Annual Report
2004

SBG research projects, activities & publications,
January to December 2004

with

dissemination plans for 2005
SBG staff & students (as at 31 December 2004)

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Forward

At the close of 2004, the Minister of Health announced the setting up of an independent Cancer Control Council to implement the New Zealand Cancer Control Strategy (NZCCS) launched in 2003.¹ The NZCCS aims to reduce the numbers of New Zealanders who develop or die from cancer, and to achieve a better quality of life for those affected by cancer. The Minister indicated that one of the early tasks of the Council “will be to set up a Cancer Control Collaborative, with the aim of identifying groups and activities around the country contributing to cancer control, and fostering collaboration with them.”² This is something that our Group wholeheartedly welcomes and to which we anticipate making a significant contribution.

During 2004, a University of Otago website http://healthsci.otago.ac.nz/sbrcg was set up for the SBG which enabled us to provide information on current staffing, research and other activities, and a full list of our publications. In 2005 we plan to update and develop this site further to make it the first port of call for anyone wanting to know about the work of the SBG. We aim to include links to the abstracts, at least, of many of our published papers and reports. We also hope to establish direct links from the national and Divisional Cancer Society websites. Please note that most of our email addresses have now changed.

The Cancer Society has approved core funding support for the SBG through to 31 March 2008 and, with Health Sponsorship Council support, additional concurrent funding for a three year doctoral scholarship. That will bring to four the number of doctoral students being supervised within the SBG and who are working in areas identified as priorities for cancer prevention and control in New Zealand.

This report follows the format of earlier annual reports with sub-divisions by major topic areas and includes an appended list of cancer control publications by SBG staff and students, as at 31 December 2004. The format for reporting projects has been changed so that each section uses the same structured headings, which should make it easier for readers to locate specific information. We hope that, with greater access to the Internet, readers will follow the links provided to read in greater detail from our reports and papers.

Part 1: SBG activities by major topic area

1.0 Tobacco control
As in earlier years, the contribution of the SBG to tobacco control efforts in 2004 included the publication and presentation of research findings, some teaching, and considerable collaborative work in research, coordination and planning as well as consultation and advocacy.

The provisions of the Smoke-free Environments Amendment Act 2003, which required all indoor workplaces, including restaurants, bars, casinos and clubs to be smoke-free from December 10 2004 will help to reduce rates of smoking related illnesses and, in the longer term, reduce premature mortality due to smoking. The implementation of that legislation represented an important milestone for tobacco control efforts in New Zealand to which SBG staff contributed through our research dissemination and advocacy efforts, including helping to inform the Health Select Committee through our detailed submission (TS3 in the appended bibliography).

This year, the development of the draft national plan for Reducing Smoking Initiation in Aotearoa New Zealand was another milestone, as was the collaboration which linked the study design, data collection procedures and other aspects of the 2002 ASH and YLS surveys of youth smoking. The latter was built on many of the recommendations in the Report of the Scientific Committee on Youth Smoking Surveillance, a 2000 report of which Tony Reeder was primary author in collaboration with Anaru Waa (HSC) and Robert Scragg (Auckland University).

PROJECT REPORTS

1.1 Tobacco use among Year 10 & 12 students in New Zealand: a report on the Global Youth Tobacco Survey data

Staff and collaborators
Helen Darling and Tony Reeder in collaboration with Anaru Waa of the Health Sponsorship Council.

Funding
Health Sponsorship Council and University of Otago postgraduate scholarships, Cancer Society of New Zealand Inc.

Rationale
The WHO international Framework Convention on Tobacco Control (FCTC), of which New Zealand is a signatory, requires governments to implement research to monitor tobacco use and to ensure that data are internationally comparable.
The Health Sponsorship Council’s (HSC) Youth Lifestyle Study (YLS) biennial survey includes key measures taken from the international Global Youth Tobacco Survey (GYTS) which is currently used in over 150 countries. The YLS follows the recommended methods for the GYTS: multi-stage cluster sampling; trained interviewers to administer the survey during school class time; and key questions taken from both the core and optional GYTS questionnaires.

**Aims**
To document key statistics on New Zealand youth smoking rates using internationally comparable sample selection methods, study procedures, instruments and measures.

**Progress / Results**
Some key findings among the students included:

- 65% had tried smoking - comparable to percentages in the US and Australia;
- 44% were exposed to secondhand smoke (SHS) at home;
- as exposure to SHS at home increased, so did the likelihood of daily smoking;
- only about one third were aware of the dangers of exposure to SHS;
- the proportions of girls who smoked were higher across all three smoking groups (daily, occasional, and all smokers);
- young female Māori students had the highest prevalence of daily smoking;
- around 7% of boys and 6% of girls had tried smoking by age 7 or younger.

**Dissemination**
A report on the GYTS data was written in collaboration with Anaru Waa (Health Sponsorship Council) and published by the Health Sponsorship Council in collaboration with the University of Otago. The Foreword to the report was written by Don Matheson, Deputy Director-General, Public Health Directorate, Ministry of Health. Some findings were reported in the media.\(^3\)\(^4\)

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1.2 Access to tobacco products by New Zealand youth

Staff
Helen Darling and Tony Reeder.

Funding
Health Sponsorship Council and University of Otago postgraduate scholarships, Cancer Society of New Zealand Inc.

Rationale
Policies that restrict youth access to tobacco products, if well enforced, have the potential to reduce youth smoking rates.

Aims
The project’s three aims were to:
- describe the primary sources of tobacco products for under-age youth;
- investigate whether underage youth were asked for identification to prove their age, and were refused tobacco sales;
- estimate the revenue generated from under-age sales of tobacco during 2002.

Progress / Results
This research was based on data obtained from the 2002 YLS, the Health Sponsorship Council’s biennial secondary school based survey of tobacco related attitudes, beliefs, and behaviours. More than one third (35.7%) of the students, 14 to 16 years, who were smokers had purchased tobacco products from commercial sources in the month before the survey. During 2002, the retail value of tobacco sales to the population of young smokers (14 to16 years, alone) was estimated to be in excess of $18 million, with around $12.5 million of this going to the government as taxes.

Being younger than the minimum legal age of purchase (18 years) was not an effective barrier to purchasing. The current legislation and level of enforcement was not a sufficient deterrent to ensure retailer compliance with age restrictions.

Dissemination
A paper has been accepted and is scheduled for publication in the New Zealand Medical Journal in early 2005.
1.3 Relations between school smoking policies & student cigarette smoking, health knowledge and tobacco purchasing

Staff and collaborators
Helen Darling, Tony Reeder and Rob McGee, in collaboration with Sheila Williams, biostatistician in the Department of Preventive & Social Medicine.

Funding
Health Sponsorship Council and University of Otago postgraduate scholarships, Cancer Society of New Zealand Inc.

Rationale
New Zealand schools were required to have policies regarding tobacco smoking. Many schools also have policies to prevent tobacco use by students, including education programmes, cessation support, and punishment for students found smoking. To date, the frequency of these policies and programmes and the relations between them and youth smoking had not been investigated in New Zealand.

Aims
To investigate the associations between school smoking policies and student:
- cigarette smoking prevalence;
- tobacco purchasing behaviour;
- knowledge of health effects from tobacco use;
- likelihood of influencing others not to smoke.

Progress / Results
Data from the 2002 YLS (described 1.2, above) and the concurrent 2002 School Smoking Policy Survey (SSPS) were used to investigate these associations. The SSPS was carried out in conjunction with the 2002 YLS; 81 of the 82 schools that participated in the YLS also responded to the SSPS. School smoking policies were coded into four categories as having either: 1) a punishment emphasis; 2) a cessation emphasis; 3) a preventive focus; or, 4) were comprehensive.5

Preliminary results suggest that having a school tobacco policy was unrelated to the prevalence of tobacco use among students, tobacco purchasing behaviour, and knowledge of the negative health effects of tobacco. Policy implementation is likely to be a more influential factor.

1.4 **Self-concept and youth smoking**

**Staff and collaborators**
Helen Darling, Tony Reeder and Rob McGee, in collaboration with Sheila Williams, biostatistician in the Department of Preventive & Social Medicine.

