered following publication of the paper.
2.1.4 SunSmart Schools Accreditation Programme Evaluation

Staff & Collaborators
Jan Jopson and Dr Tony Reeder with Andrew Gray (biostatistician, Dept. of Preventive & Social Medicine) and Nathalie Huston (research support).

Funding
The Cancer Society of New Zealand Inc. core and project funding.

Rationale
Excess childhood exposure to solar ultraviolet radiation, in particular when it results in sunburn, is a risk factor for the subsequent development of skin cancer. Because children may spend significant time outdoors when they are at school, the implementation of appropriate school sun protection policies and practices is an important health promotion issue.

Study Aims
The aims of the evaluation were threefold. First, to survey a random sample of primary schools and describe the situation with respect to their sun protection policies, practices, curriculum content and environment. The second aim was to evaluate the impact of the SSAP after a period of four years. The third aim was to identify barriers and facilitators of accreditation through visits to purposefully selected schools.

Progress / Results
The Cancer Society of New Zealand launched a nationwide SunSmart Schools Accreditation Programme (SSAP) in October 2005. In order to permit subsequent evaluation, baseline information about primary schools’ sun protection policies and practices was collected prior to the launch from a 10% sample of all NZ state and state-integrated primary schools, randomly selected within geographical region. In 2009, these schools were followed up to evaluate the impact of the SSAP (80% response rate). An additional 10% sample was also invited to participate in order to facilitate analysis of potential predictors of accreditation status, while allowing for control of prior survey participation as a potential ‘intervention.’ These survey data are currently being analysed with the assistance of the statistician. Jan Jopson is scheduled to visit 20 schools around NZ throughout Term 1 in 2010, in particular observing and getting feedback from schools with SSAP scores that have gone up or down a lot between the two surveys; schools that have issues with being involved in the SunSmart programme & those championing it; schools that stand out with a story to tell; and looking at school environments.
Dissemination
A full paper on the baseline survey, developed from the technical report provided earlier to the CSZN, was published in 2009. A paper about the 2009 survey is scheduled to be prepared and submitted for publication late in 2010.

2.1.5 Solar ultraviolet radiation exposure and workplace sun protection in outdoor occupational groups

Staff, Student & Collaborators
Dr Tony Reeder in collaboration with an Auckland University team led by Dr Judith McCool (Dept. Social & Community Health) with Prof. Keith Petrie (Dept. Psychological Medicine), Prof. Des Gorman (Head, School of Medicine) and Dr. Elizabeth Robinson (Dept. Epidemiology and Biostatistics).

Funding
Project funding by Wellington Division of the Cancer Society of New Zealand with subsequent support from the University of Auckland, University of Otago and the Cancer Society of New Zealand Inc.

Rationale
Exposure to solar ultraviolet radiation (UVR) is an occupational health and safety issue for outdoor occupations, since excessive exposure is associated with negative health outcomes, including skin cancers and eye disease.

Study Aims
The main aim of this project was to obtain data that would help to inform and guide the development of sun protection and skin cancer prevention policies and programmes for outdoor workers. This aim was to be achieved by identifying appropriate targets and strategies for intervention and evaluation.

Progress / Results
Data on skin cancer risk perceptions, knowledge and protective strategies were obtained from 1,131 workers in nine occupational groups. Sunscreen use was associated with perceived prioritisation of sun-protection, concern about sun exposure, knowledge about the effects of sun exposure and perceptions of a supportive workplace culture. Younger workers tended to report less protective perceptions and behaviours. Interventions that strengthen appreciation of the need for protective behaviours, including workplace support for sun protection, are likely to increase protection. Further analysis of the database is planned.
Dissemination

In 2009, a paper containing the analytical findings about sunscreen use by outdoor workers was published in the Journal of Occupational Health. A second paper about other sun protective strategies is in preparation. Results from the study have been provided to CSNZ health promoters. Another, complementary, paper based on a separate occupational study completed earlier by Vanessa Hammond (see our 2008 Annual Report), reported the first real-time exposure data for NZ outdoor workers. It was also published in an international journal in 2009.

2.2 Other Activities: UVR Studies

2.2.1 Conference and workshop attendances

At the annual Public Health Association Conference held in Dunedin, Tony Reeder and Jan Jopson (both supported by the Cancer Society of NZ Inc. core grant) gave a joint presentation on the SunSmart Schools Accreditation Programme. Tony Reeder also teamed up with Judy Galtry, National Advisor to the CSNZ, to give a presentation on the development of the position statement on the Risks and Benefits of Sun Exposure.

Geri Horsburgh-McLeod gave two presentations. The first, a poster at the 12th World Congress on Cancer of the Skin 2009, Tel Aviv, Israel which was supported by the Division of Health Sciences and the Department of Preventive & Social Medicine, University of Otago and an oral presentation to the Australasian Epidemiological Association conference in Dunedin.

A presentation about the results of our study which quantified the UVR exposure of outdoor workers in central Otago was made by Tony Reeder at the Otago Southland Occupational Health Nurses Study Day in Dunedin. Jan Jopson and Tony Reeder also gave an invited Departmental presentation on the SSAP.

2.2.2 Teaching, training, supervision and scholarships

Tony Reeder, Prof. Rob McGee and Andrew Gray continued to provide supervision for Geri Henry-McLeod’s PhD study, Population trends in sun protection knowledge, attitudes and behaviours, 1994-2006, which is now scheduled for completion in 2010. Dr Reeder also examined a Bachelor of Health Sciences Honours thesis for Auckland University Faculty of Medical and Health Sciences.
2.2.3 Collaboration, consultation and advocacy

Tony Reeder continued to contribute to the Cancer Society’s SunSmart Operational Group (SOG) through involvement in teleconferences and collaboration with National Office staff, Dr Judith Galtry (Sun Protection Advisor) and Mary Duignan (SunSmart Schools Programme Advisor). He also gave two presentations, one to the SunSmart Schools Operational Group and one the SunSmart Operational Group (SOG) face to face meetings in Wellington, mid-2009.

The SOG, especially the outdoor workers’ subgroup (Raewyn Sutton, Penelope Scott and Tony Reeder), made a particular contribution to the development of the Cancer Society’s sun protection resource kit for outdoor workers, launched in 2009. These resources were the result of a comprehensive, collaborative effort between CSNZ health promotion staff and the labour sector, involving a high level of input and feedback, including from both Business NZ and the NZ Council of Trade Unions with funding support from Dulux.

Tony Reeder continued to work with the NZ UVI Redevelopment Group and participated in one face to face meeting in Wellington, followed up by teleconferences and email interaction. The goal is to iron out issues around the use of the UVI as a means of informing the population of UVR risk. The HSC, NIWA, CSNZ and MetService are among the agencies involved.

