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
2010
Annual Report
2010

Cancer Society Social & Behavioural Research Unit,
Te Hunga Rangahau Ārai Mate Pukupuku
research projects, activities, publications and media reports
January to December 2010.

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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; 6Preventive & Social Medicine-Early Career Researcher Award; 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 Otago District Health Board, 12 Otago Community Hospice, 13 Dunedin School of Medicine Bequest Fund.
Foreword

In 2011, the Cancer Society Social & Behavioural Research Unit will celebrate the 21st anniversary of our first Cancer Society core grant. That funding continued and, with support from the University of Otago and other funders, led to the development of a NZ programme of social and behavioural research in cancer control. Recognition of the growing international standing of the Unit was marked in 2010 by invitations to review research papers for several prestigious journals and an invitation from the US Centers for Disease Control-based Guide to Community Preventive Services for Dr Reeder to join their Coordination Team for the Skin Cancer Review update.

As part of our core business of providing high quality research outputs, we emphasise research training. We would like to offer our congratulations to our two newest PhD graduates, Dr Richard Egan for his thesis on *Spirituality in New Zealand Hospice Care*, and Dr Robin Quigg for her thesis, *Assessing the effect of up-grading playgrounds on children’s physical activity*. During 2010, Unit staff also provided supervision for a NZ Medical Association Summer Student (Matthew Radford), an MPH candidate (Carly Collins) and MA candidate (Lisa Knitter), as well as PhD candidates working in healthy physical activity and nutrition (Leanne Liggett), and solar ultraviolet radiation exposure / protection (Geri McLeod).

Another area of strategic focus in 2010 has been the development of a Hauora Māori Research Position, in partnership with Te Pokapū o Hauora Māori, Otepoti (Centre for Hauora Māori, Dunedin). We have welcomed Ms Anna Dawson to this position, and she has been a great addition to the team. As a Unit we are looking forward to continuing to develop our responsiveness in this area.

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 2011*
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 substantial gains for cancer control in New Zealand. However, moving towards this goal requires strengthening of policy and practice across multiple sectors to ensure that healthy choices are the easy choices.

SBRU research aims to inform policy and practice in New Zealand by providing locally relevant and timely research in this area. Our planned research explores activity and nutrition throughout the lifespan; from gardens in the preschool setting, primary-school-aged children’s activity in their local environment and relationships between activity and health among adults. There is an exciting alignment between our research on edible gardens, community spaces and active transport, and public interest and concern about environmental sustainability. There is a natural synergy between the activity and nutrition agenda and moves towards locally grown food and reducing use of motor vehicles, and in turn, considerable potential for cancer-related health gains.

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1.1 Project Reports:

Healthy Physical Activity and Nutrition

1.1.1 Political activity for physical activity: health advocacy for active transport

Staff & Collaborators
Dr Rose Richards, Dr Tony Reeder, Ms Qa-t-a Amun, Dr Linda Murdoch

Funding
Department of Preventive and Social Medicine PBRF Grant, Cancer Society SBRU Core funding grant.

Rationale
Effective advocacy is an important part of efforts to increase population participation in physical activity.

Study Aims
This study aimed to a) describe advocacy for active transport via written submissions to city councils as part of their annual community consultation and b) explore the impact of an information sheet (which summarised research evidence and encouraged submission) on patterns of submissions.

Results
Over the study period of, city councils received 47,392 submissions, 17% were related to active transport. Most came from city residents, with a small proportion (2%) from the health sector. The largest category of submissions was in support of pedestrian and cycling infrastructure, design and maintenance of facilities and additional features to support use of these transport modes. Health arguments featured prominently in justifications for active transport initiatives, including concerns about injury risk, obesity, physical inactivity, personal safety and facilities for people with disabilities. There was evidence that the information sheet was utilised by some health sector submitters (12.5%), providing tentative support for initiatives of this nature. The study provides novel information about the current nature of health advocacy for active transport and informs future advocacy efforts about areas for emphasis, such as health benefits of active transport, and potential alliances with other sectors such as environmental sustainability, transport and urban planning and local communities.

Dissemination
A paper describing these study findings is under consideration for publication.
1.1.2 Physical activity and nutrition among cancer survivors

Staff & Collaborators
Dr Rose Richards, Ms Lindsay Robertson, Dr Ewa Swymlek-Gay, Dr Richard Egan

Funding
Funding for this study was provided by a research partnership between the Cancer Society of New Zealand and Curves Gymnasium

Rationale
The number of individual survivors to five years in New Zealand is estimated to be approximately 60,000, and continued advances in early diagnosis and treatment are likely to further increase the number of cancer survivors. As the population of cancer survivors in New Zealand grows, it is important to acknowledge that surviving cancer is associated with several distinct health issues. Compared with persons who have not had cancer, cancer survivors have an increased lifetime risk of developing new primary cancers, cardiovascular disease, diabetes, osteoporosis, and functional decline. Furthermore, the risk of cancer recurrence is high among cancer survivors. Healthy lifestyle practices, including regular exercise, hold the potential to reduce the impact of many of these adverse physiological and quality of life outcomes. In New Zealand, the Cancer Society is a key provider of support for cancer survivors and a potential source of information and support for physical activity participation.

Study Aims and Methods
The aim of this study is to describe some of the current approaches used by the Cancer Society to supporting physical activity among survivors and opportunities and challenges associated with this. Telephone interviews were conducted with Support Service Managers from around the country. Explored in these interviews were features of current and previously successful initiatives, perceptions of population groups with unmet needs in this area as well as barriers and opportunities for activity programmes.

Progress / Results
A literature review outlining potential benefits for physical activity and nutrition for health among cancer survivors has been submitted for publication. A technical report describing Cancer Society physical activity programmes and initiatives is close to completion.
1.1.3 Edible gardens in Early Childhood education settings in Aotearoa/New Zealand

Staff, Student & Collaborators
Ms Anna Dawson, Mrs Carly Collins, Dr Rose Richards, Dr Tony Reeder

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

Rationale
School gardens are used in teaching across a variety of academic areas, including science, language, arts, maths, physical activity, environmental studies, nutrition and agricultural studies. Studies suggest that school gardens may improve children’s fruit and vegetable knowledge, preferences and consumption. Although gardens have been identified as a potentially valuable educational resource, barriers to school gardening initiatives have been reported. These include a lack of time, teacher experience/training, resources linking to the curriculum, funding, and gardening supplies. While there is a growing literature about the role of gardens in schools, to date, there has been no research into the role of gardens within preschools or Early Childhood Education Services (ECES).

Study Aims
The aim of the current study is to explore the presence and role of edible gardens in New Zealand Early Childhood Education Services (ECES), including description of garden characteristics, financial and non-financial support, links with the curriculum and barriers experienced.

Progress / Results
A postal questionnaire was sent to a randomly selected national sample of managers/head teachers in ECES. Of the 211 ECES that responded (55% response rate), 71% had edible gardens, incorporating vegetables, berry fruit, tree fruit, edible flowers and nut trees. Garden activities were linked with teaching across all five strands of the NZ early childhood curriculum. In addition, 34% provided cooking lessons or recipes using garden produce and 30% linked the garden with messages about increasing fruit and vegetable consumption. Most gardens were established in the past 2 years and relied on financial and non-financial support from parents, teachers and community organisations. Barriers to having a garden included a lack of funding, space, time and staff support. The study findings suggest that gardens are already being used as a versatile teaching tool in many NZ ECES settings.
Dissemination

Ms Dawson has presented the methods and preliminary findings from this study at the 2010 Cancer Society Health Promotor’s Hui. A publication based on these findings is in preparation.

1.1.4 Edible gardens in New Zealand Schools

Staff, Student & Collaborators

Mrs Carly Collins (MPH Candidate), Dr Rose Richards (co-supervisor), Dr Tony Reeder (co-supervisor), 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). 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.
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

Mrs Collins has presented findings from this study at the 2010 Behavioural Research in Cancer Control conference in Fremantle, Australia. This study is being prepared for submission as a Masters in Public Health thesis and a paper is in preparation for publication.