**Funding**
Health Sponsorship Council and University of Otago postgraduate scholarships, Cancer Society of New Zealand Inc.

**Rationale**
A cornerstone of many child and youth tobacco-use prevention programmes is the belief that an improvement in self-concept will create a protective barrier against initiation of tobacco use. This belief has become pervasive and has seen self-concept (variously described as self-esteem, self-worth, self-confidence) included in many school-based programmes. For example, the compulsory New Zealand (NZ) Health and Physical Education curriculum explicitly links “self-worth” with well-being, the NZ D.A.R.E. programme includes improving “self-esteem” as an achievement objective, and the NZ Life Education Trust includes improving “self-concept” in its ‘self-help’ guide to teenagers. These three programmes constitute the bulk of tobacco education in NZ schools. The Life Education Trust programme has also been widely criticised for accepting financial support from the tobacco industry.

**Aims**
To investigate associations between levels of self-concept and daily smoking among NZ secondary school students.

**Progress / Results**
Data from the 2002 YLS used in these analyses included the Self-Description Questionnaire I (SDQ-I; Marsh 1990). The associations between daily smoking and the self-concept subscales of physical appearance, physical ability, and peer relations are being investigated as part of the modelling for Helen Darling’s PhD thesis. The hypothesised potential protective effects of reporting good relations with parents, high levels of self perceived reading or mathematics ability, scoring highly on the general school scale and on the general self scale will also be investigated.

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Dissemination
The findings were presented at the 2004 Smokefree Conference and will be reported in full in Helen Darling’s PhD thesis in 2005.

1.5 Monitoring popular media

Staff
Helen Darling and Tony Reeder.

Funding
Health Sponsorship Council and University of Otago Postgraduate Scholarships, Cancer Society of New Zealand Inc.

Rationale
The Smoke-free Environments Act (1990) and subsequent amendments banned advertising of tobacco products in New Zealand. There is anecdotal evidence that this advertising has been replaced, to some extent, with more subtle and covert advertising targeting young people.

Aims
To monitor the potential use of discreet tobacco advertising techniques to youth in New Zealand.

Progress / Results
Members of the Social and Behavioural Research in Cancer Group have observed popular media for tobacco imagery. Some advertising posters clearly imitated known tobacco products, but it is unclear if any action was taken by the tobacco industry over these breaches of copyright.

FIGURE 1: Poster advertising dance event, and imitated product packaging.
A further example of advertising is seen in Figure 2, a street poster advertising the final night of smoking in bars (prior to the implementation of the amended Smoke-free Environments Act, December 10, 2004).

![Poster advertising smoking in bars](image)

FIGURE 2: Poster advertising smoking in bars

**Dissemination**
In 2004, a short ‘Ad Watch’ article was published in *Tobacco Control* illustrating the use of tobacco products to advertise music ‘gigs’ in Dunedin, New Zealand.

### 1.6 Development of longitudinal study of tobacco smoking

**Staff and collaborators**
Tony Reeder and Helen Darling in collaboration with Professor Patrick West, Medical Research Council Social & Public Health Sciences Unit in Glasgow.

**Funding**

**Rationale**
Given the inherent limitations of cross-sectional studies, especially with respect to ascribing causality, during 2004 we developed plans for a longitudinal study focused on youth smoking. In such a study, there is a need to include a broad range of valid and reliable measures of personal, family, school and community factors in predictive models in order to identify those most strongly related to smoking initiation.
Aims
Building on the existing YLS and Pre-Teen studies of the HSC, we aim to establish a theory-grounded, longitudinal, school-based study to follow up a representative sample of students through the critical years of smoking initiation. From this study we aim to identify key factors in smoking initiation.

Progress / Results
We recommended Professor West as a candidate for the award of a visiting professorial fellowship. We were very pleased to learn towards the end of 2004 that Prof. West had been awarded a Community Trust Visiting Professorship in the Dunedin School of Medicine. Prof. West will now be coming to Dunedin in early 2005 to assist with project development for about two weeks. Prof West is the Programme Leader for Youth and Health studies at the Glasgow MRC Unit and has a distinguished record of longitudinal research and publication in the area of youth health, including tobacco smoking. Tony Reeder has previously collaborated with Prof West on a study of involvement in physical activity, based on longitudinal data collected from Dunedin and Glasgow cohorts.

1.7 Parental tobacco smoking behaviour and their children’s smoking and cessation in early adulthood

Staff and collaborators
Rob McGee and Tony Reeder, in collaboration with Sheila Williams, biostatistician in the Department of Preventive & Social Medicine.

Funding
University of Otago, Cancer Society of New Zealand Inc. (for Tony’s contribution).

Rationale
Are efforts to get parents to quit smoking going to have any pay-off in terms of impact on adolescent smoking? In the light of the disappointment with school based health education programmes aimed at adolescent smoking, there has been some emphasis on addressing adult smoking as a way of reducing adolescent smoking. For example, in the New Zealand context an important component of tobacco control has been the implementation and dissemination of the government funded Quit programme to help adult smokers stop smoking. This programme, together with efforts to make more environments smoke-free, is by and large aimed at adult smokers.
Aims
To examine the extent to which childhood exposure to parental tobacco smoking, smoking cessation and parental disapproval of smoking predicts daily smoking and attempts to quit in early adulthood.

Results
Initial analyses suggest that parent quitting in childhood has no later impact on smoking in early adulthood, but parents’ quitting and voicing objections to smoking during their child’s early adulthood may have the greatest payoff in terms of reductions in smoking.

Dissemination
A first draft of a paper to be submitted for publication is near completion.

1.8 Tobacco content of evening TV and popular videos

Staff
Rob McGee, Juanita Ketchel and Tony Reeder.

Funding
Lotteries Commission, University of Otago, Cancer Society of New Zealand Inc.

Rationale
In 2002, we initiated a study of tobacco imagery in television programmes broadcast during prime-time viewing. In 2003, this research was extended to include alcohol and other drug imagery on television. Since we were successful in obtaining contestable grant funding to repeat the survey in 2004, we decided to report imagery across the two time periods in order to allow examination of any changes in its extent or nature. In addition, we will examine substance use in popular videos in 2004.

Aims
To examine the amount and nature of depictions of tobacco use in one week of prime time television in 2002 and 2004.

Progress
All coding has now been completed and data for 2004 are currently being checked and entered into electronic storage format for analysis.

Dissemination
A paper will be written and submitted for publication. A report to the Cancer Society on the outcome of this work will be prepared.
ACTIVITIES

1.9 Conference and workshop attendances and presentations
Helen Darling gave an invited presentation at the *Moving forward for a Smoke-free Auckland Symposium*, 14 July 2004, with the support of the Auckland Division of the Cancer Society. Helen also gave an invited presentation at the *Smokefree South Meeting*, Christchurch, New Zealand, 8 October 2004.

Tony Reeder and Helen Darling attended the National Smokefree Conference, Wellington, 13-14 September 2004, and gave three oral presentations, twice each. In Session 1, Day 1, Tony Reeder presented: *Access to tobacco products by underage youth in Aotearoa / New Zealand* (Reeder & Darling). There was considerable interest in the conservatively estimated $20M received by government from taxes on cigarettes sold illegally to underage youth and how that money would be useful to fund youth health programmes. There was also concern about the lack of nationally collated regional data about controlled purchase operations. A paper reporting the full findings of the study has been accepted by the *New Zealand Medical Journal* and scheduled for publication early in 2005. Helen Darling presented *Self-concept and smoking: maybe not such a big deal* (Darling), self-concept being one of the potential predictors of youth smoking included in her PhD project, and *Marketing to children? The contents of our ‘Toy Box” revealed* (Darling & Reeder) to illustrate examples of tobacco related products purchased from retail stores.

A Tobacco Control Research Symposium was organized for the day after the Smokefree Conference. As part of the session on research updates, Tony Reeder was invited to present a report summarising current SBG tobacco control efforts, priorities and future plans. Our current priorities were identified as being to use international best practice research procedures to provide reliable and comprehensive information, in particular, about youth smoking and related risk and protective factors for NZ health promotion and tobacco control programme development and evaluation. Acknowledging the inherent limitations of cross-sectional data, in particular, with respect to the attribution of causality, it was emphasized that we are developing longitudinal studies which build on our experience with the YLS and the Dunedin longitudinal study.