During 2009, Tony Reeder played an active role in collaborating with the HSC-led, Ministry of Health funded process for redevelopment of the Triennial survey as the Sun Exposure Survey (SES) with modified sampling, procedures and instruments. This involved attending meetings in Wellington, teleconferences, email communication and provision of feedback on the survey instrument.

Tony Reeder continued to collaborate with researchers linked to the Cancer Council Australia, in particular, Dr Suzanne Dobbinson (Centre for Behavioural Research in Cancer, Cancer Council Victoria) – another paper is in preparation for publication. Dr Reeder also collaborated with researchers at the Centre for Health Research and Psychooncology (CHeRP), NSW, who were involved in testing alternative methods of presenting the UVI to the public in a range of contexts, and was consulted by Dr Billie Bonevski on the development of a GP survey instrument.

During 2009, Tony Reeder was invited to review a number of sun exposure related publications, including papers for the *International Archives of Occupational and Environmental Health* and *Health Education Research*. He also reviewed a grant application for the Cancer Council NSW.
3 Tobacco Control

Despite significant gains in tobacco control, there is still need for ongoing actions to end the struggle against tobacco use in Aotearoa/New Zealand by 2020. It is critically important that tobacco-control research maintain its course in developing and delivering effective prevention and treatment approaches to practitioners, communities, and individuals, including those disproportionately at risk.

SBRU project research, conference and workshop presentations, and advocacy continued to make significant contributions to this area in 2009. While maintaining a broad interest in all aspects of tobacco control, our research team focused on youth smoking issues. For example, one of our projects investigated nicotine dependence patterns among NZ secondary school students, and examined a number of risk and protective factors associated with the development of nicotine dependence. In another study, longitudinal data were used to identify potential predictors of quitting cigarette smoking among young adults. We continued to be involved in a project to facilitate policy and programme development to help reduce Maori youth smoking exposure and uptake. We also plan to develop a number of other projects in the areas that have the potential to protect children and young people from addictive and toxic tobacco products.

We are working to develop collaborative research projects with other tobacco control entities. The launch of Māori Affairs Select Committee's Inquiry into the tobacco industry in Aotearoa and the consequences of tobacco use for Māori was an important step forward to enhance tobacco control regulations in Aotearoa/New Zealand. The SBRU is working to contribute a submission to this important Inquiry.
3.1 **Project Reports: Tobacco Control**

3.1.1 Factors associated with nicotine dependence among New Zealand secondary school students

**Staff & Collaborators**
Jackie Guo (ARF), Prof. Rob McGee, Dr Tony Reeder, Andrew Gray (biostatistician, Department of Preventive & Social Medicine) and Nathalie Huston (research support).

**Funding**
University of Otago; Cancer Society of New Zealand Inc. (core grant).

**Rationale**
Most smokers start smoking during adolescence. In NZ, more than 50% of young people have tried smoking by the age of 15 years. Adolescents face many physiological, psychological, and sociological influences that may put them at an elevated risk of experimenting with tobacco products, and rapid progression to nicotine dependence can follow. Symptoms of nicotine dependence can appear in young smokers with a relatively short history of smoking, even before they start to smoke daily. Furthermore, there is evidence that less than 5% of youth who try to quit are successful. These observations suggest that adolescence might be a uniquely sensitive period for the development of nicotine dependence.

**Study Aims**
The two primary objectives of this study were to: (a) describe patterns of nicotine dependence among NZ secondary school students; (b) examine the associations between levels of nicotine dependence among NZ adolescent smokers and a range of potential predictors; and c) examine quitting attitudes and attempts among adolescent smokers, and identify barriers to quitting.

**Progress / Results**
Adolescent smokers are very likely to become dependent on nicotine. A large percentage (87.9%) of adolescent smokers reported at least one HONC symptom, with a mean HONC score of 4.9 out of a possible 10.

Three domains of potential explanatory factors of nicotine dependence development were identified: socio-demographic characteristics, smoking behavioural factors, and smoking context factors. Under the socio-demographic domain, school decile was significantly related to level of nicotine dependence. Three smoking behaviour factors were significantly related to nicotine dependence: smoking frequency, total lifetime consumption and typical daily consumption. A significant proportion of adolescent smokers expressed an interest to stop smoking, and many had already made at least one attempt to do so.
However, nicotine dependence is a key barrier to smoking cessation. Students with higher HONC scores were more likely to have tried to quit, be currently attempting to quit, or have used one or more of the tested cessation services; they were also less likely to feel able to quit smoking.

**Dissemination**

This study formed Jackie Guo’s Master of Public Health thesis, which was awarded with Credit in 2009. A presentation has been made to the Oceania Tobacco Control Conference in October 2009. A paper containing the key findings has been submitted in the Australian & New Zealand Journal of Public Health, and another journal article reporting the quitting results will be prepared for submission in early 2010.

### 3.1.2 Relations between adolescent activities, parental monitoring and adolescent daily smoking

**Staff and Collaborators**

Jackie Guo (ARF), Prof. Rob McGee, Dr Tony Reeder

**Funding**

University of Otago; Cancer Society of New Zealand Inc. (core grant).

**Rationale**

Adolescent smoking remains at unacceptably high levels despite widespread legislative, policy and education measures. Associations between parental monitoring and smoking among adolescents have been investigated and often considered as the primary determinant of youth smoking. Less is known about associations between other adolescent contexts and tobacco use. There is a need to expand youth tobacco research to include the broad social and environmental context of a young person’s life, in order to understand the etiology of tobacco use and to identify possible prevention strategies.

**Study Aims**

The main aim of this study was to investigate associations between different types of adolescent activities, frequency of participation in these activities, parental supervision and daily smoking among New Zealand Year 10 students.
Progress / Results
This study uses data from the 2006 Year 10 In-depth Survey (YIS). Of the 3200 participants included in this study, 270 reported daily smoking. Students were asked about the frequency with which they had engaged in a variety of activities, specifically: attending a place of worship, visiting a music event or concert, visiting a music shop, watching a movie in the theatre, visiting the skate-park, playing sports or watching a sports game or event in the month preceding the study. The data are currently being analysed and prepared for publication.

Dissemination
A scientific paper has nearly been completed and will be submitted for publication in a peer reviewed journal.

3.1.3 Adolescent attitudes to the tobacco industry

Staff and Collaborators
Jackie Guo (ARF) and Prof. Rob McGee

Funding
University of Otago; Cancer Society of New Zealand Inc. (core grant).

Rationale
While the attitudes of the NZ general population to tobacco control measures are known, little has been published on NZ adolescent perceptions and attitudes towards tobacco. Perceptions of the tobacco industry among adolescents is of interest to examine to what extent young people trust or mistrust the industry, and how this might be used to inform health promotion actions to dissuade young people from taking up smoking. This is important given the industry’s need to recruit young smokers, and the tactics they employ to do so.