1.1.5 School gardens: an opportunity for indigenous health perspectives

Staff & Collaborator

Ms Sam Jackson (summer student), Dr Rose Richards, Dr Joanne Baxter (Centre for Hauora Māori, Dept. 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
Mason Durie's (2008) Te Whare Tapa Whā model for overall health and well-being is conceptualized as a Whare with four strong walls. Each wall represents an important and interlinked cornerstone of health. These four walls are Taha Tinana (physical health), Taha Wairua (spiritual health), Taha Hinengaro (mental health) and Taha Whānau (family health). If the four walls become unbalanced, a person will become unwell. This report specifically explores Te Whare Tapa Whā in relation to gardening. Taha Tinana refers to capacity for growth and development, and those factors which may promote or hinder this. Taha Tinana includes Toiroa (healthy lifestyles) which means making positive food choices and daily exercise. This is linked to producing a healthy body, and within a Māori world view, this can be linked to the land. Through developing a strong relationship with the land, we can learn how to grow, nurture, and harvest crops and thus sustain ourselves and our families. Within a Māori worldview, Taha Wairua is central to identity. Taha Wairua incorporates the practices, relationships and customs that connect a person with their Tipuna (ancestors). Within this world view we are each part of a greater tapestry that links us to our ancestors of the past and future. Therefore, it is important for Māori to develop strong relationships with our ancestors: making connections with the practices of our tipuna provide us with secure identities. Taha Hinengaro refers to our capacity to openly express our thoughts, feelings and emotions (Whatumanawa). This can include developing self-confidence, and having a clear idea of our Tūranga waewae or standplace within a community. Finally, Taha Whānau refers to family health. The concept of family here departs from Western ideas of a nuclear family, and includes anyone who is a part of our prime support networks, people who are responsible for our physical emotional and cultural care. If community environment is unwell, this will affect personal health and well-being.

Study Aims
The aim of this project is to use indigenous health models to explore potential health benefits of school gardens. Key informant interviews were used with three respondents from two school communities. Interviews were transcribed and themes identified.

Progress / Results
A number of health and educational benefits were identified from involvement in a school garden, in particular, through involvement with a kitchen-garden programme. These benefits included building community relationships, children learning to co-operate with others, providing a space for children to make healthy food choices, teaching children the value of cooking healthy food and providing an opportunity to learn through story telling. School gardens also provide a space that draws on and legitimises local community knowledge. The findings here suggest potential for gardens to contribute to health as defined by Te Whare Tapa Whā.
1.1.6 Children’s activity in their local environment

Staff
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), and 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 Maori 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
Children from two communities in Dunedin took part in a natural experiment to measure the amount and place of their physical activity. Children wore accelerometers and GPS units for seven consecutive days in October to December 2007 (n=179) and for the same period in 2008 (n=138). Participants were blinded to the playground intervention. Two playgrounds in public parks in one community were up-graded in May 2008.

Differences in mean total daily physical activity differed depending on an interaction between participant’s Body Mass Index (BMI) z-score and their community of residence. The playground intervention was associated with higher levels of activity for children with lower BMIs but lower levels of activity for children with higher BMIs.

Although physical activity is not usually the only focus of local authority playground provision, making sure that physical activity is always included in the design rationale, and that playgrounds are designed to encourage and sustain physical activity behaviours could be a useful population health intervention.
Dissemination
During 2010, a number of key outputs were achieved. A journal manuscript was published in *Preventive Medicine* and Robin graduated with a Doctor of Philosophy degree from the University of Otago. In addition, a number of conference and symposium presentations were made, disseminating the findings of the study: a poster was presented at the 3rd International Congress on Physical Activity and Public Health, Toronto, verbal presentations made at the New Zealand Recreation Association National Conference in Wellington, at the Mobilities Symposium: Towards a Movement-driven Social Science in Aotearoa/New Zealand, Dunedin, and at He Rangī Tā Matawhānui: Visualising Wider Horizons in Wellington. Robin was also a guest lecturer for the PUBH703 Health and Environment course.

1.1.7 Evaluating the Southland Healthy Eating Healthy Action Programme.

Staff
Leanne Liggett (PhD Candidate), Rob McGee (primary PhD supervisor), Winsome Parnell (co-supervisor, Department of Human Nutrition), Andrew Gray (co-supervisor, biostatistician), Yvette McKenzie (Physical Activity Advisor), Nikki Willis (Childcare Advisor), Katie Janke (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 was 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).

The three research questions aligned to the doctoral thesis are:
1. What attributes among socially disadvantaged caregivers and their preschoolers predict child physical activity minutes, number of fruit offerings by caregiver, and number of vegetables offerings by caregiver?
2. Was Healthy Me & You effective when considering child physical activity minutes, number of fruit offerings by caregiver, and number of vegetables offerings by caregiver?
3. With which sub-groups was Healthy Me & You most effective?
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 hours 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. Key results of this project are currently being written up in the aligned PhD thesis anticipated to be submitted mid 2011.

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. The programme’s website but amended in June 2009 to advise that the programme team is no longer operational and remains accessible until June 2011. All stakeholders received either a written summary of the programme or an oral presentation was given prior to June 2009. In June 2010, two posters were presented at the International Society for Behavioral Nutrition and Physical Activity Conference in Minneapolis, USA.
1.2 Other Activities:

Healthy Physical Activity and Nutrition

1.2.1 Conference and workshop attendances

In 2010, Dr Rose Richards and Mrs Collins attended and gave presentations at the 10th Biennial Behavioural Research in Cancer Control Conference, in Fremantle. Dr Robin Quigg presented at the International Congress on Physical Activity and Public Health in Toronto, The MAI Doctoral Conference Poneke at Victoria University, The New Zealand Recreation Association National Conference and a Mobilities Symposium at the University of Otago. Ms Liggett presented two posters at the Annual Conference of the International Society of Behavioural Nutrition and Physical Activity in Minneapolis.

1.2.2 Teaching, training, postgraduate supervision and scholarships

Dr Richards was Guest lecturer to 3rd year Human Nutrition Students and provided Mentoring for a Pacific Student in the Division of Health Science. Dr Richards, along with Dr Reeder, co-supervises Mrs Collin’s MPH thesis. Robin Quigg gave a guest lecture for PUBH 703.

Dr 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 is on the reference group for Parent’s Voice.
2 Ultraviolet Radiation Studies

A systematic review of interventions designed to increase UVR protective practices / reduce harmful UVR exposure identified that there was only sufficient evidence of effectiveness for educational and policy interventions implemented in primary schools and in recreational and tourism settings. Insufficient evidence was found with respect to any other settings or types of interventions.

However, that review only included studies published up to 2000, so there remained 10 years of additional data to review. For that reason, Bronwen McNoe began work with the SBRU on updating the review, following a recommended abstraction process. In November 2010, Dr Reeder was honoured to accept an invitation to the join a reconstituted Coordination Team to help oversee the Community Preventive Services (CPS) review update - the CDC’s CPS Task Force had been responsible for overseeing the initial review. The project may involve some re-conceptualisation of the review process, subject to Task Force support when it meets in February 2011. Nevertheless, since we have already identified more than 100 additional studies with reasonable potential to meet stringent review criteria, that fact alone should provide sufficient justification for conducting an update so that timely and rigorously reviewed evidence is available to practitioners.

In New Zealand, the SunSmart Schools Accreditation Programme (SSAP) is currently the only skin cancer primary prevention intervention subject to rigorous evaluation. In 2005, the SBRU carried out a baseline survey, followed by a 2009 survey and site visits for in-depth, qualitative work carried out in early 2010.

During 2010, in collaboration with Dr Kirsten Lovelock and Bronwen McNoe, who have worked in occupational research, a grant application was prepared to develop and test an intervention in outdoor occupational settings and, although we were unsuccessful on our first attempt, we aim to refine that proposal and resubmit during 2011. There is a clear need to develop and conduct rigorous evaluation of interventions in this area in NZ and, thereby, also contribute to the relatively sparse international evidence base.

Geri McLeod’s exploration of the properties of NZ national survey measures of sun protection attitudes and knowledge has provided useful insights into their value. Many population based surveys have used such measures without thorough, prior investigation of their properties. Another example of similar work was our research into questionnaire items used in NZ to assess the reliability and validity of self reported skin colour and erythemal sensitivity. As a result of these pieces of research some measures may be able to be refined, potential biases in interpretation taken into account and health promotion priorities more accurately identified and targeted.

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 Mr Paul Johnston and Dr Gregory Bodeker (NIWA, Lauder).

**Funding**

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

**Rationale**

Low levels of vitamin D have been associated with a wide variety of health outcomes including some cancers, diabetes and cardiovascular disease. 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 solar ultraviolet radiation (UVR).