1.10 Advocacy and consultation
Tony Reeder continued to regularly participate in the Cancer Society’s Tobacco Operational Group (TOG) and selected materials for use by health promoters to stimulate ‘talking points’ for competitors in the 2004 Smoke-free Speech

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7 Darling, H. *Curiously strong allure: reducing initiation and uptake of smoking.*
8 Darling, H. *Youth Smoking.*
Competition. Helen Darling was a member of the Review Committee convened to oversee the development of the literature review and proposed national plan: *Reducing Smoking Initiation in Aotearoa New Zealand*. In September, Tony Reeder was nominated to the Board of the Smokefree Coalition and attended his first meeting in Auckland on 20 October. Helen Darling is a member of the Reducing Initiation Strategy Committee, the Tobacco Control Research Strategy Steering Committee, and the Dunedin Smokefree Group. Helen Darling and Tony Reeder prepared a Youth smoking fact sheet for dissemination by the Quit Group. Two SBG staff attended the ‘launch’ of the Smokefree legislation at a celebration on December 10 at The Station Café and Bar, also organised by the Dunedin Smokefree Group.

1.11 Teaching, supervision and scholarships
In 2004, Tony Reeder continued to present four seminars on tobacco control for the 5th Year Medical Students’ Public Health Attachment and a seminar on tobacco control (NZ and the WHO Framework Convention on Tobacco Control) for students taking the Public Health Policy paper (PUBH 702) for the Diploma in Public Health.

Tony Reeder and Rob McGee continued to provide supervision for Helen Darling’s PhD research on protective factors against youth smoking, based on the YLS 2002 data. In support of this work, Helen Darling held University of Otago and Health Sponsorship Council Scholarships during 2004. The HSC has agreed to continue to support Helen’s work to 31 March 2006, primarily to continue working with the data analysis and reporting of the 2004 YLS and Pre-Teen surveys.

In 2004, Helen Darling was the recipient of an Otago PHA grant-in-aid ($500) to attend the PHA 2004 Annual Conference and was awarded a National Heart Foundation Travel Grant (#1123, $3,500) to attend and present findings from her PhD study at the Society for Research in Nicotine and Tobacco conference, Prague 2005.

1.12 Collaboration
We maintained good collaborative relations with other tobacco control researchers through attendance at workshops and conferences and by participation in the Tobacco Control Research Strategy Steering Group and similar activities. SBG staff assisted journals and agencies by contributing to the review of grant applications, papers, and reports. Our collaboration with the HSC on the analysis and dissemination of findings from the YLS was again prominent during 2004. Our good relation with ASH was the foundation for our collaboration on school-based research. We also maintained good relations with researchers based at Auckland University, the Quit Group, and a number of public health units. Tony Reeder was consulted by Kiri Milne of the HSC about
the study design, procedures and analysis of data obtained from bar workers to evaluate the impact of the new workplace smoking restrictions.

Helen Darling and Tony Reeder provided a brief article: What’s the deal with secondhand smoke? for the Health Promoting Schools journal, May 2004 issue, published by Public Health South. Assistance was given to the Dunedin Smokefree Advocacy Group in drafting a 2004 WSFD statement. Helen Darling and Tony Reeder were interviewed for an Otago University Magazine article, to be published in 2005, on Otago University tobacco research which included work with the YLS. We maintained international collaborative links using the Globalink networks, for example, regarding the marketing of cigarettes. Information on the appearance of new packaging for ‘Dunhill’ brand cigarettes was requested by Australian tobacco control colleagues (FIGURE 3).

![FIGURE 3.](image-url)
2. Sun protection and skin cancer control

Excess solar ultraviolet (UV) radiation exposure is the key risk factor for all types of skin cancer.\textsuperscript{10} For its latitude, New Zealand experiences relatively high summer-time erythemal UV radiation levels.\textsuperscript{11} Melanoma skin cancer rates in New Zealand are among the highest in the world, resulting in more than 250 deaths in 2000. Non-melanoma skin cancers, although rarely fatal, are much more common. Skin cancer places a significant burden on the country’s health care system with more than $30 million spent on skin cancer treatment costs each year\textsuperscript{12} - resources which could, potentially, be spent on treating other diseases or correcting inequalities.

The common occurrence, high total cost, identified key risk factor, potential for prevention, and good prognosis for treatment in the early stages make skin cancer a clear priority for cancer control in New Zealand. In New Zealand, the SBG is unique for the body of skin cancer research which it has produced to help guide intervention programme planning.

A notable step forward this year has been an increased acceptance of the need to use the WHO and internationally recommended Ultra Violet Index (UVI) in displays and media weather reports.\textsuperscript{13,14} Much effort has been expended by many people in order to achieve this, but the critical breakthrough was founded on SBG research and advocacy.\textsuperscript{15} Much still remains to be done to achieve universal reporting of the UVI in media weather reports.\textsuperscript{16}

\begin{flushleft}
\textsuperscript{12} O’Dea, D. The costs of skin cancer to New Zealand, Wellington School of Medicine, University of Otago. 2000.
\textsuperscript{14} NZPA. Sunburn meter is a world first. \textit{Otago Daily Times}, p. 2, 18 November 2003.
\textsuperscript{15} Kime N, and Reeder AI. \textit{Sun protection information in summer weather reports: perceptions and practices.}
\textsuperscript{16} Richards R, Reeder AI and Bulliard J-L. Fine forecasts; encouraging the media to include ultraviolet radiation information in summertime weather forecasts. \textit{Health Education Research}, Dec 2004; 19: 677 - 685. Search under: \url{http://her.oupjournals.org/}
\end{flushleft}
PROJECT REPORTS

2.1 The Sun Study: Measurement & mitigation of solar UV radiation exposure among primary & intermediate school children in NZ

Staff and collaborators
Tony Reeder (primary PhD supervisor), Caradee Wright (PhD candidate), Nathalie Huston, Vanessa Hammond and Jan Jopson in collaboration with Dr Greg Bodeker and Dr Richard McKenzie (NIWA, Lauder) and Andrew Gray (biostatistician, Dept. Preventive & Social Medicine) with epidemiological input from Brian Cox (Hugh Adam Cancer Epidemiology Unit).

Funding
Cancer Society of New Zealand Inc., National Institute of Water and Atmospheric Research (NIWA), University of Otago, National Research Foundation (South Africa).

Rationale
Children are an important target age group for skin cancer prevention efforts because any harmful sun exposure that may occur during school years is a significant risk factor for the subsequent development of skin cancer. In addition, there is the opportunity for schools to provide exemplary sun-safe environments and early education that has the potential to help establish lifetime protective behaviours. No known previous studies, either in New Zealand or internationally, have linked actual, time-based UVR exposure, concurrent activities and social and environmental factors. Interpreting this relational database will provide valuable, much needed information to develop effective and appropriate sun protection interventions for New Zealand school children.

Aims
A key aim is to quantify, for the first time, the real-time solar ultraviolet (UV) radiation exposure of a large random sample of New Zealand school children during daylight saving months, between October 2004 and April 2005, using dosimeters capable of measuring personal UV doses at 8-second intervals for one week periods. Measures of other climatic factors which have the potential to influence personal UV radiation exposure will be made using meteorological equipment.

Associated aims include relating UV dose to personal activities (self-recorded by the participants in activity diaries) and sun protection attitudes and knowledge (using a questionnaire), as well as school factors (solar education in school curricula, school sun protection policies, physical school environments - particularly shade provision), and community support (including interviews with health promotion staff and the availability of UVR information in local summer weather reports). All of these data will be entered into a single database
and analysed with the goal of informing and guiding the development of effective sun protection / skin cancer prevention interventions and programmes as well as epidemiological and other scientific studies.

