Annual Report
2003

SBG activities and publications,

January to December 2003

with

plans for 2004
Social & Behavioural Research in Cancer Group

With support from the Cancer Society of New Zealand Inc.,
Health Sponsorship Council & University of Otago.

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Forward

The launch of the New Zealand Cancer Control Strategy (NZCCS) in 2003 was a notable event for all cancer researchers.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. Among the seven specified goals that encompass all aspects of cancer, Goal 1 (to reduce the incidence of cancer through primary prevention) and Goal 6 (to improve the effectiveness of cancer control in New Zealand through research and surveillance) are most directly related to the work of the Social and Behavioural Research in Cancer Group (SBG).

With respect to Goal 1 (primary prevention), it is heartening to see that our research programme includes work that has the potential to contribute to the achievement of most of the identified key objectives. These objectives are in the areas of tobacco control, healthy physical activity and nutrition, sun protection, alcohol consumption, and cancers related to infectious diseases and occupation. The publication of the report to the Cancer Control Steering Group of the Primary Prevention Expert Working Group (on which Dr Reeder served) provides details to support the targeting of these key objectives.² Work in many of these areas is also important for its potential to address negative health outcomes other than cancer.

Goal 6 (research and surveillance) acknowledges that “There is a particular need for increased social, behavioural, environmental, psychological and health services research.” Given this acknowledgement, and at the highest level, we anticipate that additional funding will be made available to develop these areas of research.

The core funding support that the SBG receives from the Cancer Society enables us to survive. Although we have been successful in obtaining numerous contestable research grants in addition to that core support, the lack of continuity in such funding makes it difficult to build and retain the critical mass of researchers necessary for achieving the greatest impact. As we assess the commitment involved in participating in grant application processes, which are highly competitive and have a low rate of success, overall, we are aware that such efforts subtract from the potential of a small group to carry out actual research, dissemination, and advocacy.

Nevertheless, despite these challenges, our Group has remained highly productive, as both the content of this report and the appended list of publications by SBG staff and students amply demonstrate.

Part 1: SBG activities by major topic area

1. Tobacco control
Exposure to tobacco smoke, either through active smoking or exposure to second
hand smoke, remains the leading cause of preventable premature death in New
Zealand, resulting in almost 5,000 deaths per year. Around one quarter of all cancer
deaths are caused by smoking.

Looking on the positive side, the strengthening of the Smoke-free
Environments legislation in 2003 should help reduce rates of smoking related illness
and premature mortality in the longer term. Also, it seems that the prevalence of
youth smoking has begun to drop for both sexes and all ethnic groups, other than
Maori females and Asian males. Nevertheless, youth smoking, particularly among
Maori, remains at unacceptably high levels.

Most of the tobacco smoking research that we carried out in the past year was
based on analysis of data from the Health Sponsorship Council’s (HSC) Youth
Lifestyle Study (a biennial survey of secondary school students that also receives
support from the Cancer Society and the Quit Group), and the complementary School
Smoking Policies Survey.

The contribution of the SBG to tobacco control efforts in 2003 included the
presentation and publication of research findings, some teaching, and considerable
collaborative work in research coordination and planning as well as advocacy. A
highlight of the year was the opportunity to contribute to the Cancer Control Strategy
and the Tobacco Control Research Strategy development process.

1.1 The School Smoking Policies Survey (SSPS) – secondary schools
Compulsory school attendance for children between 6 and 16 years provides an
opportunity for schools to promote healthy behaviours through positive role-
modelling by staff and students, health education programmes, enforcement of
smoke-free policies, and the provision of a smoke-free environment.

In order to document the existing situation, the School Smoking Policies
Survey (SSPS) aimed to describe the cigarette-smoking policies of a random sample
of New Zealand secondary schools and to assess compliance with the provisions of
the Smoke-free Environments Act 1990. At the time of the survey, New Zealand
schools were not required to be totally smoke-free and employees were allowed to

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smoke in designated areas to which students did not have access, as long as this did not impact on the rights of other staff to not be exposed to second-hand smoke. However, all schools were required to have a written policy on smoking and to display it.