**Study Aims**

Demographic, personal and behavioural factors have the potential to affect received UVR. The study aims were to: (a) relate sun exposure (measured over 8 week periods by personal, electronic UVR dosimeters) to changes in blood vitamin D levels in 500 adults, 18-80 years (equal quotas of Māori, Pacific, Asian, & European ethnicities) in Auckland (330) and Dunedin (170); and (b) determine the wavelength dependence of UVR that produces vitamin D, and the extent to which vitamin D levels may be sustained through artificial UVR sources. Results from the study should provide information on how much UVR exposure is required by major ethnic groups in the adult NZ population to maintain vitamin D levels considered necessary for good health.
Progress / Results

Data collection was completed with satisfactory participation, both overall and to meet age group and ethnic specific targets. Complementary data streams, which included dosimeter measured UVR exposure, clothing and nutrition diary data and blood tests, were cleaned and merged for multivariable analysis.

Preliminary analyses indicate consistently higher levels of body coverage for the more southerly, Dunedin participants and a divergence in mean body coverage between the two centres in spring, with Dunedin coverage remaining relatively steady, but Auckland coverage gradually reducing. The highest levels of mean body coverage, mostly above 80%, occurred approximately from April to September, usually the coldest months in both centres.

A number of plausible, statistically significant associations were found and these potentially have practical significance. Those who reported occupational outdoor work were found to have almost double the UVR dose. Body coverage increased significantly with increasing age, whereas UVR dose increased by approximately 25% for each decade of age. There was lower body coverage at weekends, but also a lower UVR dose. The latter may be due to spending time indoors, but could possibly indicate lower compliance with study protocols on wearing dosimeters at weekends.

Preliminary investigation of the vitamin D status of the Dunedin sample found no evidence of statistically significant differences according to sex or outdoor worker status, but vitamin D levels decreased with increasing BMI. Those reporting Asian ethnicity had the lowest mean 25(OH)D levels. Steps will be to confirm these preliminary findings in the full dataset and to identify and investigate plausible interactions. Further analysis of the complex dataset will continue in 2011.

Dissemination

All participants received personal feedback about their vitamin D levels. Preliminary results were presented at the UV Radiation and its Effects workshop in Queenstown, April 2010 (see publications list). A number of papers are being prepared for publication.
2.1.2  GP’s advice about sun exposure and vitamin D

**Staff & Collaborators**
Mrs Jan Jopson, Dr Tony Reeder and Andrew Gray (biostatistician, Department of Preventive and Social Medicine, University of Otago).

**Funding**
The Cancer Society SBRU Core funding grant and the University of Otago.

**Rationale**
Balancing the risks and benefits of ultraviolet radiation (UVR) exposure can be a challenge in New Zealand. Vitamin D insufficiency has been detected among a sizable proportion of the population. There is growing evidence that vitamin D status may impact on a number of disease outcomes, including some cancers. The main source of vitamin D is exposure of the skin to UVR. However, excessive UVR exposure is associated with skin cancer, particularly among vulnerable skin types, and NZ has among the highest melanoma rates in the world. Given this situation, it is important to know about the advice health professionals provide with respect to vitamin D and UVR exposure.

**Study Aims**
The aims of this study are to: (1) describe the advice currently provided by GP’s with respect to vitamin D deficiency and sun exposure issues; (2) identify the information and resource needs of GPs around these issues and (3) help inform and guide health education and promotion efforts.

**Progress / Results**
After facing a number of practical challenges, this research started late 2010. Information sought included demographics, when and where trained, practice size, and knowledge and practices around vitamin D and sun exposure issues.

**Dissemination**
An abstract of preliminary findings was submitted for presentation at the 2011 Melanoma Summit, Wellington, March 2011. The dissemination of study findings in 2011 should be timely with respect to the need to inform and guide NZ health promotion programmes. A paper will be prepared for publication in a peer reviewed scientific journal.
2.1.3 Systematic review of interventions for the primary prevention of skin cancer

Staff
Mrs Bronwen McNoe and Dr Tony Reeder.

Funding
The Cancer Society SBRU Core funding grant and the University of Otago.

Rationale
A systematic review of interventions designed to increase UVR protective practices / reduce harmful UVR exposure identified that there was only sufficient evidence of effectiveness for educational and policy interventions implemented in primary schools and in recreational and tourism settings. Insufficient evidence was found with respect to other settings and types of interventions. However, that review only included studies published up to 2000 and there remained 10 years of additional interventions to be critically reviewed.

Study Aims
To update the Sariaya et al. (2004) review in order to provide timely, evidence-based information to help guide NZ health promotion practice and identify research priorities. To follow the rigorous abstraction and review process recommended by the US Centers of Disease Control (CDC) Community Preventive Services Task Force responsible for overseeing the initial review.

Progress / Results
The initial literature search identified more than 100 additional intervention studies with the potential to meet stringent review criteria, thereby providing sufficient justification for conducting the review update. The data abstraction process is underway. Dr Reeder was invited to join and accepted membership of the reconstituted Coordination Team to help oversee the Community Preventive Services (CPS) review update.

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Dissemination
We aim to collaborate with the US CDC Community Preventive Services in conducting, publishing and distributing authoritative reviews so that timely and rigorously analysed evidence is available to practitioners in NZ and around the world.

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

Staff & Collaborators
Dr Tony Reeder in collaboration with Dr Kirsten Lovelock (Dept. of Pharmacy) and Mrs Bronwen McNoe.

Funding
Pilot project funding is being sought.

Rationale
Exposure to solar ultraviolet radiation (UVR) is a recognised occupational health and safety issue for outdoor occupations, since UVR excessive exposure is associated with negative health outcomes, including skin cancers and eye diseases. Mitigation is the recommended strategy.

Study Aims
The main aim of this project is to develop a sun protection and skin cancer prevention intervention for selected key occupational groups that is theoretically linked and capable of rigorous evaluation. This will help to meet NZ needs while contributing usefully to a relatively sparse international evidence base.

Progress / Results
An initial grant application to support project development was unsuccessful, but we propose to submit at least one revised application in 2011.

Dissemination
Full dissemination will be an essential part of the proposed project.
2.1.5 Sunburn in a New Zealand population, 1994-2006.

Staff, Student & Collaborators
Geri McLeod (PhD candidate), Dr Tony Reeder (primary PhD supervisor), Andrew gray (co-supervisor, biostatistician, Dept. of Preventive & Social Medicine), Prof. Rob McGee (co-supervisor, Dept. of Preventive & Social Medicine), Dr Jean-Luc Bulliard (technical advisor, Unité d’épidémiologie du cancer, Institut universitaire de medicine saciale et preventive, 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 Cancer Society SBRU Core funding grant and the University of Otago.

Rationale
Sunburn has been associated with an increased risk of subsequent skin cancer. To help increase awareness and reduce harmful UVR exposure, health promotion programmes have been supported in NZ since 1988. The Cancer Society of New Zealand Inc. (CSNZ) and The Health Sponsorship Council (HSC) undertook the Triennial Sun Protection Survey series in order to better understanding their target audiences. With the addition of meteorological data from the National Institute of Water and Atmospheric Research (NIWA), confounding by climatic factors could potentially be controlled in multivariable analyses.

Study Aims
Using survey data for five waves of the survey (1994, 1997, 1900/00, 2002/03, 2005/06) in conjunction with climate and UVR data from NIWA, matched to the respondents’ interview day, the project had two main aims. The first was, across the survey years, to describe patterns of sunburn and the variables identified in the literature as associated with it.

A second aim was to investigate (in a reduced dataset of the most recent three survey waves) potential predictors of (a) time spent outdoors during the period of greatest sunburn risk (11am to 4pm); (b) use of sun protection by clothing and sunscreen; and (c) sunburn experience, using statistical modelling, controlling for climatic factors, survey year, and area of residence.
Progress / Results
Preliminary findings indicated statistically significant patterns across survey years, with time spent outdoors decreasing among males, the 20-29 year age group and those not attempting to obtain a tan. Body coverage decreased significantly among females, the 20-29 year age group and those with Fitzpatrick skin Types II and III (I being 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), more positive attitudes towards tanning and those who attempted to tan. Further analyses using multivariable statistical modelling and including climate data will be reported in the thesis.

Dissemination
A paper on the psychometric qualities of a scale on attitudes towards tanning was published in the Australasian Epidemiologist. Geri McLeod’s PhD thesis is rescheduled for submission and examination in 2011. Publication and the widest possible dissemination of study findings will be sought.

2.1.6 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 & the Cancer Society SBRU Core funding grant.