**Progress / Results**
An innovative electronic personal dosimeter capable of measuring second-by-second UV radiation exposure was developed by Martin Allen (a secondary school science teacher with a Royal Society of New Zealand fellowship) in collaboration with NIWA and SBG staff. In 2004, the Cancer Society of New Zealand Inc. awarded a grant to Dr Reeder to undertake this project. Martin Allen was contracted to manufacture the dosimeters for the fieldwork. The questionnaires and activities diaries (weekday and weekend) were developed and piloted in four Dunedin schools during June. Fieldwork commenced on 22 October 2004 and is scheduled to continue through to mid April 2005, with a break over the school holidays. Vanessa Hammond, formerly a social worker at the Roxburgh Children’s Health Camp, was appointed to assist Caradee Wright with the fieldwork. Nathalie Huston was appointed to assist with co-ordination of the fieldwork administration, and related office-based support activities. Data entry is on-going and analysis is scheduled from April 2005, with preliminary results expected by the end of 2005.

**Dissemination**
Caradee Wright attended the *International Non-Ionising Radiation Workshop*, May 20-22, 2004 Seville, Spain and presented a poster on the study dosimeter to an audience of UV radiation experts. Funding support was provided from three sources: our host Department (Preventive and Social Medicine), the University of Otago and the Auckland Division of the Cancer Society of New Zealand.

Interest in this study has been exceptionally high, resulting in many local, national and regional media enquiries and reports in newspapers, and on radio\(^7\) and television, the University of Otago Magazine,\(^8\) the University website and in *He Kitenga, 2004 University of Otago Research Highlights*.\(^9\) Papers for publication in scientific journals are either in preparation or planned.

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\(^7\) NewstalkZB (radio) 1,000 children in skin cancer survey. 28 June 2004.
2.2  Sun protection in New Zealand secondary schools

Staff
Jan Jopson and Tony Reeder, with technical assistance from Nathalie Huston.

Funding support
A 2003 University of Otago grant supplemented by support for fieldwork from the Auckland and Wellington Divisions, Hawkes Bay and Southland Centres of the Cancer Society and, for finalising report preparation during 2004, from the core Cancer Society of New Zealand Inc. grant.

Aims
To document (i) a baseline for secondary school sun protection policies and practices, (ii) Yr 10 students’ sun protection knowledge, attitudes and behaviours.

Progress
In the summer of 2002-3, Jan Jopson carried out a comprehensive baseline survey of secondary school sun protection policies and practices, as well as related curriculum content and students’ sun protection knowledge, attitudes and behaviours. Report preparation and dissemination was the key activity during 2004.

Key findings
The key findings include:

- Only 20% of schools had a written sun protection policy.
- All written policies mentioned shade and education about sun protection, 90% encouraged hat wearing, 60% encouraged staff to be role models, 50% mentioned special events;
- 65% of schools closed most of their buildings to students during breaks;
- 71% of schools had substantial areas of their grounds out of bounds for safety and ease of supervision, often at the expense of providing shade for students;
- 90% of schools reported at least some teaching on sun protection in the curriculum;
- 61% of female, and 51% of male Yr 10 students surveyed reported that they had no teaching on sun protection in the previous 12 months; similar studies in South Australia reported that 13% of female and 10% of male students recalled no teaching on sun protection in the previous 12 months;

All the frequency distributions are presented in the full Technical Report (Report MR9 which is on the SBG website).
To address sun protection at the secondary school level, there are no specific requirements by the Ministry of Education in either the curriculum or the physical school environment.

**Dissemination**
A full technical report, including many recommendations for schools and a school sun protection policy template, was prepared during the first half of 2004 and mailed to all 50 of the secondary schools randomly selected for participation in the study. Copies of that report were also sent to all Cancer Society health promotion staff and other interested parties. The report was also put up on our website to make it as widely available as possible. In addition, 31 confidential school specific reports were prepared for the schools which participated fully in the study.

Jan Jopson gave a presentation during a session on sun protection at the July 2004 Public Health Association Conference in Christchurch. Tony Reeder and Jan Jopson gave a combined presentation covering the study methods and the findings about school policies, practices and curriculum content to a 9 September 2004 public University of Otago seminar hosted by the Department of Preventive and Social Medicine and the Otago Branch of the Public Health Association. There were also some reports in the media. Multivariable analysis of the survey data would be required before preparation of a paper for submission to a scientific journal.

### 2.3 Sun protection messages in media weather reports

**Staff and collaborators**
Rose Richards and Tony Reeder, in collaboration with Jean-Luc Bulliard of the Unité d’épidémiologie du cancer, Lausanne, Switzerland.

**Rationale**
Reports of UV radiation levels in media weather forecasts have good potential to communicate the need for appropriate sun protection to a broad audience.

**Funding**
Grants were received from the University of Otago (1998, 2000) with support from the core Cancer Society grant for report writing in subsequent years. Dr Bulliard received support from a Swiss National Science Foundation fellowship.

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20 Rebecca Walsh, School skin cancer alert, New Zealand Herald, Monday 5 July 2004.
Progress / Findings
This study examined provision of the Ultraviolet Index (UVI) and Burntime messages by New Zealand newspapers, radio and television stations over a 4-year period, and the impact of Cancer Society sponsorship of the provision of UV radiation information for broadcast. The study found newspaper and radio presentation of UV radiation information increased immediately after these costs were removed, but dropped among radio stations in subsequent years, indicating the need for further promotional efforts. At the final assessment (summer 2001-2), 66% of radio stations, both television channels and 48% of newspapers reported at least one form of UVR information in summertime weather reports.

Dissemination
A paper has been published in the Oxford University Press journal, Health Education Research. (refereed paper MP17)

2.4 Outdoor workers’ perceptions of non-melanoma skin cancer risk

Staff and collaborators
Tony Reeder in collaboration with staff at Auckland University (Dr Judith P. McCool and Associate Professor Keith J. Petrie of the Department of Psychological Medicine, Faculty of Medical and Health Sciences) and Professor Des Gorman, Head of Occupational Medicine, School of Population Health), and Laura Lambie (Manager, Cancer Prevention and Early Detection, Wellington Division of the Cancer Society).

Funding
Cancer Society of New Zealand (Wellington Division), Auckland University, and Cancer Society of New Zealand Inc. support for Dr Reeder.

Rationale
Non-melanoma skin cancers (NMSC) are the most common cancers in New Zealand with, each year, at least 45,000 cases confirmed in laboratory tests and treatment costs estimated at around $12M. Yet in areas of high exposure, such as New Zealand, more than 90% of NMSC is attributed to excess exposure to solar ultraviolet radiation and is potentially preventable. Most of the personal costs and many deaths (around 50 per annum) are, therefore, potentially avoidable. Significant health system resources could be spent in other areas. Outdoor workers are at increased risk of NMSC, but earlier qualitative research into workers’ perceptions of the risk of developing non-melanoma skin cancer

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21 O’Dea, D. The costs of skin cancer to New Zealand, Wellington School of Medicine, University of Otago. 2000.

suggested that for many workers it was not a salient risk and the etiology was not well understood.

Aims
The study aims were to investigate two questions, (i) how do workers perceive their personal risk of developing NMSC and (ii) what social, lifestyle or workplace environmental factors influence the prioritization of sun protection behaviours?

Progress / Results
Insights gained from the analysis of qualitative data, obtained in 2003 during the first stage of the project, informed the development of the 40-item, self-completion survey instrument. During the second stage of the project in 2004, using this questionnaire, comprehensive information was obtained from 1,031 workers employed in nine different outdoor occupational groups drawn from a number of workplaces. The study findings indicate that workers’ perceived workplace risk priorities and relative lack of concern about sun protection show that there is a need to design interventions to operate within existing workplace structures and networks.

Dissemination
On completion of the first two stages of the project, a final report was prepared for the Wellington Division of the Cancer Society in December 2004. Two papers have been prepared for publication, one on the qualitative research and the other on the quantitative research.

The future
A proposed third stage of the project will be to design, implement and evaluate a sun protection intervention targeted towards outdoor workers. It is intended that, in the first instance, this intervention will be offered in, at least, the Wellington / Marlborough area from which the original impetus for the study emerged.

2.5 Survey of sun protection policies and practices of Territorial Authorities

Staff
Tony Reeder and Jan Jopson with technical assistance from Nathalie Huston.