The SSPS was carried out in conjunction with the HSC’s 2002 Youth Lifestyle Study (YLS). Eighty-two schools from six geographical regions were randomly selected for participation in the YLS and 81 of these schools took part in the SSPS. Copies of school smoking policies were received from 64 schools; additionally one policy was obtained from a school website. Most schools (88%) reported having a written policy, but only 21 (26%) had that policy on display. Just over half (51%) were totally smoke-free (i.e. in all buildings and grounds, 24 hours a day, 7 days a week). Only five schools (8%) were both compliant with the legislation and totally smoke-free. Most (74%) of the school staff surveyed supported changes to the Smoke-free Environments Act which would require schools to become totally smoke-free.5 6

Schools play a potentially important role in providing models of smoke-free environments but, given the considerable differences and lack of optimal practices found, the research provided justification for the proposed strengthening of the Smoke-free Environments Act. The research findings will also facilitate assessment of the effect of legislative change on school environments and youth smoking.

The full results of the study were published in the New Zealand Medical Journal (see list of staff publications), where they were presented in association with editorial comment by Professor Alistair Woodward.7

1.2 Education about smoking, sanctions against smoking, student quit attempts, and cessation programmes in New Zealand secondary schools

The overall aim of the research was to further contribute to discussion about the extent to which the school is an appropriate context within which to address the issue adolescent smoking. The specific objectives of the project were to describe the education about smoking that is provided within New Zealand secondary schools; the sanctions that are imposed on students who are caught smoking; student access to cessation programmes or support; and the frequency of student quit attempts.

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As for 1.1, above, this research was based on data obtained from the 2002 YLS and SSPS. Forty-six percent of participating students attended schools which were described as being smoke-free. Education on tobacco use was provided to most students (97%), usually within the Health and Physical Education curriculum. However, for 42% of respondents, tobacco education was provided by an external provider, for example, the DARE or Life Education Trust programmes.

In addition to providing smoke-free environments and tobacco education, schools also have opportunities to promote smoke-free messages by imposing sanctions on students caught smoking. Most schools (96%) imposed such sanctions, but less than half (46%) used structured sanctions which increased in severity with repeat “offending”.

The prevalence of daily smoking was determined by responses to the question “how often do you smoke now?” which were in the category of “at least once a day”. Overall, of the 3,434 students surveyed (mean age of 15 years) 13% smoked daily. Most schools imposed sanctions on students caught smoking, frequently these sanctions were linked to either tobacco education or cessation programmes. Over half of the students surveyed had access to some cessation programmes through their school. Cessation programmes were usually provided via school guidance counselors.

A large proportion (70%) of the daily smokers had attempted to quit in the previous 12 months, which is consistent with the findings of overseas studies. Family members were the sources most often approached for help or advice on quitting (27%), followed by friends (19%), whereas 48% received no help or advice.

Overall, the study indicated that most secondary schools provide some education about tobacco and have sanctions to discourage smoking. Perceived inconsistencies between the receipt of education about tobacco use and the lack of a smoke-free school environment may help reinforce the view that smoking is an acceptable adult behaviour. Ineffective sanctions may not discourage smoking, particularly if the teachers who apply those sanctions are seen to be smokers.

Many schools provide access to cessation services, but the role of schools in linking students with cessation programmes was identified as being worthy of further research, especially given that the nature and efficacy of these New Zealand programmes is unknown. Additionally, the linking of cessation programmes with sanctions may be counterproductive. A recent Australian study identified three factors which tended to inhibit young people from seeking smoking cessation help from school. These factors included whether parents, teachers, or friends found out that they smoked. The study also identified that the preferred provider of cessation

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services should be from outside of the school. Clearly, there is a need for these issues to be researched in the New Zealand context.

1.3 Exposure to second-hand smoke in the home environment
Traditional approaches to reducing youth smoking have tended to directly target youth, for example, through educational campaigns and controls on purchasing. However, indirect approaches may be as, or more effective. Using data from the 2002 YLS, this study investigated the relations between students’ daily smoking and their exposure, from all sources, to second hand smoke (SHS) at home.

Since participants were selected using multi-stage sampling procedures the data were weighted to ensure that the results could be generalised to the student population. Daily smoking was reported by 13%, with 44% of all the students surveyed exposed to SHS at home – for 18% this was on all seven days preceding the survey.

There was a significant and positive dose-response relation between SHS exposure and daily smoking. Students who were exposed to SHS at home on all 7 days during the past week were over six times more likely to be daily smokers compared with those not exposed. Those exposed on 3 to 4 days were over three times more likely to be daily smokers.