Rationale
There was 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 self-report measures of skin colour and erythemal sensitivity used in large population studies, including NZ. Without such information, the interpretation of survey findings may be misleading.

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

This was the first study to investigate the quality of the two self-report measures commonly used in Australian and New Zealand surveys of UVR exposure. Almost 300 participants had their skin colour measured using a photospectrometer and attended brief assessments, 7 days apart, when the two self-report questionnaire items were administered. A pattern was found, which we named ‘the dark shift’, because there was a tendency for people with a range of different skin colours to overestimate the darkness of their natural, non-tanned skin. We concluded that the survey measures were useful, but the finding that a significant number of people tended to overestimate their skin pigmentation had potentially important implications for the targeting and uptake of skin cancer health promotion programmes. People with an inaccurate perception of their risk may be less likely to respond appropriately to messages about sun protection, which could help to explain why people continue to get sunburned.

Dissemination

All participants were provided with feedback. A paper was published in the journal Cancer Epidemiology, Biomarkers & Prevention (see publications list). Other forms of dissemination included a media release and acceptance of an abstract for oral presentation at the 2nd Melanoma Summit, Wellington, March 2011.

2.1.7 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

Excessive 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 while at school, the implementation of appropriate school sun protection policies and practices is an important health promotion issue.
Study Aims

A baseline survey of a national sample of state and state-integrated primary schools, randomly selected within geographical region, allowed us to describe the 2005 situation with respect to sun protection policies, practices, curriculum content and environment. The aims of this subsequent evaluation are threefold: 1) to describe the situation in 2009, using a survey of an enlarged random sample, including the baseline schools and an additional sample (to facilitate analysis of potential predictors of accreditation status, while allowing for control of prior survey participation as a potential ‘intervention’); 2) to evaluate, after four years, the impact of the SSAP on schools which participated in the baseline survey; 3) to identify potential barriers and facilitators of accreditation through on-site visits.

Progress / Results

Overall, in 2009, there was a statistically significant increase in total SSAP scores and a higher percentage of schools met all 12 SSAP criteria. The clothing and curriculum criteria were the most challenging to attain. Scores varied significantly by geographic region (CSNZ Division), but not any other socio-demographic factors. The 242 schools which participated at baseline and were followed up in 2009 (80% response rate) demonstrated a shift towards improved sun protection. During Term 1 (2010), Jan Jopson visited 22 schools throughout NZ to observe environmental contexts and obtain feedback. These were purposefully selected schools which had total SSAP scores that either increased or decreased considerably between the two surveys; had issues with getting involved in the SunSmart programme or championed it; stood out as having a story to tell.

Dissemination

Reports about both the 2009 follow-up survey and 2010 on-site visits are being prepared for the CSNZ. Feedback will be obtained from the SSAP Coordinator (Jane Armstrong) and the SunSmart Schools Operational Group. Papers based on these reports are being prepared and are scheduled to be submitted for publication in 2011.

2.2 Other Activities: UVR Studies

2.2.1 Conference and workshop participation
Dr Reeder presented findings from the Vitamin D and Sun Exposure Study at the UV Radiation and its Effects Conference, Queenstown, April 2010. Dr Reeder reviewed abstracts for the 10th Behavioural Research in Cancer Control Conference in Fremantle, Australia in April 2010. He also presented about the SunSmart Schools programme at the CSNZ National Health Promotion Hui, Wellington, October 2010. Mrs Jopson gave a presentation about the SunSmart Schools programme at the Public Health Association conference, Tūrangawaewae Marae, Ngāruawāhia, Waikato, September 2010. Mrs Jopson also gave an invited presentation at the Advancing SunSmart schools hui for school teachers, Timaru September 2010, coordinated by the South Canterbury Centre of the Canterbury and West Coast Division of the Cancer Society.

2.2.2 Teaching, training and supervision
Dr Reeder and Prof. McGee continued to supervise Geri McLeod’s deferred PhD project. Dr Reeder gave a presentation, Sun protection at elementary schools: including a cluster randomized trial, at a Department of Preventive and Social Medicine seminar.

2.2.3 Collaboration, consultation and advocacy
Dr Reeder collaborated with Dr Lisa Houghton, Department of Human Nutrition, University of Otago, by contributing recommended measures of sun exposure for a proposed study of vitamin D fortification in early childhood. Another study in which it is proposed to include measures of UVR exposure and mood is being developed by a PhD candidate (Maria Polak) from the Psychology Department, University of Otago, Dunedin.

Dr Reeder gave an invited presentation, Primary prevention interventions to reduce skin cancer risk, at the triennial meeting of the Skin Cancer Steering Committee, Wellington, August 2010. He also contributed to the drafting of a report by the Early Detection (of skin cancer) Advisory Group (EDAG) and participated in meetings and email discussions for the UVI Working Group, facilitated by the Health Sponsorship Council. Throughout the year, Dr Reeder and Mrs Jopson provided feedback to the CSNZ National Office Health Promoters on drafts of a number of documents including position statements and advice to the public. In November 2010, Dr Reeder accepted an invitation to join a reconstituted Coordination Team to help oversee the proposed Community Preventive Services skin cancer intervention review update for the Community Preventive Services Task Force of the US Centers for Disease Control.

A media release prepared around the time of publication of a paper on perceptions of skin colour received considerable national and some international reportage in May 2010. Also that month, Dr Reeder contributed an article, Balancing the sunshine, for the Otago-Southland Cancer Society Link newsletter.
3 Tobacco Control

The Māori Affairs Select Committee’s Inquiry into the tobacco industry in Aotearoa and the consequences of tobacco use for Māori report was completed in November 2010, and was an important step forward to enhance tobacco control regulations in Aotearoa/New Zealand. This report made a number of recommendations for achieving the vision of New Zealand being smoke-free by 2020. The SBRU made both written and oral submissions to this important Inquiry. Following this report, the Smoke-free Environments (Controls and Enforcement) Amendment Bill was developed by the government; the key focus of this bill is the removal of tobacco retail displays.

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 2010. 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. Research projects looking at trends in smoking cessation, access to tobacco, and second hand smoke among young people since 2002 have also begun. 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.
3.1 **Project Reports: Tobacco Control**

3.1.1 **Smoking cessation perceptions and behaviours among adolescent smokers in New Zealand 2002-2008**

**Staff and Collaborators**
Dr. Louise Marsh, Prof. Rob McGee, Andrew Gray (biostatistician, Department of Preventive & Social Medicine), Rhiannon Newcombe (Health Sponsorship Council) and Judy Li (Health Sponsorship Council).

**Funding**
University of Otago; Cancer Society SBRU Core funding grant.

**Rationale**
Most daily smokers begin smoking by age 18 and most of those that do begin smoking in adolescence, will maintain their smoking well into adulthood. Research has shown that most people who smoke would like to stop smoking, but for various reasons these people are not able to attempt to quit, or have unsuccessfully tried to quit. There are a wide range of quit resources potentially available to young people; however, few students appear to be accessing these services. The majority of smoking cessation research to date has focused on the adult population, which emphasises the need for successful smoking cessation interventions targeted at youth. Little is known about the trends over time in smoking cessation attempts or quitting services accessed by adolescents in New Zealand, and a better understanding of students’ cessation behaviour will help inform the development of effective strategies to support teen quitting.

**Study Aims**
The aims of this study were to examine trends in young smokers wanting to quit, their perceptions of their ability to quit smoking, actual quit attempts, and use of quit services in NZ over the period 2002 to 2008.

**Progress / Results**
This study uses data from the 2002 and 2004 Youth Lifestyle Study and 2006 and 2008 and Youth In-Depth Study surveys of year 10 and 12 students (normally 14-15 years) from randomly selected secondary schools in NZ. This data has been provided by the Health Sponsorship Council of New Zealand and will be analysed in early 2011.

**Dissemination**
A paper will be prepared and submitted to a scientific journal for publication in 2011. An abstract has also been prepared to present this research at the Oceania Tobacco Control Conference in Brisbane in October 2011.
3.1.2 Access to tobacco products by New Zealand youth: 2002 to 2008

Staff and Collaborators
Dr. Louise Marsh, Prof. Rob McGee, Andrew Gray (biostatistician, Department of Preventive & Social Medicine), Rhiannon Newcombe (Health Sponsorship Council) and Rose Trappitt (Health Sponsorship Council).

Funding
University of Otago; Cancer Society SBRU Core funding grant.