Funding
University of Otago Grant supplemented by the Cancer Society of New Zealand Inc.
Rationale
For all types of skin cancer, there is substantial potential for prevention through the modification of collective behaviours and through environmental protection in both built and non-built environments. In New Zealand, until recently, the emphasis in skin cancer control has tended to be placed on awareness raising campaigns,\textsuperscript{23} but the need to place greater emphasis on achieving supportive public policies and institutional changes was accepted at the August 2001 meeting of agencies involved in skin cancer control. The need for local councils to develop and implement appropriate sun protection policies is considered a priority, given that councils are influential in shaping the social and physical environments in which we live – having responsibilities for recreational and sporting facilities, outdoor swimming pools, outdoor workers, community events, and the granting of planning and building approvals.

Overall, council policies and activities can play an important role in health, for example, through commitment to district plans, long term community plans [New Zealand Government, 2002 #2628] and the proposed urban design protocol.[Ministry for the Environment, 2004 #3073] The study was developed in response to a lack of collated, national information in New Zealand about the sun protection policies and practices of a sector that is increasingly recognized as important for the achievement of structural change in support of sun protection and skin cancer control. It was not known either how many councils had adopted such policies, how comprehensive any existing policies were, or how policies were being implemented - information that is essential for needs assessment, programme planning and the evaluation of advocacy and interventions for skin cancer prevention.

Aims
The three key aims of the study were to:

- collect and collate national information to build a comprehensive picture of the sun protection policies, practices and plans of local councils in New Zealand;
- help inform and guide the development of a SunSmart programme designed to encourage councils to implement appropriate sun protection policies and practices;
- establish a baseline against which any change can be measured and interventions evaluated.

Progress / Results
A model questionnaire from South Australia was substantially modified in response to feedback received from council and health promotion staff. In June 2004, a preliminary letter was mailed to the Chief Executive Officer (CEO) of each of the 74 territorial authorities of New Zealand. Overall, 50 (68%) of territorial authorities participated in the survey and responded to a detailed, five-part questionnaire which was distributed to appropriate staff, collated and returned by CEO-nominated council contacts. Information was obtained on sun protection policies and practices that effect outdoor staff, parks and gardens, swimming and paddling pools, other outdoor facilities and planning and building approvals.

Dissemination
Some preliminary findings from the survey will be submitted for presentation within the Place-based public health initiatives stream at the 2005 PHA Annual Conference in Wellington. A full paper, based on a technical report, will be prepared and submitted for publication later in 2005.

The future
The SBG will continue to work closely with the Cancer Society, Health Sponsorship Council and other agencies involved in skin cancer prevention to implement and evaluate sun protection strategies targeted to territorial authorities.

2.6 Evaluation of the Triennial Sun Survey series
Towards the end of 2004, the Cancer Society and the Health Sponsorship Council agreed to jointly fund a three-year ($25,000 p.a.) PhD scholarship to support analysis of the Triennial Survey data. The PhD project is tentatively entitled: Evaluating the SunSmart programme – tracking population trends in sun protection knowledge, attitudes and behaviours, 1994-2003.

ACTIVITIES

2.7 Conferences and workshops
Tony Reeder was invited to prepare a presentation about skin cancer control research in New Zealand for the Central Regions Sun Safety Workshop in Wellington on 26 February. The presentation was very positively received by participants and the Workshop proceeded well. This was the first regionally focused meeting where a range of agencies both regional (DHB’s and PHU’ s) and national (HSC, Cancer Society, Ministry of Health) were represented. Only two Public Health Units were currently specifically contracted to provide any SunSmart services, whereas the others tried to fit something into their Healthy Schools programmes. Among the PHU’s there was great appreciation of the role played by the Cancer Society with all but one of the PHU’s having links with the local Division or Centre. It was concluded that new resources needed to be made
available for regional SunSmart programmes and that these would have to come from other than the Cancer Society.

2.8 Consultancy and advocacy
Tony Reeder continued to be a regular and active participant in the Cancer Society SunSmart Operational Group (SOG) which, through regular teleconferences, helps to guide Cancer Society skin cancer prevention programmes and advocacy. Tony provided feedback on draft reports on shade and the development of school programmes. With respect to advocacy, Tony also contributed to newspaper articles on the results of Triennial Survey,24 and with regard to sun exposure and levels of Vitamin D in NZ children.25

On August 5, Dr Reeder presented the report commissioned by the Skin Cancer Steering Committee to inform the development of the Skin Cancer Control Programme Plan 2005. In the report, the linkages between skin cancer control objectives and the New Zealand Cancer Control Strategy were demonstrated. A number of issues that required attention were identified, including school programmes, shade development, the need to identify additional resources to support programmes, early detection, vitamin D deficiency, solaria and the effectiveness of sunscreen in preventing skin cancer. Overall, a series of 34 recommendations were made.

The Committee responded very positively to the report and most of the recommendations were accepted. It was agreed that the highest priority should remain the 0-12 year age group and their caregivers (including teachers, sports coaches etc.), and that schools should continue to be a focus of efforts for environmental protection. It was also agreed that there needed to be a renewed focus on early detection, with the first stage being to call a meeting of agencies and individuals involved. Similarly, it was agreed there should be a meeting to address the issue of Vitamin D and to which a broad range of representatives should be invited, including clinicians, epidemiologists, nutritionists, sun protection researchers and health promoters.

2.9 Collaboration
We have continued to maintain close relations with Health Sponsorship Council staff working in the sun protection area, in particular, Wendy Billingsley and Kiri Milne. During 2004, collaboration continued with Dr Jean-Luc Bulliard, of the Unité d’épidémiologie du cancer, Lausanne, Switzerland, on the analysis of data and preparation of a report about the monitoring of media sun protection messages in weather reports and the process and outcomes, to summer 2001-2, of

Cancer Society efforts to influence summer sun protection messages in media weather reports (see 2.3, above).

Collaboration on sun protection project development has continued with NIWA staff at Lauder, in particular, Drs Greg Bodeker and Richard McKenzie, and also with the 2003 Royal Society of New Zealand Science, Mathematics and Technology Teacher Fellow, Martin Allen.

2.10 Teaching, training, supervision and scholarships

Tony Reeder is the primary supervisor for Caradee Wright’s PhD project (section 2.1, above). Ms Wright took up a South African National Research Foundation (NRF) overseas PhD scholarship to commence work in 2004 on the project to measure the UV exposure of New Zealand school children. NIWA met the first year of her university fees as an overseas student, since (particularly with recent changes in international exchange rates) the NRF funding in US$ was insufficient to cover both overseas student fees and living expenses. At the end of 2004, Ms Wright was awarded one of only four University of Otago International PhD Scholarships.
3. Healthy physical activity and nutrition

The increased tempo of activity in this area continued in 2004. The promotion of physical activity and prevention of obesity are priority areas for public health interventions for the primary prevention of cancer. The International Agency for Research on Cancer (IARC) report on weight control and physical activity concluded that there was “sufficient evidence” for the cancer preventive effects of both physical activity and avoidance of weight gain. While current adult guidelines recommend 30 minutes of daily moderate intensity activity for health, the IARC review suggests that 45-60 minutes of moderate to vigorous activity is required to reduce cancer risk. The World Cancer Research Fund International has convened a panel of experts to review the evidence of the relations between nutrition, physical activity, and cancer and to update the 1997 report which estimated that 30-40% of all cases of cancer are preventable by making relatively small changes in nutrition and physical activity.

Children and young people, from infancy to 24 years, are identified as a priority group for physical activity promotion in the national policy for physical activity and sport, currently being developed by Sport and Recreation New Zealand (SPARC). The suggested benefits for targeting young New Zealanders are threefold: the potential for positive influences on child health, on later adult health and for the establishment of healthy lifetime activity patterns. With respect to advocacy, taking physical activity as an example, local government is a key player in influencing opportunities, and it represents an important target. With appropriate planning and promotion, active transport such as walking and cycling has great potential for increasing physical activity. Active transport provides opportunities for people to build into their personal daily routines a regular contribution increased activity levels. For those who are overweight, walking provides an appropriate starting point for becoming more physically active.

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3.1 Interest and participation in selected sports among New Zealand adolescents

Staff
Rose Richards, Tony Reeder and Helen Darling.