Study Aims
The main aim of this study is to investigate changes in attitudes towards the tobacco industry among NZ adolescents over the last few years

Progress / Results
This study will use data from the 2006 and 2008 HSC YIS surveys. We are currently seeking permission from the NZ Health Sponsorship Council for access to these data.
Dissemination
The findings will be written up for publication in a peer reviewed journal, and may form the basis for a conference presentation later in 2010.

3.1.4 Does the increase in smoke-free adolescents hide a delayed uptake among young adults?

Staff and Collaborators
Prof. Rob McGee, Jackie Guo (ARF), & Andrew Gray (biostatistician, Department of Preventive & Social Medicine).

Funding
University of Otago; Cancer Society of New Zealand Inc. (core grant).

Rationale
Current evidence suggests that smoking prevalence is falling among school students, but this may not translate into lower adult prevalence if the decline represents a delay in uptake rather than the persistence of non-smoking into adulthood. With the decline in the age of legal purchase of alcohol to 18 years, and given the strong association between alcohol use and tobacco use, there is the real potential for delayed uptake in cigarette smoking to coincide with legal purchase of alcohol. The answer to this question has significant implications for tobacco control.

Study Aims
It is intended to use data from and the 1996 and 2006 Census to examine patterns of smoking uptake.

Progress / Results
The customised data tables are being obtained from New Zealand Statistics. The data are currently being analysed and prepared for publication.

Dissemination
It is intended to prepare a scientific paper for publication in peer reviewed journals. A conference presentation will be prepared for later in 2010.
3.1.5 Predictors of quitting cigarette smoking among young adults

Staff and Collaborators
Prof. Rob McGee and Dr David Welch (University of Auckland)

Funding
University of Otago

Rationale
As more and more people quit smoking, tobacco use has become more concentrated among those who find it harder to give up. These include people with existing mental health problems. We will examine the influence of anxiety and depression at the end of adolescence (age 18 and 21 years) on subsequent quitting of tobacco smoking up to age 32 years. The study will follow about 200 cigarette smokers from age 18 years. There is evidence from previous research that both anxiety and depression are related to smoking, and that anxiety does predict quitting among women. This raises the possibility that while anxiety predicts quitting, depression may be a barrier to quitting. It will also be possible to examine what mediates any relationships found. For example, smokers with mental health disorders may be less prepared to change their smoking behaviour, less confident about succeeding based on past attempts, or more dependent on tobacco and other substances. Findings from this study will contribute to knowledge around the challenges smokers with these disorders face when trying to quit, and may indicate interventions to promote successful quitting in these groups of smokers.

Study Aims
Data will be taken from the Dunedin Multidisciplinary Health and Development Study (DMHDS), a longitudinal programme of research following about 1,000 individuals from birth to adulthood.

Progress / Results
More than 30 years of longitudinal data including tobacco smoking, quitting behaviours and the protection of children from tobacco exposure have been collected for the DMHDS cohort and are available for analysis. The SBRU has a history of significant tobacco control publications based on this database. Data are currently being prepared for analysis.

Dissemination
It is intended to prepare a scientific paper for publication in peer reviewed journals. A conference presentation will be prepared for later in 2010.
3.1.6 The WAKA (whānau auahi kore ānei ana) project: Developing strategies to reduce smoking uptake and SHS exposure in children study

Staff and Collaborators
Tony Reeder (co-investigator) in project team led by Prof. Richard Edwards (Dept. Public Health, Wellington School of Medicine, Otago University) with Dr. George Thomson, Dr. Nick Wilson, and Prof. Philippa Howden-Chapman (Dept. of Public Health, Wellington School of Medicine, Otago University); Dr. Heather Gifford (Whakauae Research Services), Dr. Judith McCool (Dept. Psychological Medicine, Faculty of Medicine and Health Sciences, University of Auckland), Andrew Waa (Quigley and Watts Ltd.) and Dr. Sue Walker (Research Manager, Health Sponsorship Council).

Funding
Health Research Council of New Zealand Partnership Programme.

Rationale
Tobacco smoking and exposure to second hand tobacco smoke (SHS) remain substantial public health problems in New Zealand (NZ), particularly among Māori communities. Reducing smoking initiation and the exposure of children to SHS, particularly among Māori, are key aspects of NZ tobacco control strategies. There is evidence that caregiver behaviours may be important influences on the prevalence of smoking and SHS exposure.

Study Aims
To develop empirically based explanatory models, ‘change’ strategies and community intervention strategies for reducing smoking initiation and the SHS exposure of NZ, focusing particularly on Māori communities. A structured and systematic development process will include: systematic reviews, reviews of NZ datasets, additional dataset analysis, and primary research to fill priority information gaps, model/strategy building, provision of feedback to key stakeholders and revision of models and strategies.

Progress / Results
The project is now substantially completed. Phase 1 of the project involved systematic reviews of the evidence, and additional qualitative research and quantitative analysis using existing datasets. Using this material, explanatory models for smoking uptake and for SHS exposure of children were developed.
These explanatory models together with further literature reviews of intervention effectiveness and consultations with key stakeholders were used to develop conceptual change models for a community-based intervention to reduce smoking uptake and SHS exposure of children.

The feasibility of the proposed strategies for intervention was tested in interviews and focus groups with national and local stakeholders, and potential members of the target groups. The Ministry of Health has now agreed to fund a demonstration project for an intervention based on the WAKA project findings in Whanganui.

**Dissemination**

WAKA study findings will be disseminated through peer-reviewed journal articles and a range of other mechanisms now being implemented as the final phase of the project.

### 3.2 Other Activities: Tobacco Control

#### 3.2.1 Conference and workshop attendances

Jackie Guo attended and gave a presentation at the *Oceania Tobacco Control Conference 2009* in Darwin. Jackie Guo also attended the *Youth Leadership Training Workshop* in Christchurch, the *AEA Annual Scientific Meeting* and the *National Public Health Association Conference* in Dunedin. Jackie Guo attended a workshop on preparing a submission for the Māori Affairs Select Committee’s *Inquiry into the tobacco industry in Aotearoa and the consequences of tobacco use for Māori* in Dec 2009. Conference and workshop attendance was supported by the Cancer Society core grant.

#### 3.2.2 Teaching, training, supervision and scholarships

Rob McGee, Andrew Gray and Tony Reeder provided supervision for Jackie Guo’s MPH study. Rob McGee leads 4 tutorials for 5th Year Medical students on Tobacco Control.