Rationale
Successfully restricting youth access to tobacco products could help prevent young people becoming smokers. In NZ, amendments made in 1996 to the Smoke-free Environments Act 1990 made it illegal to sell tobacco products to those under the age of 18 years. However, there is a lack of recent information about NZ youth access to tobacco products and information regarding the monitoring and prosecutions of retailers selling to under-age smokers. Recent data from the 2009 Tobacco Use Survey found that 62% of 15 to 17 year olds purchased tobacco from commercial outlets. Research has also found a rise in the proportion of under-age smokers purchasing from supermarkets, liquor stores and hotels from 2006. This highlights that being under age is not a barrier to purchasing tobacco products in NZ, and that trends in access and purchase of tobacco products by under-age youth are not clear.

The aim of this research was to determine the extent to which access to tobacco products by young people in New Zealand has changed over time between 2002 and 2008. Given previous rates of under-age sales, we hypothesise that the current enforcement of the Smoke-free Environments Act 1990 is not sufficient to deter retailers from selling tobacco to young people under 18 years. The specific objectives of this research are: (1) to examine trends in commercial and social supplies of tobacco products to under-age youth in NZ; (2) to examine trends in under-age youth being asked for identification and refusal of sales; and (3) to examine changes in young people’s spending on cigarettes. These exposures and relationships were examined over a six year period from 2002 to 2008.

In addition, this study examines trends in prosecutions under the Smoke-free Environments Act 1990 for underage sales for the years 2002 to 2008 and compare with trends in requests for identification and tobacco sale refusals.
Study Aims

The aim of this research was to determine the extent to which access to tobacco products by young people in New Zealand has changed over time between 2002 and 2008. Given previous rates of underage sales, we hypothesise that the current enforcement of the Smoke-free Environments Act 1990 is not sufficient to deter retailers from selling tobacco to young people under 18 years. The specific objectives of this research are: (1) to examine trends in commercial and social supplies of tobacco products to under-age youth in NZ; (2) to examine trends in under-age youth being asked for identification and refusal of sales; and (3) to examine changes in young people’s spending on cigarettes. These exposures and relationships were examined over a six year period from 2002 to 2008. In addition, this study examines trends in prosecutions under the Smoke-free Environments Act 1990 for underage sales for the years 2002 to 2008 and compare with trends in requests for identification and tobacco sale refusals.

Progress / Results

This study uses data from the 2002 and 2004 Youth Lifestyle Study and 2006 and 2008 and Youth In-Depth Study surveys of year 10 and 12 students (normally 14-15 years) from randomly selected secondary schools in NZ. This data has been provided by the Health Sponsorship Council of New Zealand and will be analysed in 2011.

Dissemination

A paper will be prepared and will be submitted to a scientific journal for publication in 2011.

3.1.3 Youth experiences of second hand smoke exposure in New Zealand: 2002 to 2008

Staff and Collaborators

Dr. Louise Marsh, Prof. Rob McGee, Andrew Gray (biostatistician, Department of Preventive & Social Medicine), Rhiannon Newcombe (Health Sponsorship Council) and Rose Trappitt (Health Sponsorship Council).

Funding

Cancer Society SBRU Core funding grant.
Rationale
Second hand smoke (SHS) is estimated to kill 300 people a year in New Zealand and causes a substantial burden on morbidity, particularly for children. Young people exposed to SHS have an increased risk for respiratory illnesses, ear problems, asthma, lung function, and more recently, in NZ, a greater risk of exposure has also been shown to be higher among low income individuals and for Māori. Despite reductions in exposure, there are still some areas where SHS may impact young people, in particular smoking in the home and smoking in vehicles, which are the most significant sites of SHS exposure for most children. This is of particular concern given that young people may not be able to avoid exposure. In addition, exposed children may be at greater risk of becoming smokers themselves.

The NZ Smoke-free Environments Act was introduced in 1990 with subsequent amendments made in 2003 banning smoking in certain public places; these types of policies can have additional benefits of reducing smoking in the home and promoting the implementation of home smoking restrictions. The main benefit of household smoking restrictions is reduced SHS exposure for those living in the home, additional benefits are that young people with smoking restrictions in the home are more likely to be in lower stages of smoking uptake, have lower smoking prevalence, are less likely to experiment with smoking, to have ever smoked or been a regular smoker, and are more likely to have quit smoking. These findings appear to be stronger for strict smoking bans compared with partial bans.

Study Aims
The objectives of this study are to (1) investigate trends in young people’s exposure to SHS inside and outside their home, and while travelling in vehicles, and examine differences for subgroups, particularly Māori; (2) examine trends in household rules about smoking; (3) examine the relationship between household rules around smoking and actual exposure; (4) examine the relationship between exposure to SHS and perceptions of harm from SHS; and (5) to explore the relationship between exposure to SHS and being a daily smoker to identify further evidence around smoking uptake. This analysis will identify changes over time and determine how best to develop policy that will support the reduction is SHS exposure among young people. These exposures and relationships were examined over a six year period from 2002 to 2008.

Progress / Results
This study uses data from the 2002 and 2004 Youth Lifestyle Study and 2006 and 2008 and Youth in-depth Study surveys of year 10 and 12 students (normally 14-15 years) from randomly selected secondary schools in NZ. This data has been provided by the Health Sponsorship Council of New Zealand and will be analysed in 2011.

Dissemination
A paper will be prepared and will be submitted to a scientific journal for publication in 2011.
3.1.4 The density of tobacco retail outlets around schools in Otago and Southland

Staff, Collaborator & Student
Dr. Louise Marsh, Prof. Rob McGee, Andrew Gray (biostatistician, Department of Preventive & Social Medicine) & Matthew Radford (summer student).

Funding
New Zealand Medical Association Summer Studentship & Cancer Society SBRU Core funding grant (Dr Marsh).

Rationale
Some research has shown that the density of tobacco retail outlets is related to individual smoking rates, and has also been found to be higher in areas where a larger proportion of the population are younger than 18 years; suggesting that young people may be exposed to high-risk environments during the period in which the risks of initiation of tobacco use and transition to daily use are greatest. Density of tobacco retailers surrounding schools has also been associated with access to tobacco products; the higher the density of tobacco retailers surrounding a school, the higher likelihood of youth smokers buying their own cigarettes, and higher smoking rates at schools. There is conflicting research on the proximity of retailers and smoking rates, some research has found that people living closer to nearest cigarette retailer were more likely to smoke, while others have found no such effect. To date, there has been limited research undertaken in NZ on the density and proximity of tobacco retail outlets and none on density and proximity around schools. The results of this research may suggest areas where the density of tobacco retailers may need to be limited to reduce the uptake of smoking among young people.

Study Aims
The purpose of this research was to examine the density and proximity of tobacco retail outlets to secondary schools in the Otago and Southland regions of NZ, and the relationship with smoking rates of young people residing in those areas. The research also sought to examine the relationship between the density of tobacco retailers around schools and characteristics of the population in that area e.g. deprivation and ethnicity. The final purpose of this research was to validate the location of tobacco retailers listed in the NZ Yellow Pages (NZYP) or observable on Google Street View with those actually selling tobacco products.

Progress / Results
The data on tobacco retailers in Otago and Southland has been collected and the physical check of a group of areas has also been undertaken. Census smoking data has been obtained from Statistics New Zealand. This data will be analysed in 2011.
Dissemination
A research report will be written for the New Zealand Medical Association. It is also intended that this research be submitted to the *New Zealand Medical Journal*.

### 3.1.5 Factors associated with nicotine dependence among New Zealand secondary school students

**Staff & Collaborators**
Jackie Guo, 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 SBRU Core funding 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 scientific paper containing the key findings has been published in Australian and New Zealand Journal of Public Health.
3.1.6 Relations between adolescent activities, parental monitoring and adolescent daily smoking

Staff
Jackie Guo, Prof. Rob McGee and Dr Tony Reeder

Funding
University of Otago; Cancer Society SBRU Core funding 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 Youth 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 been submitted for publication in a peer reviewed journal.
3.1.7 Does the increase in smoke-free adolescents hide a delayed uptake among young adults?

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

Funding
University of Otago; Cancer Society SBRU Core funding 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
Data from and the 1996 and 2006 Census are being used to examine patterns of smoking uptake.

Progress / Results
The customised data tables have been 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.
3.1.8 Predictors of quitting cigarette smoking among young adults

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

Funding
University of Otago, Cancer Society SBRU Core funding grant. (Dr Marsh).