Funding
Health Sponsorship Council, Cancer Society of New Zealand Inc.

Rationale
Sport and Recreation New Zealand (SPARC) research suggests that between half and two thirds of adolescents are interested in participating in a new sport or active leisure. A better understanding of which ‘new’ activities are most attractive to adolescents is useful information for those seeking to increase participation among this age group.

Aims
This study examined the pattern of youth interest in physical activity by documenting participation and interest in 18 selected popular sports among respondents in the Health Sponsorship Council 2002 national Youth Lifestyle Study.

Results
Sports where there was the largest discrepancy between the proportions of adolescents expressing an interest and the proportions actually participating included rugby union, rugby league, basketball, soccer and surfing (among both sexes); dance and volleyball (among females); and skateboarding (among males). The challenge for public health is to capitalise on this interest and provide appropriate opportunities and support to turn it into increased participation in physical activity.

Dissemination
The results of this study have been published in the New Zealand Medical Journal\(^{33}\) and reported in the media.\(^{34}\)

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\(^{34}\) Walsh, R., Couch athletes exposed in poll, in The New Zealand Herald. 4 June 2004, Auckland.
3.2 Tracking sport participation from childhood to young adulthood

Staff and collaborators
Rose Richards and Tony Reeder in collaboration with Richie Poulton, Director of the Dunedin Multidisciplinary Health and Development Study (DMHDS), and Sheila Williams, biostatistician in the Department of Preventive & Social Medicine.

Funding
Cancer Society of New Zealand Inc. The DMHDS is supported by the Health Research Council of New Zealand. Data reported in this study were collected with support from the United States National Institute of Mental Health, grant MH45070.

Rationale
One of the most important benefits of physical activity participation during childhood and adolescence may be the creation of a foundation for future participation into adult life. To examine the degree to which activity during youth impacts on adult participation requires longitudinal research, and few studies exist where it is possible to examine the entire ‘natural history’ of participation from childhood to adulthood.

Aims
The current study aimed to track sport participation from two perspectives: any participation in organised club sports; and participation in a group of 12 popular sports, among the DMHDS cohort.

Results
Correlation coefficients indicated tracking of club sport membership (7-21 years) and sport participation (15-21 years) was statistically significant, but at low to moderate levels. The study findings suggest some benefit from encouraging sport participation during childhood and adolescence for participation later in life. However, the substantial movement both into and out of sport participation observed in this and other studies cautions against over-reliance on promotion at these ages to achieve the goal of sustained participation in physical activity throughout the life span.

Dissemination
Submission of a scientific paper based on this study was delayed due to additional, more sophisticated analyses being carried out. A paper is now in the final stages of preparation for submission to a journal.

3.3 Influences on physical activity during adolescence and young adulthood

Staff and collaborators
Rose Richards and Tony Reeder in collaboration with Assoc. Prof. Richie Poulton, Director, Dunedin Multidisciplinary Health and Development Study (DMHDS), and Dr Sheila Williams, biostatistician in the Department of Preventive & Social Medicine.

Funding
Cancer Society of New Zealand Inc. (core grant). The DMHDS is supported by the Health Research Council of New Zealand.

Rationale
Late adolescence and early adulthood is a time of transition in the lives of many young New Zealanders, it is also a time when participation in physical activity declines markedly. Arresting this decline is a key part of ensuring adequate participation in physical activity throughout the lifespan, and requires greater understanding of the factors which influence participation during this period.

Aims
This study aims to identify significant predictors of participation in physical activity at ages 15, 18 and 21 years among the DMHDS cohort.

Progress / Results
Because of the breadth of information available about this cohort it is possible to examine the potential influences at each age in addition to childhood factors which may impact on later patterns of physical activity participation. Guided by the available literature, plausible correlates and predictors in the DMHDS database are being identified and the data prepared for statistical analysis.

Dissemination
A thesis is being written and a paper will be prepared and submitted for publication in a suitable scientific journal.
3.4 Walking to school: A trainee intern Health Care Evaluation project

Staff
Tony Reeder was the ‘client’ for the research project in collaboration with Jason Eberhardt-Phillips, Departmental Public Health Course Coordinator and a team of 5th year medical students.

Funding support
University of Otago.

Aims
The study aims were, among primary school children in Dunedin city, to:

- obtain baseline data on the frequency of walking to school;
- investigate factors that either facilitate or present barriers to walking to school.

Progress
An SBG proposal for a study of walking to school among Dunedin primary school children, which was submitted to the trainee interns for consideration, was enthusiastically taken up towards the end of 2004 and developed into a Trainee Intern Health Care Evaluation Project. The project methods were developed and the survey began in December.

Dissemination
Study methods and findings will be reported early in 2005 at a public seminar presentation and as a printed report.

3.5 The Tailored Nutrition Communication Project

Staff and collaborators
Tony Reeder continued to collaborate as co-investigator on the project with the research team based in the University of Otago’s Department of Human Nutrition which includes Caroline Matthaei (Horwath) and Louise Mainvil (principal investigators), with Silke Hellwig and Christine Thomson, as well as Andrew Gray (biostatistician, Dept. Preventive & Social Medicine), Grant Baxter (Design Studies) and Elaine Rose (Physical Education).

Funding
National Heart Foundation of New Zealand, University of Otago, and (for Tony Reeder’s component) the Cancer Society of New Zealand Inc.
Rationale
Low fruit and vegetable intake is associated with increased health risks, including cancer. To complement environmental and policy interventions, there is a need for effective behavioural interventions which enable New Zealanders to make healthy food choices.

Aims
The project aim is to increase fruit and vegetable consumption among those who do not meet the current recommended criteria, and to achieve this through the development of a health communication programme based on personally tailored, computer generated messages.

Progress
During 2003, the focus was on developing a message library and the computer delivery system for stage-targeted, individually tailored print communications (ITPC) for all Stages of Change36 with respect to fruit and vegetable intake. These materials were piloted in 2004 ready for use in a randomized controlled trial to determine the effectiveness of ITPC in comparison with standard print materials. An innovative computer programme was written to mimic a personal consultation with a dietitian. Complementary work on messages specifically designed for Maori is proceeding, initially with the support of Cancer Society funding. A RCT is scheduled to start in 2005.

Dissemination
A number of papers will be prepared for publication and presentation.

ACTIVITIES

3.6 Conferences and workshops
Rose Richards gave an invited presentation at the Obesity Action Coalition Workshop, Wellington, June 2004 and at the Regional Nutrition and Physical Activity Forum organized by the Agencies for Nutrition Action (ANA) in association with Sport and Recreation New Zealand (SPARC).

3.7 Collaboration, consultation and advocacy
We continued to work in collaboration with the Cancer Society’s Physical Activity and Nutrition Advisory Committee (PANAC), researchers based in the Department of Human Nutrition at Otago University, with ANA. Dr Reeder also contributed to discussion in a public meeting in Dunedin called to by the Ministry for the Environment to discuss feedback on the draft New Zealand Urban Design Protocol and has been in touch since with others who attended

concerned about issues such as the provision of greater support for physically active transport. Collaboration was developed with the Auckland Division of the Cancer Society with respect to work with the LiveSmart programme in 2005.

### 3.8 Teaching and supervision
Dr Reeder continues to be primary supervisor for Ms Richards PhD project on physical activity.
4. Other research in cancer control and health promotion
The SBG is mainly involved in specific areas of cancer control identified as significant by the Cancer Society of New Zealand, but we also carry out some generic research that fits into the broader National Cancer Control Strategy. Our work is designed to help inform and guide future action.

PROJECT REPORTS

4.1 Public perceptions of cancer risk, prevention and treatment

Staff and collaborators
Tony Reeder in collaboration with Dr Judy Trevena of the Department of Psychological Medicine, Dunedin School of Medicine.

Funding
University of Otago, Cancer Society of New Zealand Inc.

Rationale
It is important to document public perceptions about cancer because they are potentially relevant for targeting primary prevention activities, and underlie motivations that influence the uptake of screening programmes and the acceptability of diagnostic and treatment services.

Progress / Results
During 2004, data relating to perceptions of alternative and preventive treatments for cancer, obtained during an earlier national random telephone survey, were analysed.