#### 3.2.3 Collaboration, consultation and advocacy

Rob McGee has recently joined the Tobacco Operational Group of the Cancer Society. The SBRU is preparing a submission for the Māori Affairs Select Committee’s *Inquiry into the tobacco industry in Aotearoa and the consequences of tobacco use for Māori*.
4 Psycho-Social-Spiritual (PSS) Cancer Research

When someone develops cancer, its impact extends beyond the physical effects of the disease to include psychological, social, economic, sexual and spiritual consequences.9

Attending to the psycho-social-spiritual10 (PSS) needs of those affected by cancer is mandated nationally and internationally.11,12 Holistic cancer care across the continuum (pre-diagnosis to survivorship or death) is increasingly understood to be the ideal, albeit unrealized reality. PSS cancer care encompasses the range of support services provided by CSNZ. CSNZ Support Services management and SBRU are growing the research base in this area. This work started with a needs analysis of the research priorities of CSNZ supportive care staff.13 The three priorities identified were referral issues, consumer needs and evaluation needs. A current project, based on this needs analysis, is focusing on what influences referrals to cancer support services. This work is led by Richard Egan, who has a CSNZ funded research fellowship focusing on PSS research for CSNZ Support Services.

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10 The term ‘psycho-social-spiritual’ is used as a synonym for the more common term ‘psycho-oncology’. This latter term may include social and spiritual concerns, but within the New Zealand/Pacific context arguably the PSS term more accurately resonates with Maori, Pacific and holistic models of health and healthcare.


4.1.1 Spirituality in New Zealand Hospice Care

Staff, Student & Collaborators
Richard Egan (PhD candidate) in collaboration with supervisors: Prof. Rob McGee, Prof. Rod McLeod (University of Auckland), Dr Chrystal Jaye (Dept. of General Practice, Dunedin School of Medicine), and Dr Joanne Baxter (Ngāi Tahu Māori Health Research Unit, Dunedin School of Medicine).

Funding
Genesis Oncology Trust PhD Scholarship, University of Otago (Departments of General Practice and Preventive & Social Medicine), CSNZ (Canterbury & West Coast Division).

Rationale
Palliative care aims to meet the needs of the whole person dying from cancer: including the physical, social, mental and spiritual dimensions. This integrated approach to health is increasingly recognised as best practice in both end of life care and other areas of medicine. Current research suggests that spirituality is a key aspect of end of life care, but that it is not well attended to, and under researched. The topic is broad so as to be exploratory and hypothesis generating.

Study Aims
This study examined spiritual care in New Zealand end-of-life cancer care, primarily focused on hospices. The questions considered were: what does spirituality mean for those affected by terminal illness?; what are their spiritual needs?; what do Māori say about spirituality/spiritual care?; and how can spiritual care be improved? A mixed methods approach included an extensive literature review and two discrete studies. Study One involved 52 interviews (patients n=24, family members n=9, staff n=8, chaplains n=8, Māori experts n=3). Study Two surveyed 78% of New Zealand’s hospices (N=25, response rate 56%).

Progress / Results
The thesis has been examined and passed subject to amendments. The candidate is currently finishing off the amendments and will graduate in May 2010.

Dissemination
The results of this work will be made available to all respondents, including New Zealand hospices, in both written and oral forms. Lay and academic presentations will be made, both nationally and internationally, at conferences and hui. Articles will be prepared for publication in national and international journals.
4.1.2 Factors influencing referrals to cancer support services in New Zealand

Staff
Richard Egan (primary investigator), Roz McKechnie (Assistant Research Fellow).

Funding
National Office, CSNZ Support Services; University of Otago Deans Bequest Fund

Rationale
This research is the next step in the growing PSS research for CSNZ Support Services. The first research priority as identified by CSNZ support staff was concern with referral process and more specifically how, why and where are cancer related healthcare professionals referring patients and family/whānau for PSS support? Therefore, the aim of this research is to explore current referral practices for cancer support services among healthcare professionals. To meet the research aim, the research objectives include:

1. Investigate how healthcare professionals (HCPs), specifically oncologists, oncology nurses and GP’s, assess for PSS distress/need.
2. Investigate who these HCPs refer onto for PSS services.
3. Investigate the mechanisms involved in the referral process.
4. Investigate PSS care regarding timing, needs, those most at risk, gaps and barriers.
5. Investigate the CSNZ support services in the above context.

Methods
This research employs mixed methods, including key informant interviews and self completed electronic surveys. Semi-structured key informant interviews make up the first arm of the study. Participants included healthcare professionals who work with people affected by cancer across the six CSNZ Divisions. The second arm of the study will be an electronic survey of oncologists, oncology nurses and GP’s. Ethics approval was gained from the Multi-regional Ethics Committee.

Progress / Results
The first arm (interviews) of this project has been completed. Analysis and development of the second arm (survey) are ongoing. An interim report (January, 2010) has been provided to the National Office Support Service Manager; the final report is due June 2010.
Dissemination
The final report (June 2010) will be presented to the CSNZ Support Services Managers. Based on this final report, a journal article and conference presentation will be developed, in consultation with CSNZ.

4.1.3 Re-emergence: Spirituality and mental health. A discussion paper

"Spirituality is an issue which is crucial to many people, particularly those experiencing distress in their lives. It can provide a sense of belonging and hope as well as enhance coping strategies and a sense of control." 14

Staff & Collaborators
Richard Egan in collaboration with the Mental Health Foundation of New Zealand

Funding
Mental Health Foundation of New Zealand

Rationale
Spirituality is increasingly being recognized as a key dimension of health internationally, nationally and particularly for Maori. 15 Whether taken from an inequality perspective, a person-centred holistic approach, responding to Treaty of Waitangi commitments, or regarding the research, the focus on spirituality is growing. Spirituality research spans a range of fields, most notably in the health, palliative care and mental health areas, which are producing interesting and sometimes controversial results.

Study Aims
Notwithstanding the interest and ‘evidence’, there are a range of issues that are not well canvassed, particularly in the New Zealand context, thus the need for an update on the literature. This discussion document aims to further the debate and discussion about spirituality as it relates to mental health and well-being.

14 Mental Health Foundation UK. Spirituality and mental health: Executive Briefing 2008: Available from: http://www.mentalhealth.org.uk/publications/?EntryId=61019&q=684286%C2%AC2008%C2%AC.
Progress / Results
The discussion paper has been written and presented to the Mental Health Foundation.

Dissemination
The Mental Health Foundation is considering advocating for the place of spirituality in mental health and well-being. The discussion paper will be a source document for their work. The author will present and develop a paper for journal publication based on the discussion document.

4.2 Other Activities: PSS Cancer Research

4.2.1 Conference and workshop attendances
Conference presentations
This year, Richard Egan has given presentations at the International Conference for Ageing and Spirituality in Auckland, the Palliative Care 2009 Conference, Perth, Australia and at the Psychosocial Oncology New Zealand (PONZ) Conference, Dunedin. The latter included the keynote address. Richard received conference support from Genesis Oncology. See Part 2, Section 2.5, under Psychosocial Factors: Conference Presentations for further detail.