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 was used from the Dunedin Multidisciplinary Health and Development Study (DMHDS), a longitudinal programme of research following about 1,000 individuals from birth to adulthood. 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.
Progress / Results

Initial analysis found that anxiety and depression were associated with a greater likelihood of smoking at age 21, and those with anxiety, but not those with depression at age 21 smoked more cigarette years between 21 and 32. Amongst those who smoked at age 21, neither anxiety nor depression at age 21 predicted increased odds of still being smokers at age 32. On the other hand, amongst current smokers at age 32, both age 21 anxiety and depression predicted having made failed attempts to quit in the last twelve months at age 32. The burden of disease from anxiety was marginally related to whether a smoker at age 21 still smoked at age 32. The odds of an age 21 smoker still smoking were 32% higher for each diagnosis of anxiety at 21, 26, and 32. The burden of disease from depression was not related to whether a smoker still smoked.

Dissemination

A paper has been prepared and will be submitted to a scientific journal for publication in early 2011.

3.2 Other Activities: Tobacco Control

3.2.1 Conference and workshop attendances

Jackie Guo attended and presented two posters at the Asia Pacific Conference on Tobacco or Health in 2010 in Sydney Australia. The titles of these two posters were Relations between adolescent leisure activities and daily smoking, and Nicotine dependence and smoking cessation among New Zealand secondary school students. Dr Reeder presented a report on SBRU research to the national hui of the CSNZ health promotion staff, Wellington, October 2010. Louise Marsh and Rob McGee attended the Tobacco-Free Aotearoa Conference in Auckland in November 2010, and Dr Marsh gave a presentation at a workshop of Tobacco Control Researchers on the Overview of tobacco control research by the Social and Behavioural Research Unit.

3.2.2 Teaching, training, supervision and scholarships

Louise Marsh, Rob McGee, and Andrew Gray provided supervision for Matthew Radford’s summer studentship. Matthew received a summer studentship from the New Zealand Medical Association. Rob McGee led 4 tutorials for 5th Year Medical students on Tobacco Control. In 2011, these tutorials will be presented to 4th year medical students.

3.2.3 Collaboration, consultation and advocacy

Rob McGee attended the Tobacco Operational Group of the Cancer Society. The SBRU made written and oral submissions on 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.

With the growing incidence of cancer, there is an parallel growth in our understanding of the importance of attending to the psycho-social-spiritual (PSS) needs of those affected by cancer. In 2010, New Zealand PSS care was formally recognised by the Ministry of Health through the publication of the Guidance for Improving Supportive Care for Adults with Cancer in New Zealand, where supportive care was defined as “The essential services required to meet a person’s physical, social, cultural, emotional, nutritional, informational, psychological, spiritual and practical needs throughout their experience with cancer.” CSNZ aims to either provide or collaborate with other providers to meet supportive care needs of those affected by cancer. It is this context that CSNZ Support Services management and SBRU continue to grow the research base in this area. This work started with a needs analysis of the research priorities of CSNZ supportive care staff. The three priorities identified were referral issues, consumer needs and evaluation needs.

The first project following the needs analysis focused on what factors influence referrals to cancer support services. A report was written and a journal article is soon to be submitted. This work is led by Dr Richard Egan, with the support of a CSNZ funded research fellowship focusing on PSS research for CSNZ Support Services. A range of collaborators have contributed to this work, both from CSNZ (Susan Sutcliffe and Dr Chris Atkinson) and SBRU (Jan Jobson, Dr Rose Richards) and the Department of Preventive & Social Medicine (Professor Peter Herbison).

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8 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 Māori, Pacific and holistic models of health and healthcare.
4.1.1 Supportive care needs of Māori and older people affected by cancer

Staff & Collaborators
Dr Richard Egan with Dr Lisa Whitehead (primary investigator) (Centre for Postgraduate Nursing Studies, University of Otago, Christchurch), Prof Bridget Robinson (Dept of Medicine, University of Otago, Christchurch), Suzanne Pitama (Dean’s Office, University of Otago, Christchurch), Tania Huria (Māori Indigenous Health Institute, University of Otago, Christchurch), A/Prof. Marie Crowe (Dept. of Psychological Medicine, University of Otago, Christchurch), Prof. Nora Kearney (School of Nursing and Midwifery, University of Dundee, Scotland), Prof. Sanchia Aranda. (School of Health Sciences: Nursing, University of Melbourne, Australia).

Funding
Application for this project has been made to the Health Research Council.

Rationale
With increasing longevity, greater numbers of New Zealanders will be diagnosed with cancer. This study explores the supportive care needs of Māori and older people who are affected by lung or colorectal cancer, and their families. The study will involve a survey of supportive care needs, family interviews and the development and evaluation of two service improvement plans to address key supportive care needs identified in the interviews and survey. The study is patient-centred in all of its phases to ensure that an in-depth understanding of patient needs is obtained in order to develop services that are the most efficient, effective and relevant to the target population. A comprehensive network of advisors who support the study has been convened, including key leaders in policy and practice to facilitate the dissemination of findings and the implementation of the findings in practice both during and beyond the completion of the study.

Study Aims
The overall aim of this programme of research is to improve the supportive care experiences of people affected by cancer and, as a consequence, improve outcomes for patients, their family and whānau. In particular it will address the supportive care needs of Māori and the elderly.
Methods
The proposed HRC project is a 30 month study comprising a range of methodological approaches utilising the Medical Research Council (MRC) framework for complex interventions. Funding has been sought for phases 2 and 3. To inform the development of this proposal, phase 1 was completed as pilot work and involved the completion of two systematic reviews and focus groups and interviews with people affected by cancer (N=30) in Christchurch, the West Coast and Otago. Building on this work, Phase 2 will explore supportive care needs of individuals and family in the first months following diagnosis through a national survey of supportive care needs, followed by family group interviews with a purposive sample to explore supportive care needs in more detail. Phase 3 will draw on the findings from phases 1 & 2 to drive forward service improvement through the development and evaluation of service improvement plans.

Progress / Results
This project has been in development for 2010-2011, with preliminary work developed to inform the larger studies. Egan has been working with a team from the Centre for Postgraduate Nursing Studies, University of Otago, Christchurch, leading the project. Literature reviews and interviews/focus groups have been completed. An HRC application has gone through the first round and is currently being submitted for the second and final round.

4.1.2 Spirituality in New Zealand hospice/cancer care

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

Funding
Project funding is being sought

Rationale
Supportive cancer care and palliative care aims to meet the needs of the whole person: including the physical, social, mental and spiritual dimensions. This integrated approach to health is increasingly recognised as best practice in end of life care as in other areas of medicine. Current research suggests that spirituality is a key aspect of end of life care and supportive care, but that it is not well attended to, and under researched. Our PSS team is not currently directly funded for this area of research, but it has been highlighted as an area of need in all of our research to date.

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Study Aims

An HRC proposal was developed to examine, develop and improve quality of life/hauora, particularly as it relates to spiritual care/taha wairua/wairuatanga for those affected by terminal illness from cancer. The target populations are Māori within the Otago region, a hospice community (patients / whānau / staff / community), and aged residential care residents and staff. Three studies were proposed to enable quality spiritual care at end of life to be understood and evidence developed:

1. A health promoting hospice intervention with the objectives of integrating spiritual care across the whole hospice community, increasing the evidence base for spiritual care in NZ hospices, increasing staff training opportunities and spiritual support, and improving spiritual care assessment and care processes in NZ hospices.

2. A kaupapa Māori, participatory action research investigation with Māori within the Otago region to understand health needs and improve hauora at the end of life, particularly as it relates to cancer and spirituality/taha wairua.

3. An investigation to improve spiritual care in NZ end-of-life cancer care, primarily focused in aged residential care, examining questions such as: How is spirituality understood?; What are the current unmet spiritual needs of residents affected by terminal cancer and dementia?; Are there particular needs for Māori residents?; and How can spiritual care be improved?

Progress / Results

The HRC did not fund this project, however all or parts of it will be further pursued in the coming year.

4.1.3 Factors influencing referrals to cancer support services in New Zealand

Staff & Collaborators

Dr Richard Egan (primary investigator), Roz McKechnie (Research Fellow), Dr Rose Richards, Prof. Peter Herbison, Jan Jopson.

Funding


Rationale

This research was 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 was to explore current referral practices for cancer support services among healthcare professionals.
To meet the research aims, the research objectives include investigation of:

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

Methods
This research employed mixed methods, including key informant interviews and self-completed electronic surveys. Semi-structured key informant interviews made 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 was an electronic survey of oncologists and oncology nurses. Ethics approval was gained from the Multi-Regional Ethics Committee.