This positive relation between exposure to SHS at home and active smoking suggests that tackling adult smoking will not only reduce the direct risks to youth health associated with SHS, but may also help reduce the prevalence of youth tobacco smoking. The results of the study have been published in the Australian and New Zealand Journal of Public Health and reported in the media.9,10

1.4 Indigenous youth smoking: a survey of New Zealand Maori
The disparity in smoking prevalence rates between Maori and non-Maori adults (51.7% and 21.3%, respectively)3 underpins the need for better understanding about the risk factors associated with smoking uptake among Maori youth. The research to investigate these factors was based on the 2002 YLS sample, of which over 15% self-identified as NZ Maori.

Preliminary findings indicated that a greater proportion of Maori were exposed to SHS at home than non-Maori and that Maori youth were more frequently exposed to SHS at home. Maori females demonstrated the highest rate of daily smoking and Maori youth started smoking at an earlier age than non-Maori.

These results are preliminary and should be interpreted cautiously. Since tobacco use is influenced by many factors, including socioeconomic status, care must

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10. Staff reporter. Smokers’ children likely to smoke too. The Dominion Post, 3 June 2003.
be taken to not assume that ethnicity is a “cause” of smoking. Further research is required to examine the causal relations between identified risk factors and daily cigarette smoking. In collaboration with Anaru Waa of the Health Sponsorship Council, a poster was prepared for presentation at the 12th World Conference on Tobacco or Health, Helsinki, Finland, 3-8 August 2003.

1.5 The relation between school smoking policies and youth cigarette smoking, health knowledge, and tobacco purchasing behaviour
New Zealand schools are required to have policies regarding tobacco smoking. Measures to prevent tobacco use by students, including education, cessation, and sanctions are often included in these policies. The aim of this research was to investigate the relations between school policy and the prevalence of students’ cigarette smoking, as well as the association between school policy and students’ health behaviours: specifically, tobacco purchasing, knowledge of health effects from tobacco use, and the likelihood of influencing others not to smoke.

This study used combined data from the 2002 YLS and SSPS. School policy variables were coded into four categories according to whether there was a focus that was either on punishment, cessation, prevention, or was comprehensive. Preliminary results suggest that there is no association between policy components and youth smoking behaviour, neither for daily smoking, any smoking, nor for those who reported that school was the most common place where they smoked. However, there was a statistically significant trend for a decline in daily smoking as school socioeconomic decile rating increased. Further work is planned with these data and a paper is being prepared for publication.

1.6 Tobacco content of evening TV and popular videos
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. The coding of those data has almost been completed. 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.

1.7 Other issues
We had a letter published in the Journal of the American Academy of Child and Adolescent Psychiatry which highlighted the need to tackle environmental risk factors for youth smoking rather than focusing on issues of psychopathology, such as ADHD.
In order to document the social and political context within which our tobacco control research is carried out, Helen Darling has built up a file of reports in the New Zealand print media about tobacco issues.

1.8 Conference attendances and presentation
Dr Reeder and Helen Darling attended and made oral presentations at the 2nd Australian Tobacco Control Conference in Melbourne, 9-11 April, and the 12th World Conference on Tobacco or Health, Helsinki, Finland, 3-8 August 2003. The content of these presentations is summarised, above (1.1 and 1.4). A presentation about the smoke-free status of secondary schools, based on the results of the School Smoking Policies Survey 2002, was made for the launch of the Tobacco Control Research Strategy at Parliament in Wellington on 1 May 2003. A presentation on the relation between exposure to SHS in the home and youth smoking was made for Cancer Society Health Promoters attending their Annual Workshop in Dunedin, November 2003.

1.9 Advocacy and consultation
It was a particularly busy year for advocacy and consultation activities. We provided input into the development of A Tobacco Control Research Strategy for New Zealand. The New Zealand Medical Journal invited us to write an editorial on youth smoking to accompany the publication of a paper based on the ASH survey of Year 10 students. Dr Reeder continues to regularly participate in the Cancer Society’s Tobacco Operational Group (TOG).

In May 2003, media releases were prepared for the publication of the results of the SSPS and the YLS data on the link between exposure to smoking at home and youth smoking. Helen Darling was twice a studio guest on Channel 9 television News, first for a discussion about smoke-free schools and, second, about youth exposure to second-hand smoke at home. The New Zealand Drug Foundation, reported on the SHS study. A report, “How things have changed”, in the Cancer Society’s Otago Southland Divisional newsletter Link highlighted changes in attitudes towards tobacco and discussed some SBG research.