4.2.2 Teaching, training, supervision and scholarships
Professor Rob McGee continues to be a supervisor for Richard Egan’s PhD project. Richard Egan is now co-supervising (40%) Lisa Knitter, a Master’s student, whose topic is Spirituality in Cancer Care, focused in a hospital oncology setting.
5 Other Issues in Cancer Control and Health Promotion

5.1 Project Reports:

Cancer Control & Health Promotion

5.1.1 Colorectal cancer control in New Zealand

Staff & Collaborators
Dr Tony Reeder, co-investigator, as part of a team led by Dr Diana Sarfati, Dept. of Public Health, Wellington School of Medicine & Health Sciences and Dr Patrick Graham, with co-investigators Mr Magnus McGee, Dr Ian Sheerin, Mrs Gillian Abel, Dr Lee Thompson and Dr Phil Hider (Dept. of Public Health & General Practice, Christchurch School of Medicine & Health Sciences); A/Prof. Bridget Robinson (Dept. of Medicine, Christchurch School of Medicine & Health Sciences); A/Prof. Brian Cox (Hugh Adam Cancer Epidemiology Unit, University of Otago; Dr Terri Green (Dept. of Management, University of Canterbury); Dr Susan Parry (Dept. of Gastroenterology, Middlemore Hospital, Auckland), and Mr Ian Bissett (Dept. of Surgery, University of Auckland).

Funding
HRC (Health Research Council) project grant.

Rationale
Currently, NZ health services are challenged to provide both timely investigation and treatment for people with colorectal cancer (CRC), and surveillance for individuals at increased risk of CRC. Given the proposal to introduce population screening for CRC in NZ, this research will provide information that is essential for health service planning. It will also produce a powerful research tool for NZ, because the approach will be capable of being adapted to other disease outcomes in order to determine the requirements of new interventions. The approach is being applied to CRC initially, because information in this area is urgently needed.

Study Aims
In order to obtain information essential to help reduce the impact of CRC in NZ, computer models will be developed which, when combined with epidemiological, clinical, economic and qualitative data, will help in estimating the future services and costs likely to be required for appropriate treatment and follow-up for people with CRC, surveillance for those at increased risk and population screening.
The specific SBRU contribution to the project is to collaborate with qualitative analyses of semi-structured interviews about the perceptions of a) GPs and specialists, and b) the general population, through face-to-face interviews with those in the age group likely to be eligible for population screening (50-74 years non-Māori; 40-60 yrs Maori). The aim was to purposefully select Māori participants as well as additional GPs and specialists from regions with high numbers of Māori patients since, although the incidence of CRC is higher among non-Māori, Māori are more likely to die prematurely.

**Progress / Results**

In 2009, interviewing and transcription of the 110 audio recordings was completed. Data were obtained from 19 GP’s (4 Māori) and 11 specialists as well as 30 Māori and 50 non-Māori from the general population. Meetings of both the full research team and the qualitative team (Thompson, Abel and Reeder) were held in Christchurch on November 2nd 2009. It was proposed that three papers would be based on the qualitative data, with one led by each member of the qualitative team.

**Dissemination**

Wide dissemination is planned to include the Ministry of Health, District Health Boards, Cancer Control Council and the CSNZ. Papers will be prepared for publication in journals and presentations for conferences. A paper on perceived barriers to the uptake of the Faecal Occult Blood Test (FOBT), the proposed initial screening test for NZ, has been accepted for oral presentation at the *Behavioural Research in Cancer Control Conference*, Perth, April 2010.

5.1.2 **Perceptions of cancer risk, prevention and treatment**

**Staff and collaborators**

Dr Tony Reeder (Co-supervisor) with Christina Bocock (Dunedin School of Medicine, Summer Research Scholar), Dr Judy Trevena (Primary supervisor, Dept. Psychological Medicine), and A/Prof. David Perez (Co-supervisor, Dept. of Medical and Surgical Sciences).

**Funding**

Dunedin School of Medicine Summer Research Scholarship, University of Otago.

**Rationale**

There is evidence of wide use of CAM (complementary and alternative therapies) by cancer patients seeking a holistic approach to treatment. It is important that patients feel that these therapies can be discussed with the physicians who provide treatment, yet there seems to be a low rate of communication about CAM between patients and their doctors.
Part 1

Our previous research indicated that many people lack knowledge about CAM and may benefit from guidance from physicians. Physicians’ views about CAM are likely to influence communication.

Study Aims
To document the views of physicians about CAM as part of the developing discipline of Integrative Medicine.

Progress
Lists of all GP’s in the Otago region (236) and physicians on staff at the Dunedin Public Hospital (174) were obtained and an invitation was sent to all and, overall, 230 (58%) returned the completed questionnaire.

Dissemination
Preliminary results were prepared by Christina Bocock as a brief report to the Dunedin School of Medicine early in 2009. During 2009, a paper reporting the full analyses was prepared for publication in a scientific journal and will be submitted for review early in 2010.

5.1.3 Engagement between health researchers and end users of research

Staff & Collaborator
Dr Rose Richards and Ms Karen Hartshorn (National Centre for Lifecourse Research).

Funding
Dunedin Medical School Dean’s Bequest Fund. Dr Richards is co-funded by the Cancer Society of New Zealand Inc. core grant and the University of Otago Health Sciences Career Development Postdoctoral Fellowship.

Rationale
In many countries, including New Zealand, there is interest in how to extract maximum value from investment in health research. This question applies not only to the identification of research areas that are strategically important but also the degree to which research findings go on to inform policy, practice and public awareness.
Study Aims
The aim of the current study is to explore engagement between researchers and end-users of research, from the perspective of health researchers based in the Faculty of Medicine at the University of Otago. In this study we examine methods, motivations, challenges and opportunities related to engagement experienced by health researchers.

Progress / Results
Semi-structured interviews were used to explore types, motivations, challenges and opportunities related to engagement with non-academic groups. Face-to-face interviews (60% response rate) were conducted with 33 members of the Faculty of Medicine at the University of Otago and key themes in responses identified. Respondents were involved in a broad range of engagement activities. Motivations included personal enjoyment, wanting to make a difference and because it was central to their research methodology. Challenges included perceptions that engagement activities are not highly valued by academic institutions, potential for miscommunication and conflict and a lack of dedicated time and funding. Mentoring and leadership to support these activities was identified as important, as was the need for quality engagement and ethical conduct throughout.

Dissemination
A paper is currently in preparation for publication based on the findings of this project.

5.2 Other Activities:

Cancer Control and Health Promotion
Dr Tony Reeder met with Sarah Perry, National Screening Advisor for the Cancer Society of New Zealand, to discuss the preparation of papers for publication based on a CSNZ survey about attitudes towards screening and colorectal cancer.

Tony Reeder collaborated with Dr Judy Trevena (principal investigator) and Assoc Professor David Perez (co-investigator) on grant applications to support future work in the area of cancer perceptions, both of medical students and patients receiving treatment for cancer.
Part II

Staff publications by major topic area, 1992-2009
2.1 Healthy Physical Activity and Nutrition

In chronological order, with the most recent listed last in each sub-section

**Refereed papers**


Part 2


**Letters published in scientific journals**


**Theses**

PT01 Richards R. *Predictors of physical activity participation during adolescence and young adulthood*. A thesis submitted for the degree of Doctor of Philosophy (PhD), University of Otago, Dunedin, 15th December 2006.