Progress / Results
The project is complete. The 24 interviews and 199 survey responses, combined with a review of the literature, have told the story of people doing the best they can within the resources they have in a variety of environments, for example, rural versus urban settings. That PSS needs are important, and at times unmet, was confirmed by these studies. The data suggests there is very high awareness of some CSNZ support services, but the full scope of these services is not well understood. The services not talked about in the interviews, such as CancerConnectNZ, CancerChatNZ and CanSupport, are all resources which could assist with meeting the gaps identified by participants.

With a caution about making generalizations, critical points for PSS distress were identified along the major milestone continuum. Most at risk were those who are isolated, and the family members of cancer patients. All participants agreed that nurses were the most important professional for the assessment and referral process, and in some cases PSS care itself. However, for rural and Māori populations this was not always the case, as providers in these settings (GPs and navigators) often addressed PSS needs.

The assessment and referral processes were a mix of informal and structured approaches. Assessment for PSS need/distress is largely informal, intuitive and based on experience, with assessment tools seldom used. Referral processes varied, with many services offering formal systems, though they were not always used, especially across the CSNZ services. A mix of formal and informal processes for assessment and referral (including self-referral) was affirmed as the ideal due to the possibility of those in need being missed if only informal processes are relied upon. Nurse specialists were named as the ideal professionals for these processes as they have mandated time, experience and the requisite skills.

The CSNZ support services were the most drawn upon service (equal to social workers in the survey). CSNZ was affirmed as an essential service for those affected by cancer, with the convenient CSNZ support services locations widely acknowledged as a facilitator for access.
But there was room for improvement, particularly related to CSNZ referral processes, knowledge of core support services (especially the 0800 number), and provision for rural and Māori populations. Māori affected by cancer face significant gaps and barriers related to mainstream services, but the navigator service appears to be a promising solution.

Gaps in PSS assessment, referral and care were related to self-referral and patient knowledge of services, HCPs knowledge of services, spiritual care assessment and referral options, sexual health, family needs and psychological services. The barriers to adequate care focused on medicalized attitudes, funding, patient/whānau and HCP knowledge, cultural competence, distance from services and lack of options. Suggestions to improve PSS care obviously related to the gaps and barriers, but also focused on upstream issues such as Ministry of Health priorities, infrastructure for PSS care processes and meeting mandated culturally competent, holistic and patient-centred approaches.

Dissemination
A report has been tabled with CSNZ and a journal article is currently under way. Conference presentations will be developed, in consultation with CSNZ.

4.1.4 Exploring the needs of carers of palliative care patients using Photovoice

Staff & Collaborators
Dr Richard Egan & Dr Jennifer Angelo (Otago Community Hospice).

Funding
Otago Community Hospice.

Rationale
The aim of this study is to understand more comprehensively, the issues that family members face as they care for a family member with limited life expectancy. No hypothesis has been established. Rather, this study is an exploratory needs assessment using Photovoice, a qualitative research method. In the Photovoice methodology, carers examine any and all aspects of their roles and photograph objects and situations that depict those aspects. There is no need to photograph the ill family member. However, ultimately the choice of subject matter is in the hands of the carer. Analysis of the carers’ photos and their descriptions will provide the foundation material for the educational programme. The photographs will not be used in the educational program.
Methods
Photovoice is a qualitative research method in which participants are given cameras to take photographs throughout the course of their daily lives. Photovoice allows participants to photograph and communicate concerns. Using this participant driven methodology, the investigator can obtain the “insider view” of the problems. In this particular study, participants photographed objects and situations depicting their tasks and concerns and later discussed them. In this way, the needs of carers could be identified, allowing for any and all aspects of their carer role to emerge.

Progress / Results
The study is complete. A total of ten carers participated, including 2 men and 8 women, between 30 and 80 years old, with a mean age of 57 years. Ten participants, chosen as it was considered manageable in terms of resources (cameras available), provided rich data to explore the research needs and reached saturation within the sample frame. The participants produced hundreds of photographs and 45 discrete interviews. From the coding results, three meta-themes emerged: physical demands, mental health issues and relationships.

Dissemination
Results will be disseminated through the hospice programme, a presentation was given at the 2010 NZ Hospice conference, and a journal article will be published.

4.2 Other Activities: PSS Cancer Research

4.2.1 Conference and workshop attendances
Conference presentations
This year, Dr Richard Egan has given presentations at the Mental Health Foundation staff hui; a TED talk; a Genesis Oncology lecture, a Public Health Association conference presentation and a Hospice NZ conference presentation.

4.2.2 Teaching, training, supervision and scholarships
Dr Richard Egan continues to co-supervise (40%) Lisa Knitter, a Master’s student, whose research topic is Spirituality in Cancer Care, focused in a hospital oncology setting. Egan’s definition of spirituality was used for the Ministry of Health’s Guidance for Improving Supportive Care for Adults with Cancer in New Zealand

Chapter 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 a pilot programme for 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 SBRU contribution to the project was to collaborate with qualitative analyses of semi-structured interviews about the perceptions of a) GPs and specialists, b) the general European population, through face-to-face interviews with those in the age group likely to be eligible for population screening (50-74 years). A parallel study of Māori and GPs and specialists from regions with high numbers of Māori patients was undertaken by Māori researchers.

**Progress / Results**

Interviewing and transcription of the 110 audio recordings was completed and 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 and it was proposed that at least three papers would be based on the qualitative data, with one led by each member of the qualitative team.

**Dissemination**

In 2010, two collaborative papers were prepared and submitted to journals for review. The paper led by Dr Reeder on perceived barriers to the uptake of the Faecal Occult Blood Test (FOBT), the proposed initial screening test for NZ, among European New Zealanders was submitted and a preliminary presentation made at the *Behavioural Research in Cancer Control Conference*, Perth, April 2010. Another paper on gender differences, led by Dr Thompson, was also submitted for publication. Wide dissemination is planned to include the Ministry of Health, District Health Boards, Cancer Control Council and the CSNZ.
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 and Cancer Society SBRU Core funding grant (Dr Reeder).

Rationale
There is evidence of widespread use of CAM (complementary and alternative therapies) by cancer patients who are seeking a holistic approach to their 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. 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 the quality of communication.

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

Progress
All GPs in the Otago region and physicians on staff at the Dunedin Public Hospital (n = 395) were invited to participate and 235 (59%) returned the completed questionnaire. Preliminary results were prepared by Christina Bocock as a brief report to the Dunedin School of Medicine in 2009. A full analysis of the data has been completed and submitted for publication in a scientific journal.

Dissemination
A paper was provisionally accepted for publication in Integrative Cancer Therapies, subject to revision in response to the reviewers’ comments.
5.2 Other Activities:

Cancer Control and Health Promotion

Dr Tony Reeder collaborated with Sarah Peno, National Screening Advisor for the Cancer Society of New Zealand, including provision of feedback on a paper being prepared for publication based on a CSNZ commissioned survey about attitudes towards screening and colorectal cancer. Dr Reeder participated in all face-to-face and teleconference meetings of the National Health Promotion Committee throughout the year and provided feedback to Mrs Peno on proposed CSNZ information sheets and position statements on colorectal and prostate cancer screening.
Part II

Staff publications by major topic area, 1992-2010
2.1 Healthy Physical Activity and Nutrition

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

Refereed papers


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).
Part 2

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)


PC03 Richards R, Reeder AI. Physical activity levels in a cohort of young New Zealand adults. 6th International Congress of Behavioral Medicine, Brisbane, Australia, November 2000. International Journal of Behavioral Medicine, 2000; 7:S152 (abstract).


PC30  Liggett L, Gray A, Parnell W, McGee R. *Fruit and Vegetable Consumption among Socially Disadvantaged Primary Caregivers and Offerings to their Preschoolers.* 2010 Annual Conference of the ISBNPA (International Society of Behavioral Nutrition and Physical Activity), Minneapolis, USA. 9-12 June 2010. (poster)


**Workshop presentations**


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.


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 Al, 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.


17. Quigg R. *From Aspiration to Achievement. Surviving and enjoying a PhD*. Lecture given to PUBH703 Health & Environment, Preventive & Social Medicine, University of Otago. 15 September 2010.

**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.

PMR4 Richards R.  Teens who spend less time glued to screens may relate better to peers. Otago University media release, 2 March 2010.