Dissemination
A paper on public perceptions of the causes and primary prevention of common fatal cancers in New Zealand was published in 2003. A second paper, on public perceptions of treatment and alternative and complementary therapies (CAM) is in preparation and will be submitted for publication in 2005.
4.2 Secondary school students’ disposable income, part-time employment, saving, & spending on gambling, alcohol, fast food and cigarettes

Staff and collaborators
Helen Darling, Tony Reeder and Rob McGee, in collaboration with Sheila Williams, biostatistician in the Department of Preventive & Social Medicine.

Funding
Health Sponsorship Council and University of Otago postgraduate scholarships, Cancer Society of New Zealand Inc., University of Otago.

Rationale
Part-time employment is a normal occurrence that provides adolescents with opportunities to obtain experience and gain disposable income, but employment has also been associated with some risks for adolescents, for example, an increased risk of gambling and tobacco smoking and hours of employment that can interfere with educational goals. Similarly, the provision of ‘pocket money’ from family members may also be associated with increased risks.

Aims
The three aims were to:

- identify the sources of disposable income among secondary school students;
- document expenditure on potential health risk items;
- examine associations between part-time employment and purchasing of potential health risk items.

Progress/ Results
Data were obtained from the 2002 YLS and analysed as part of Helen Darling’s PhD project.

Dissemination
A paper has been drafted and submitted for publication.
4.3 Use of the Internet for health information by NZ secondary school students.

Staff
Helen Darling and Tony Reeder.

Funding
Health Sponsorship Council and University of Otago postgraduate scholarships, Cancer Society of New Zealand Inc., University of Otago.

Rationale
The Internet is not limited to health promoting or health neutral messages. Most students use the Internet, yet identifying websites that present reliable health information can be very difficult with sites often judged by their format rather than content. In order to become critical users of information from the Internet students need skills and knowledge to critically evaluate site content. Little is known about how NZ students use the Internet for health information, despite the fact that most (95%) of the students surveyed in the 2002 YLS used the Internet.

Aim
The overall aim was to examine, among NZ secondary school students, the frequency of Internet use for accessing health information.

Progress / Results:
Data were used from the 2002 YLS. In response to the questions “Have you ever used the Internet to obtain general health information” – two thirds (68.4%) responded that they had, and for 16.7% this was to obtain information about a “… specific health issue”.

Dissemination
A poster was presented at the 2004 PHA Annual Conference in Christchurch.
4.4 Sponsorship and fundraising in New Zealand schools

Staff
Rose Richards, Helen Darling and Tony Reeder.

Funding
Health Sponsorship Council and the Cancer Society of New Zealand Inc.

Rationale
New Zealand schools have a long-standing tradition of fundraising within the school community. Over time, however, the range of potential sponsorship, incentive and fundraising partnerships available has increased and provides school communities with both opportunities and challenges for their efforts to provide quality education to their students. Anecdotal evidence suggested that schools were receiving support for educational activities through sponsorship or fundraising practices which were potentially health compromising. Examples included the selling of chocolate bars, “fast food” nights, “sausage sizzles”, and the provision of soft-drink machines on school grounds.

Overseas, concerns have been raised about the impact of such commercial activities in school settings\textsuperscript{37-38} and a recent obesity prevention report from the U.S. Surgeon General identified the need to “evaluate the financial and health impact of school contracts with vendors of high-calorie foods and beverages with minimal nutritional value”.\textsuperscript{39}

Aims
Primary, intermediate and secondary schools were surveyed with the aim of examining the pattern of participation in sponsorship, incentive and fundraising initiatives. Feedback on these findings was sought from key stakeholders.

Progress / Results
Most schools were involved in some sort of sponsorship, incentive and fundraising initiative with some having potential negative health implications for students. Two examples centred around the promotion and sales of food products high in fat and sugar content to students (in the case of vending machines) and to the wider school community (via fundraising products). Key stakeholders identified concerns that classroom health education may be undermined and that schools were being perceived as having endorsed consumption of particular products.


Dissemination
The findings from the survey, including potential obstacles and opportunities for health promotion, were summarised in a discussion document which was circulated among key stakeholders for comment early in 2004. A poster was presented at the PHA Annual Conference in Christchurch **, a report was printed in the August 2004 issue of Health Promoting Schools (Otago, Murihiku, Wakatipu), and a publication based on the full study has been submitted to an academic journal.

4.5 Evaluation of the Kids on Bikes programme

Staff and collaborators
The programme was developed by Helen Darling and Rose Richards in collaboration with staff from the cycle shop, Cycle Surgery.

Funding
University of Otago and HSC Postgraduate Scholarships, Cancer Society of New Zealand Inc.

Rationale
The Kids on Bikes programme is a free, community-based programme designed to encourage children to be active and cycle, safely. It required evaluation.

Progress / Results
Evaluation of the pilot Kids on Bikes programme was undertaken by Helen Darling in March 2004. Key findings from the evaluation included:

- 101 children participated in the Monday night programme
- the school-based programme (students attending a low decile school were taught how to ride, those without cycles were presented with a donated bike, and, if required, a helmet),
- there was ongoing support for the programme
- the programme would benefit from the appointment of a co-ordinator.

The programme successfully taught children how to ride, many of whom had never ridden before and did not own a bike

Dissemination
SBG staff also advocate for children’s cycling in Dunedin and have written a brief submission on the proposed DCC track strategy.
ACTIVITIES

4.6 Conference and workshop presentations
Tony Reeder attended the Gisborne Cancer Society Health Promotion Workshop, 2005, and participated in group discussions about cancer screening, inequalities in cancer outcomes and other issues. Rose Richards gave an invited presentation at the Obesity Action Coalition Workshop, Wellington, June 2004 and at the Regional Nutrition and Physical Activity Forum organized by the Agencies for Nutrition Action (ANA) in association with Sport and Recreation New Zealand (SPARC) (see also Section 3, above).

4.7 Advocacy, consultation and collaboration
Collaboration and consultation with the Cancer Society has been on-going and has developed further with other agencies, such as ANA (see also in Section 3, above).
APPENDIX 1

A1.1 SBG criteria for prioritisation and conduct of research
Our research priorities are based on a number of criteria, which include:

- prioritisation by the National Health Promotion Committee of the Cancer Society of particular cancer prevention efforts that require research;
- our ability to provide timely and high quality research to inform the health promotion efforts of the Cancer Society and other agencies;
- conducting research of an applied nature to inform health promotion practice;
- the possibilities of building research alliances.

A1.2 Cancer Society of New Zealand prioritisation criteria are based on:

- the scale of a particular cancer problem – how many people develop or die from it;
- how well the causes of the particular cancer are known;
- whether behavioural risk factors or factors in the social and physical environments are potentially modifiable;
- whether there are evidence-based opportunities for prevention;
- whether interventions have the potential to impact favourably on other chronic diseases, thus allowing for collaboration and strategic alliances with other research groups and health agencies.

In New Zealand, the key areas for which the evidence to support cancer prevention interventions is most compelling are:

- tobacco control;
- sun protection and skin cancer prevention;
- the promotion of physical activity and appropriate nutrition.\(^{32}\)

Most SBG activities and publications fit into one or other of these three categories, although some are of a more generic nature.

All SBG cancer prevention and health promotion work is carried out within the frameworks of the Ottawa Charter, the Jakarta Declaration and the Treaty of Waitangi.

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Part 2: Staff publications, by major topic area, 1992-2004
(In chronological order, with the most recent listed last in each sub-section)

Tobacco control

Refereed papers


*Invited editorials*

TE1  Reeder AI. Let’s clear the air of second hand smoke! *New Zealand Medical Journal*, 2001;114:53-54.


*Letters published in scientific journals*


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


**Reports**


TR7  Darling, H, Reeder A and Waa A. *Tobacco use among Year 10 and 12 students in New Zealand: a report on the Global Youth Tobacco Survey data*. University of Otago / Te Whare Wanaga o Otago and Te Ropu Whakatairanga Hauora / Health Sponsorship Council, July 2004. (26 p.)