**Reports**

PR01 Reeder AI, Chalmers DJ, Begg DJ, Langley JD. *Participation in physical activity and selected sports, the use of protective practices, and sports injury experience of the Dunedin Multidisciplinary Health and Development Study cohort at age 21 years*. A report prepared for the Accident Rehabilitation and Compensation Insurance Corporation, February 1997. Injury Prevention Research Unit, Department of Preventive and Social Medicine, Otago Medical School, Dunedin. (20p + appendices).

PR02 Reeder AI. *The development and implementation of the Otago Lifesaver host responsibility programme for licensed club premises*. Occasional Report 36, ISBN 0-908958-37-4. Injury Prevention Research Unit, Department of Preventive & Social Medicine, Dunedin School of Medicine, Dunedin, November 1998. (54p).

PR03 Richards R, Reeder AI. *Physical activity: its measurement and health benefits, and the participation and opinions of young New Zealand adults*. A report to the Cancer Society and Hillary Commission, Social & Behavioural Research in Cancer Group, Department of Preventive & Social Medicine, Dunedin School of Medicine, January 1999. (60p + appendices).

PR05 Richards R, Reeder AI. *Physical activity for cancer prevention.* A report prepared for the Cancer Society of New Zealand. Social & Behavioural Research in Cancer Group, Department of Preventive & Social Medicine, Dunedin School of Medicine, August 17, 2001. (6p).

PR06 Richards R, Reeder AI. *Participation in vigorous physical activity, decisional balance scores and health status among young New Zealand adults.* A report to the Cancer Society of New Zealand. Social & Behavioural Research in Cancer Group, Dunedin School of Medicine, September 2003. (20p + appendices)


PR08 Richards R, Darling H, Reeder AI. A discussion document to report and seek feedback on the Preliminary findings from the ‘Sponsorship and Fundraising in New Zealand Schools Study’: Challenges and opportunities. Social and Behavioural Research in Cancer Group, Department of Preventive & Social Medicine, Dunedin School of Medicine, Dunedin, NZ, February 2004. (15p + appendices).


PR12 Richards R. *Neighbourhood and physical activity: a scoping study.* A technical report to the National Centre for Lifecourse Research, Dunedin Multidisciplinary Health and Development Research Unit, Department of Preventive & Social Medicine, Dunedin, 31 March 2008 (7p).


**Conference presentations (since 1998)**


Part 2


PC10 Richards R, Reeder AI, Poulton R, Williams S. *Predictors of patterns of physical inactivity among New Zealand adolescents.* Fifth National Physical Activity Conference, Melbourne, Australia, October 2005.


**Workshop presentation**

2. Darling H, Richards R, Reeder T. *Sponsorship and Fundraising in Schools*. The Effects of the Food and Marketing Industries on Population Health and Health Inequalities Research Workshop; Department of Public Health, University of Otago; Westpac Trust Stadium, Wellington, NZ. 3 March 2006


5. Richards R. *You’ll get square eyes: TV, computers and gaming during adolescence*. Presented to the meeting of the National Board of the CSNZ, Dunedin Airport, NZ. June 7, 2008.

6. Quigg R. *HEHA Evaluation: Children’s Activity in their Local Environment*. Presented to the meeting of the National Board of the CSNZ, Dunedin Airport, NZ. June 7, 2008.


**Tertiary seminars and lectures**

1. Richards R, Reeder AI, Poulton R. *Longitudinal patterns and tracking of sport participation from childhood to early adulthood*. Student research seminar, Department of Preventive & Social Medicine, Dunedin School of Medicine. May 8, 2003.


3. Quigg R. *Children’s activity in their local environment: An explanation of the study design*. Student research seminar, Department of Preventive & Social Medicine, Dunedin School of Medicine. 27 March 2007.


9. Liggett L. *Habits for Life: Practical programme for caregivers of the next generation*. Student research seminar, Department of Preventive & Social Medicine, Dunedin School of Medicine. 20 May 2008.


11. Quigg R. *Pace & place: Using accelerometers & GPS units to measure children’s physical activity*. Student research seminar, Department of Preventive & Social Medicine, Dunedin School of Medicine, University of Otago. 1 July 2008.

12. Richards R. *Physical Activity and Health*. Lecture given to 5th year Medical Student Course: Public Health Attachment, Preventive & Social Medicine, Dunedin School of Medicine, University of Otago. 21 April 2009.


14. Shaw C. *Edible Gardens in New Zealand Schools*. Student research seminar, Department of Preventive & Social Medicine, Dunedin School of Medicine, University of Otago. 7 May 2009.

15. Quigg R, Gray A, Reeder AI, Holt A, Waters D. *Does Up-Grading Playgrounds Increase Children’s Physical Activity*. Student research seminar, Department of Preventive & Social Medicine, Dunedin School of Medicine, University of Otago. 22 October 2009.

**Media Release**

**PMR1** Richards R. Getting kids active may not be enough to make active adults. Otago University media release, 28 December 2007.  
PMR2  Reeder A, Gray A. Survey reveals what makes kids more likely to walk to school. Otago University media release, 4 April 2008.  

PMR3  Richards R. Children from active homes more likely to be active teens. Otago University media release, 9 March 2009.  

Submissions

PS01  Begg DJ, Reeder AI, Simpson J. Submission on Alcohol and Young People - comments on proposed ALAC strategic approach. Submitted to Alcohol Advisory Council, 23 October 1996.


2.2 UVR Studies

Refereed papers


**Book chapters**


**Theses**


Kime NH. Sun protection information in summer weather reports: perceptions and practices. A thesis submitted for the degree of Master of Science in Health Promotion, Leeds Metropolitan University, UK, 2nd June 2003.


**Letters published in scientific journals**


**Professional publications**


Part 2


Reports

UR01  Morris J, Elwood M. How effective are sun exposure modification programmes? Social & Behavioural Research in Cancer Group / Hugh Adam Cancer Epidemiology Unit, Department of Preventive and Social Medicine, University of Otago, May 1995. (56p).


UR04  Reeder AI. Results from the Māori respondents included in the national survey of awareness, understanding and response to sun protection messages in media weather reports. A report to the National Health Promotion Committee, Cancer Society of New Zealand. Social & Behavioural Research in Cancer Group, Department of Preventive and Social Medicine, Dunedin School of Medicine, March 2001. (12p + appendices).

UR05  Reeder AI. Skin cancer prevention in New Zealand: A discussion document to help guide future SunSmart programme directions. A report prepared for the Cancer Society and Health Sponsorship Council Joint Working Group. Social & Behavioural Research in Cancer Group, Department of Preventive and Social Medicine, Dunedin School of Medicine, August 2001. (68p).