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


UT03  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


UN05 Reeder A. Balancing the sunshine. *Link*, Otago-Southland Division of the Cancer Society of New Zealand, Dunedin, May 2010.

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).

UR07 McCool J, Gorman D, Petrie K, Reeder AI, De Silva K. *Outdoor workers’ perceptions of the risk of developing non-melanoma skin cancer.* Progress report prepared for the Wellington Division of the Cancer Society of New Zealand Inc. Health Psychology, Faculty of Medical and Health Sciences, University of Auckland, 2003. (7p).

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).

UR09 Reeder AI. *Report to the Skin Cancer Control Steering Committee to inform development of the Skin Cancer Control Programme Plan 2005.* Health Sponsorship Council Board Room, Wellington, July 2004. (44p).

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)


UC14 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.


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.


UPS3 Jopson JA, Reeder Al. 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)


8. Reeder AI. Snakes and Ladders: Picking a safe path for UVR and vitamin D health promotion in NZ. Presented at the Round Table on Vitamin D, UVR exposure and health, Wellington, NZ, 26 July 2007.


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.


22 Jopson J, Reeder AI. Sun Smart Research Update. The Advancing SunSmart Schools Hui 2010, CSNZ, Timaru, NZ, 16 September 2010.

23. Reeder AI, Jopson J. Sun Protection in NZ Primary Schools- taking a closer look. Presented at the CSNZ Health Promoters National Hui in Wellington, NZ, 20 October 2010.

**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.


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.


6. Reeder AI. Sun Protection at Elementary Schools: including a cluster Randomized Trial. Research Seminar, Department of Preventive & Social Medicine, Dunedin School of Medicine, University of Otago. 21 October 2010.

**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. December 2001.

UMR3 Reeder AI, Wright C. Kiwi kids’ time in summer sun to be tracked with hi-tech UV badges. June 24, 2004.

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.

UMR12 Reeder AI. Otago researchers find “dark shift” bias in self-reported skin colour. Otago University media release, 12 May 2010.

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


Part 2


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

TT1 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)


TN02 Reeder A. How things have changed. Link. Otago-Southland Division of the Cancer Society of New Zealand, Dunedin, May 2003.


TN05 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.

TN06 McGee R, Reeder AI, Darling H. Using underage tobacco sales money to enhance youth health. PHA News IX (2); 2006: 7-8.


Reports


Conference presentations (from 1998)


TC04  Reeder AI, Blair A. Views from the hospitality industry on smoking bans. The Environmental Tobacco Smoke / Passive Smoking Conference, Wellington, NZ, 30 November 1999.
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.


TC20  Guo H, McGee R, Reeder AI, Gray AR. Nicotine Dependence among New Zealand Secondary School Students. Asia Pacific Conference on Tobacco or Health (APACT) 2010, Sydney, Australia. 6-9 October 2010 (poster).

TC21  Guo H, McGee R, Reeder AI. Relations between adolescent leisure activities and daily smoking. Asia Pacific Conference on Tobacco or Health (APACT) 2010, Sydney, Australia. 6-9 October 2010 (poster).

Workshop presentations (from 2003)


10. Marsh L. Overview of tobacco control research by the Social and Behavioural Research Unit at a workshop of Tobacco Control Researchers at the Tobacco-free Aotearoa Conference in Auckland, 4-5 November 2010.

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 spitoons, 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.


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.

TS6  CSNZ Social & Behavioural Research Unit. Inquiry into the tobacco industry in Aotearoa and the consequences of tobacco use for Māori. Submission to the Māori Affair Select Committee, 29 January 2010.

Letters to the Editor (from 2006)


TLM3  Reeder T. Tax on Smoking. Otago Daily Times; 5 February 2010.

Other

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

2.4.1 Treatment/ screening issues

Refereed papers


TRP9 Bocock C, Reeder AI, Perez D, Trevena J. Beliefs of New Zealand doctors about integrative medicine for cancer treatment. Integrative Cancer Therapies, in press.

TRP10 Thompson L, Abel G, Reeder AI. “I can’t get my husband to go and have a colonoscopy”: gender and screening for colorectal cancer. Health, in press.

Theses

Conference presentations
TRMC1 Reeder AI, Thompson L, Abel G. *The FOBT as the initial test for a colorectal cancer screening programme: perceptions of barriers - a NZ qualitative study.* 10th Biennial Behavioural Research in Cancer Control Conference. Fremantle, Western Australia. 14-16 April 2010.

Workshop presentations

Reports

Media Releases

TRMR2 Trevena J, Reeder A. Many NZ’ers believe non-conventional cancer treatments beneficial. Otago University media release, 16 December 2005.

2.4.2 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.


Workshop presentations (from 2003)


Media Releases


AMR2 Richards R, Hancox B. Teens who spend less time glued to screens may relate better to peers. Otago University media release, 2 March 2010.
2.4.3 Psychosocial factors

Refereed papers


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).
Part 2

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.


Professional publications


PSPP5  Egan R. Health Promotion and Spirituality: making the implicit explicit. Keeping Up to Date, Summer 2010; 34: 1-4

Conference presentations


**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


4. Egan R.  *Psychosocialspiritual Cancer Research - an emerging field*. Presented to the meeting of the National Board of the CSNZ, Dunedin Airport, NZ. June 7, 2008.


**Tertiary seminars and lectures**


### 2.4.4 Miscellaneous

**Workshop presentation**

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.

**Submissions**


Part III

Media Reports 2010
# Media Reports

## 2010

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Source</th>
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<tbody>
<tr>
<td>23-1-2010</td>
<td>Spirituality among dying focus of study, <em>Otago Daily Times</em>.</td>
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<tr>
<td>2-3-2010</td>
<td>Get those kids outside! Study links excessive screen time to difficulty relating to other people.</td>
<td><em>Thomson Reuters</em>.</td>
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<td>2-3-2010</td>
<td>Keep teens away from computer, TV screens-study. <em>Reuters Life</em>.</td>
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<td>2-3-2010</td>
<td>Poorer relationships for teens who watch more TV. <em>3 News, Radio Live</em>.</td>
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<td>2-3-2010</td>
<td>Teens with much PC, TV time less connected to friends, family. <em>USA Today</em>.</td>
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<td>3-3-2010</td>
<td>‘Fine’ to limit TV time. <em>Otago Daily Times</em>.</td>
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<tr>
<td>8-4-2010</td>
<td>Study sheds light on UV exposure. <em>NZ Press Association</em>.</td>
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<td>9-5-10</td>
<td>Fun in the sun cost me my life. <em>The Herald</em>.</td>
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<td>13-5-10</td>
<td>Researchers identify 'the dark shift'. <em>Channel 9 News</em>.</td>
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<td>13-5-10</td>
<td>&quot;Dark shift&quot; bias found in new research. <em>NZPA Newswire</em>.</td>
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<tr>
<td>13-5-10</td>
<td>&quot;Dark Shift&quot; Bias Found In New Research. <a href="http://www.voxy.co.nz">www.voxy.co.nz</a>.</td>
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<td>13-5-10</td>
<td>Otago researchers find &quot;dark shift&quot; bias. <a href="http://www.scoop.co.nz">www.scoop.co.nz</a>.</td>
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<td>13-5-10</td>
<td>Otago researchers find &quot;dark shift&quot; bias. <a href="http://www.nzdoctor.co.nz">www.nzdoctor.co.nz</a>.</td>
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<td>13-5-10</td>
<td>Research finds skin colour often over-estimated. <a href="http://www.stuff.co.nz">www.stuff.co.nz</a>.</td>
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<tr>
<td>13-5-10</td>
<td>Otago researchers find &quot;dark shift&quot; bias in self-reported skin colour. <a href="http://www.healthcanal.com">www.healthcanal.com</a>.</td>
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<td>14-5-10</td>
<td>People think they are more tanned than the reality. <em>NewsTalk ZB</em>.</td>
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<td>14-5-10</td>
<td>Cancer Society study show skin tones overestimated. <em>Otago Daily Times</em>.</td>
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<tr>
<td>14-5-10</td>
<td>Otago researchers find &quot;dark shift&quot; bias in self-reported skin colour. <a href="http://www.infonews.co.nz">www.infonews.co.nz</a>.</td>
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</table>
20-5-10  Call for tobacco tax to be used to boost health. *The Star.*

May-10  Balancing the sunshine. *Cancer Society Link.*


6-9-10  How much UV is needed for optimum vitamin D? *Radio NZ – National*