**Conference presentations (from 1998)**


TC4 Reeder AI and Blair A. *Views from the hospitality industry on smoking bans.* The Environmental Tobacco Smoke / Passive Smoking Conference, Wellington, 30 November 1999.

TC5 Reeder AI and 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, 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. *Exposure to second hand smoke at home and its relation to daily smoking among New Zealand youth.* Oral presentation at the 12th World Conference on Tobacco or Health, Helsinki, Finland, 3-8 August 2003.


**Workshop presentations (from 2003)**


**Tertiary seminars and lectures (2004)**

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


**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.
Media releases
TMR1 Reeder AI. Youth smoking is increasing – study identifies some key factors. For Smokefree – Towards 2000, Conference. June 23, 1998

TMR2 Reeder AI. Smoky bars, like sawdust and spittoons, are “a thing of the past.” November 24, 2000.

TMR3 Reeder AI. Study underlines continuing need for quit smoking services. September 14, 2001.


TMR5 Darling, H, & Reeder, A. School staff want total ban on smoking: Otago Survey reveals overwhelming support for proposed legislation. Otago University media release, 1 May 2003.

TMR6 Darling, H, & Reeder, A. Smoke-free homes help youth stay smoke-free. Otago University media release, 30 May 2003.

TMR7 Darling, H, & Reeder, A. Tobacco prevention efforts should include younger children. Otago University media release, 10 September 2004.

Submissions

TS2 SBG 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.
2 Sun protection and skin cancer prevention

Referred papers


MP17 Richards, R., Reeder, A.I., & Bulliard, J-L. Fine forecasts: encouraging the media to include ultraviolet radiation information in summertime weather forecasts. *Health Education Research*, 19, 686-697. 2004. [http://her.oupjournals.org/cgi/content/abstract/19/6/677](http://her.oupjournals.org/cgi/content/abstract/19/6/677)

**Book chapters**


**Theses**

MT1 Richards, R. *Sun protection, and sun-related attitudes and knowledge among New Zealand adolescents.* A thesis submitted for the Master of Science, University of Otago, Dunedin, 19th May 1999.


MT3 Kime, NH. *Sun protection information in summer weather reports: perceptions and practices.* A thesis submitted for the Master of Science in Health Promotion, Leeds Metropolitan University, UK, June 2, 2003.
Professional publications


Reports
MR1 Morris J, and 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.


MR4 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.

MR5 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.
MR6 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. (8p).

MR7 Reeder A.I. *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, February 2004 (44 p.)

MR8 Jopson JA and 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. plus appendices).

MR8 McCool J, Petrie K, Gorman D and 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. (104p).

**Conference presentations (from 1998)**


MC5 Reeder AI, Richards R and Bulliard J-L. *Sun protection messages in media weather forecasts in New Zealand.* 6th International Congress of Behavioural Medicine, Brisbane, November 2000. *International Journal of Behavioural Medicine, 2000; 7:S222-3 (abstract).*


**Public seminar presentations (from 1998)**

MPS1 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.

MPS2 Reeder, AI. *The Melanoma Prevention Programme in New Zealand.* Barnett Lecture Theatre, Dunedin Hospital, 4 October 2001.

MPS3 Jopson JA and Reeder AI. *Sun protection in New Zealand secondary schools: obstacles and opportunities.* Department of Preventive and Social Medicine & Otago Branch of the Public Health Association of New Zealand, University of Otago, Dunedin, September 9, 2004.

**Workshop presentations (from 2003)**

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


Media releases

MMR1 Reeder AI and Richards R. Sun protection information in weather reports helps everyone. December 8, 2000.

MMR2 Reeder AI and Richards R. When it rains – it pours, when it shines – it radiates. December 2001.

3a Physical activity

Refereed papers


Reports
PR1 Reeder AI, Chalmers DJ, Begg DJ and 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.

PR2 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.

PR3 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, September 2001.
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.


**Conference presentations (since 1998)**


**Workshop presentation**


**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.

**Submissions**


Bragg C and McGee R. *Draft Dunedin Pedestrian Strategy.* Submission to the Dunedin City Council on behalf of the Mornington Primary School and Board of Trustees, Dunedin, December 2002.


### 3b Nutrition and alcohol

**Referred papers**


**Reports**

NR1 Reeder, A.I. *The development and implementation of the Otago Lifesaver host responsibility programme for licensed club premises.* Occasional Report 36, ISBN 0-0908958-37-4. Injury Prevention Research Unit, Department of Preventive & Social Medicine, Dunedin School of Medicine, Dunedin, November 1998.

Conference presentations (from 1998)


Submission
NS1 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.

Tertiary seminars and lectures
4 Other research in cancer control and health promotion

Treatment issues

Refereed papers


Reports

Child and adolescent health

Refereed papers


Invited editorial
Professional publications


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 2002.


Workshop presentations (from 2003)

AW1 Richards R, Darling H & Reeder AI. *Sponsorship and fundraising in NZ schools: Preliminary findings and implications for nutrition.* Cancer Society Health Promotion Workshop, Dunedin, November 2003.


**Psychosocial factors**

**Refereed papers**


**Book chapter**


**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).*

**Professional publications**


**Submissions**


PART 3: Dissemination plans for 2005 by major topic area

1. Tobacco control

Refereed papers
1. Is there a relation between school smoking policies and youth cigarette smoking, health knowledge, and tobacco purchasing behaviour? (Under review)
2. The prevalence of youth cigarette smoking and access to tobacco products. (Accepted)
3. Disposable income, spending on gambling, alcohol, fast food and cigarettes and saving by New Zealand secondary school students. (Submitted for review)
5. The relation between a permissive home environment and youth daily smoking.
6. Attachment to parents versus peers as a protective factor for adolescent smoking.
7. The relations of part-time employment and work intensity with purchasing of potential health risk products.
8. Predictors of persistent smoking and quitting among women smokers. (Submitted for review).
10. Smoking cessation in a large sample of New Zealand women. (Submitted for review)
11. A longitudinal study of the predictive significance of Stages of Change assessment for later smoking behaviour.
13. The relation of physical activity and sedentary behaviour with cigarette smoking in youth.
14. Migraine, but not tension headache, as a risk factor for persistent smoking. (Submitted for publication).

Brief report
1. Changes in youth access to tobacco products, 2002-4 (brief report / letter)

Reports
1. High level results of the 2004 Youth Lifestyle Study survey.
2. The prevalence and correlates of tobacco use among Year 10 and 12 students in 2004.

PhD thesis
Darling, H. Personal, family, school and other factors that protect young people from cigarette smoking. University of Otago.

Proposed conference attendances 2005
Helen Darling has been awarded a travel grant by the National Heart Foundation (Grant 1123) to attend the Society for Research on Nicotine and Tobacco (SRNT) Annual Conference in Prague, Czech Republic, March 2005.
Sun protection and skin cancer prevention

**Refereed papers**
3. McCool, J. Gorman, D., Reeder. Petrie, K. Outdoor workers’ understandings of the health risks from workplace sun exposure. *(Submitted for review)*

**Reports**
1. Reeder, A.I. and Jopson J. Sun Protection policies and practices of territorial authorities in New Zealand.
2. Galtry, J. and Reeder A.I. Skin cancer control in New Zealand.

**Conference presentations**
A paper on the sun protection policies and practices of NZ territorial authorities will be submitted for presentation at the *Annual Conference of the Public Health Association*, 6-8 July 2005, Wellington. It is intended that a presentation on The Sun Study will be made at the 6th *World Congress on Melanoma*, Vancouver, Canada, September 6-10 2005.

3 Physical activity, nutrition and alcohol

**Refereed papers**
1. Tracking sport participation from childhood to early adulthood.
2. Childhood and concurrent influences on physical activity during adolescence and young adulthood

**Proposed conference attendances**
It is proposed that SBG staff working in the area of physical activity and nutrition will attend and make presentations at the ‘Call to Action – karea ake te wero’ inaugural public health nutrition and physical activity national conference, May 23-25, Christchurch and the Fifth National Physical Activity Conference, Melbourne, 13-16 October.

4. Other research in cancer control and health promotion

**Refereed papers**
2. Sponsorship and fundraising in New Zealand schools: implications for health. *(under review)*