UR06  Kime N, Reeder AI. Sun protection information in summer weather reports: perceptions and practices. A report prepared for the Cancer Society of New Zealand Inc., and the Health Sponsorship Council. Social & Behavioural Research in Cancer Group, Department of Preventive & Social Medicine, Dunedin School of Medicine, December 2002. (29p + appendices).


UR08  Jopson JA, Reeder AI. Sun protection in New Zealand secondary schools: obstacles and opportunities. Social & Behavioural Research in Cancer Group, Department of Preventive & Social Medicine, Dunedin School of Medicine, June, 2004. (42p + appendices).

Part 2

UR10 McCool J, Petrie K, Gorman D, Reeder AI. Non-melanoma skin cancer: outdoor workers’ perceptions of risk and sun protection use. Final report prepared for the Cancer Society of New Zealand (Wellington Division) Inc. Department of Psychological Medicine, Faculty of Medical and Health Sciences, University of Auckland, December 2004. (40p + appendices).


UR13 Jopson JA, Reeder AI. Are NZ Primary Schools SunSmart? A Baseline study prior to the implementation of the National SunSmart Schools Accreditation Programme. A report to the Cancer Society of New Zealand, August 2006. (36p + appendices).


Conference presentations (from 1998)


Reeder AI, Jopson JA. *Sun protection policies and practices of NZ territorial authorities: Rationale and preliminary findings*. Oral presentation at the Public Health Association of New Zealand Conference, Wellington, NZ, July 2005.
UC15 Wright CY, Reeder AI, Bodeker G, Allen A, McKenzie R. Linking real-time solar UV radiation exposure with the social and physical environment, activities, knowledge and attitudes of New Zealand school children. 6th World Congress on Melanoma, Vancouver, Canada, 6-10 September 2005 (poster).


UC21 Jopson JA, Reeder AI. A baseline study prior to implementation of a New Zealand primary schools’ National SunSmart Accreditation Program. 8th Biennial Behavioural Research in Cancer Control Conference: Fortitude Valley, Queensland, Australia, 27-29 September 2006.


UC26 Jopson J, Reeder AI. *An audit of the solaria / indoor tanning industry in New Zealand.* Presented at The 9th Behavioural Research in Cancer Control Conference, Melbourne, Australia; 9-11 April 2008.


UC32 Jopson J, Reeder A. *The NZ SunSmart Schools Accreditation Programme.* Public Health Association Conference, University of Otago, Dunedin, NZ. 1-4 September 2009.

Public seminar presentations (from 1998)

UPS1 McGee R. *Fun in the sun.* Otago Branch of the Public Health Association of New Zealand and the Department of Preventive and Social Medicine, University of Otago, Dunedin, 30 April, 1998.

UPS2 Reeder AI. *The Melanoma Prevention Programme in New Zealand.* Barnett Lecture Theatre, Dunedin Hospital, 4 October 2001.

UPS3 Jopson JA, Reeder AI. *Sun protection in New Zealand secondary schools: obstacles and opportunities.* Department of Preventive and Social Medicine & Otago Branch of the Public Health Association of New Zealand, University of Otago, Dunedin, 9 September 2004.

UPS4 Reeder T, Jopson J. *Yellow Pages advertising of indoor tanning industry services in New Zealand, 1992-2006.* Public Health Seminar, Department of Preventive & Social Medicine, University of Otago and the Public Health Association, Otago/Southland, 2 October 2008.

Workshop presentations (from 2003)

1. Reeder AI. *Current commitment to population monitoring of sun protection in New Zealand.* Australian Sun Protection Survey meeting, Melbourne, Australia, 8 April 2003.


5. Reeder AI, Jopson J. *Sun protection policies and practices of Territorial Authorities: rationale and preliminary findings*. Cancer Society Health Promotion Workshop, Auckland, NZ, November 2005.


12. Reeder AI, Hammond V.. *Sun exposure & vitamin D status among New Zealand adults*. Presented to the meeting of the National Board of the CSNZ, Dunedin Airport, NZ, June 7, 2008.


17. Reeder AI, Jopson JA. *The SunSmart Schools Accreditation Programme (SSAP) evaluation*. SunSmart Schools Operational Group, CSNZ, Wellington, NZ, 1 July 2009.

Tertiary seminars and lectures (from 2007)

1. Henry G. 
   Attitudes towards suntanning in NZ, 1994-2006 and Application of Item Response Theory (IRT) to a ProTan Scale. 
   Student Research Seminar, Department of Preventive & Social Medicine, University of Otago, 10 July 2007.

2. Hammond V. 
   Outdoor workers and sun protection: Workplace or worker? Student Research Seminar, Department of Preventive & Social Medicine, University of Otago, 10 July 2007.

3. Henry-McLeod GF, Gray A, Reeder AI, McGee R. 
   Sunburn and tanning in the New Zealand population, 1994-2006. 
   Student Research Seminar, Department of Preventive & Social Medicine, University of Otago, 17 June 2008.

4. Hammond V. 
   Predictors of serum vitamin D status among NZ adults. 
   Student Research Seminar, Department of Preventive & Social Medicine, Dunedin School of Medicine. 5 August 2008.

5. Jopson J, Reeder AI. 
   Sunsmart Schools: What? Why? Where to from here? 
   Research Seminar, Department of Preventive & Social Medicine, Dunedin School of Medicine, University of Otago. 14 May 2009.

Media releases

UMR1  Reeder AI, Richards R. 
   Sun protection information in weather reports helps everyone. 
   December 8, 2000.

UMR2  Reeder AI, Richards R. 
   When it rains – it pours, when it shines – it radiates. 

UMR3  Reeder AI, Wright C. 
   Kiwi kids’ time in summer sun to be tracked with hi-tech UV badges. 

UMR4  Reeder AI. 
   Local government needs to do more sun protection work: Otago cancer prevention expert. 
   Otago University media release, 7 July 2005. 

UMR5  Wright C. 
   New findings on NZ school children’s summer sun exposure. 
   Otago University media release, 21 April 2006. 

UMR6  Reeder AI. 
   Thick melanoma: the problem continues. 
   Otago University media release, 8 August 2008. 

UMR7  Reeder AI. 
   Workplace commitment key to sun protection for outdoor workers. 
   Otago University media release, 12 August 2008. 
UMR8  Reeder AI. Large increase in New Zealand sunbed services. Otago University media release, 21 August 2008.

UMR9  Reeder AI, Galtry J, St. Clair-Chapman L. Child sun protection: Attitudes may be the key. Otago University media release, 4 February 2009.

UMR10 Reeder AI, Galtry J, St. Clair-Chapman L. Outdoor workers exposed to high UV radiation levels. Otago University media release, 25 February 2009.

UMR11 Reeder AI, Jopson JA. Cancer Society programme to help schools be ‘SunSmart’, CSNZ National Office media release, 15 June 2009.

Submissions

US1  The SunSmart Operational Group of the Cancer Society of New Zealand Inc. (Reeder AI). The need for legislation and regulations to control and monitor harmful exposure to ultraviolet radiation from equipment used for cosmetic tanning or other non-medical purposes. A submission to the Ministry of Health in response to: A Review of the New Zealand Radiation Protection Legislation: A Discussion Document. 2003.


2.3 Tobacco control

Refereed papers


   http://www.blackwell-synergy.com/toc/add/88/2


   http://heapro.oxfordjournals.org/cgi/reprint/9/2/89

Part 2


Part 2


TP21 Darling H, Reeder AI. Tobacco advertising on mini-motors. *Tobacco Control*, 2006; 15(1): 34. [http://tc.bmj.com/cgi/reprint/15/1/34](http://tc.bmj.com/cgi/reprint/15/1/34)


**Invited editorials**


**Letters published in scientific journals**


**Theses**

Darling H. Personal, family, school and other factors that protect young people from cigarette smoking. A thesis submitted for the degree of Doctor of Philosophy (PhD), University of Otago, Dunedin, 3rd December 2005.


**Professional publications / non-refereed (recorded from 2003)**


Reeder A. How things have changed. Link. Otago-Southland Division of the Cancer Society of New Zealand, Dunedin, May 2003.


Darling H, Reeder AI. Exposure to secondhand smoke (SHS) is associated with adverse health outcomes for children and adolescents, including increased risk of invasive meningococcal disease, respiratory and middle-ear infections, and exacerbation of asthma symptoms. *Health Promoting Schools Magazine*. May 2004.


Reports


Conference presentations (from 1998)


TC05 Reeder AI, Blair A. *Environmental tobacco smoke: New Zealand legislation & hospitality industry views on the prohibition of smoking in licensed premises*, Dunedin (poster). 11th World Conference on Tobacco or Health, Chicago, USA, August 2000.


TC11 Darling H, Reeder AI. *Student quit attempts, smoking sanctions and cessation programmes in New Zealand schools*. Oral presentation at the 12th World Conference on Tobacco or Health, Helsinki, Finland, 3-8 August 2003.

TC12 Darling H, Reeder A. *Youth smoking and exposure to second hand tobacco smoke: A New Zealand study*. Oral presentation at the 12th World Conference on Tobacco or Health, Helsinki, Finland, 3-8 August 2003.


Part 2


**Workshop presentations (from 2003)**


**Tertiary seminars and lectures**

1. Reeder AI. *Tobacco control.* Seminars for 5th year medical students public health attachment (four seminars per year to 2007).

3. Guo J. *Understanding nicotine dependence among New Zealand secondary students.* Student research seminar, Department of Preventive & Social Medicine, Dunedin School of Medicine. 5 August 2008.


**Public seminar presentations (from 1998)**

TPS1 Reeder AI. *Youth smoking: A burning issue.* Public Health Association, Otago Branch, and Department of Preventive and Social Medicine. Department of Preventive and Social Medicine, Dunedin, September 9, 1999.

TPS2 Darling H. *School influence on behaviours: The example of tobacco smoking.* Public Health Association, Otago/Southland, and Department of Preventive and Social Medicine. Department of Preventive and Social Medicine, Dunedin, April 6, 2006.

**Media releases**


TMR02 Reeder AI. Smoky bars, like sawdust and spittoons, are “a thing of the past.” November 24, 2000.

TMR03 Reeder AI. Study underlines continuing need for quit smoking services. September 14, 2001.


TMR07 Darling H, Reeder AI. Smoke-free homes help youth stay smoke-free. Otago University media release, 30 May 2003.

TMR09 Darling H, Reeder A. Tax revenue from under-age tobacco sales. Otago University media release, 15 April 2005.


Submissions


TS2 Social and Behavioural Research in Cancer Group staff submissions supporting ASH’s submission on MP Grant Gillon’s Cigarettes Fire Safety Bill, 2001.

TS3 Reeder AI. Tobacco control legislation to protect and promote public health in New Zealand. Submission to the Health Select Committee in support of the Smoke-free Environments (Enhanced Protection) Amendment Bill 1999 and Supplementary Order Paper. November 2001.

TS4 McGee R, Reeder AI. Submission to the Ministry of Health regarding pictorial warnings, 13 June 2006.

TS5 Reeder AI. On-line submission to Statistics New Zealand regarding retention of the tobacco smoking question in the New Zealand Census, 2008.

Letters to the Editor (from 2006)


Other

TO1 Darling H. Youth & Smoking. Factsheet prepared for the Quit Group. February 2005.
2.4 Other research in cancer control and health promotion

Treatment/ screening issues

Refereed papers


Theses

Media Releases


Reports


Child and adolescent health

Refereed papers


Invited editorial

Professional publications

AN1 Richards R, Darling H, Reeder AI. *Current research about sponsorship and fundraising in New Zealand schools*. Health Promoting Schools, Otago, Muihiku and Wakatipu, Public Health South, August 2004.

Conference presentations


AC2 Darling H, McGee R, Williams S, Reeder AI. *Self-concept among a large sample of New Zealand adolescents: are they related to school and demographic characteristics?* Self Concept Conference, Sydney, , Australia, 2002.


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Workshop presentations (from 2003)


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PSP5 Trevena J & Reeder A. Perceptions of New Zealand adults about reducing their risk of cancer. *New Zealand Medical Journal*, 2007; 120 (1258)

Edited Book


Book chapter


Book review


Invited Editorial


Report

PSR1 McGee R. *Comment on “Cannabis: the PHC’s advice to the Minister.”* A report to the Cancer Society of New Zealand, Department of Preventive & Social Medicine, Dunedin School of Medicine, August 1995. (This report formed the basis of the Society’s submission on Cannabis and Health to the Minister of Health).

PSR2 Egan R, Amun Q. *Scoping Paper. Identifying Priorities for Psycho-social-spiritual Cancer Research in New Zealand: Perspectives from the Cancer Society of New Zealand Support Services.* A report to the Cancer Society of New Zealand, SBRU, Department of Preventive & Social Medicine, Dunedin School of Medicine, March 2009.

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Part 2


Workshop presentations


2.  Egan, R.  Spirituality in NZ End-of-Life Cancer Care: Mid-PhD research discussion. Department of Preventive and Social Medicine, Otago University, Dunedin, NZ. Research Student Seminar. April 17, 2007


Tertiary seminars and lectures


Submissions


Miscellaneous

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1. Reeder AI. *The CSNZ Social & Behavioural Research Unit, 1990-2011: Where did we come from and where are we going?* Presented at the CSNZ Health Promoters National Workshop in Wellington, NZ, 14 October 2009.
Part III

Media Reports 2009
## Media Reports

### 2009

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<td>Two thirds of people are failing to slip, slop, slap, <em>RadioLIVE</em>.</td>
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<td>Need to target suntan attitudes, study finds, <em>Otago Daily Times</em>.</td>
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