SBG staff purchased smoking “toys” from local retailers and provided examples to staff of Public Health South for forwarding to Sue Kedgely, MP to

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14 How things have changed. Link, p.1, May 2003, Otago Southland Division of the Cancer Society.
demonstrate the need for controls on the sale of these items. The results were reported in the media.\textsuperscript{15}

Dr Reeder participated in correspondence published in the media about the proposed legislation to ban smoking in bars, restaurants, clubs and other shared environments.\textsuperscript{16,17}

\textbf{1.10 Teaching, supervision and scholarships}

Dr Reeder presented four seminars on tobacco control for the 5th Year Medical Students’ Public Health Attachment; a seminar on second hand tobacco smoke for students taking the paper on Public Health Policy (PUBH 702) for the Diploma in Public Health; and a lecture on tobacco and the epidemiology of lung cancer for the Health Studies paper (HEAL 201).

Dr Reeder and Associate Professor Rob McGee continue to provide supervision for Helen Darling’s PhD research on protective factors against youth smoking, based on the YLS 2002 data. Mrs. Darling presented a Departmental student research seminar on her YLS research programme. In support of this work, Helen Darling held two scholarships during 2003: a University of Otago Postgraduate Scholarship and a Health Sponsorship Council Scholarship.

\textbf{1.11 Collaboration}

We have maintained collaboration with other tobacco control researchers through attendance at workshops and conferences and by assisting with the development of \textit{A Tobacco Control Research Strategy for New Zealand} 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 has been prominent this year. We also maintain good relations with ASH, researchers based at Auckland University, the Quit Group, the Smokefree Coalition, and a number of public health units.

2. Sun protection and skin cancer prevention

In 2003, the Primary Prevention Expert Working Group recommended that skin cancer should be recognized as a priority area. The subsequent inclusion of skin cancer prevention in the New Zealand Cancer Control Strategy represents a significant advance in that it marks a renewal of government recognition that skin cancer should be a major cancer prevention target. Since the demise of the Public Health Commission in the mid-1990’s, the issue of skin cancer had, largely, been missing from the Ministry of Health agenda and left to the efforts of the Cancer Society, Health Sponsorship Council and one or two public health units. Another step forward has been increased acceptance of the need to use the internationally recommended Ultra Violet Index (UVI) in displays and media weather reports.18,19

2.1 Measurement and mitigation of solar UV radiation exposure of primary and intermediate school children in New Zealand

The main aim of the project will be to quantify the solar ultraviolet radiation (UV) exposure of New Zealand school children during daylight saving months from October 2004 to March 2005. UV dosimeters will be used to measure personal UV doses for one-week periods at 10-second resolutions. An estimated 900 school children will be recruited to participate.

The UV data will be fed into a database along with information on personal activities and sun protection usage (self-recorded by the participants in activity diaries), solar education in school curricula, school sun protection policies, physical school environments (focusing on sun protection, particularly shade provision), community support (including interviews with health promotion staff) and students’ sun protection attitudes / knowledge (using a questionnaire). The data will be analysed to inform the development of efficient sun protection interventions and programmes as well as epidemiological and other scientific studies.

We are particularly fortunate to have Ms Caradee Wright join our research team, because she has unique prior experience working in this area in South Africa. The National Institute of Water and Atmosphere (NIWA) has agreed to play a substantial role in the project and supported Ms Wright by providing funding for a 3-month training period at their Lauder site towards the end of 2003. That time was used for project development and, in collaboration with the project team, the preparation of two major grant applications, one to the Health Research Council and another to the New Zealand Cancer Society, both were submitted in November 2003. A Memorandum of Understanding regarding the project was drawn up between the

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University of Otago and NIWA. The results of the grant applications are expected to be known by April/May 2004.

2.2 Adolescent sun protection
Ms Annette Baker’s thesis for the Masters in Public Health took a qualitative approach to seek insights into reasons for the generally poor level of adolescent sun protection in New Zealand. The research drew on tape recordings of eleven school-based focus groups (5 female, 5 male and one mixed). From the discussion topics, major themes were identified and related to the key components of the Health Belief Model.

Among the conclusions and recommendations were that the focus on youth should be maintained, the transition from intermediate to secondary school attendance needed further study, and that secondary school contexts provide challenges that require an intensive and comprehensive sun protection intervention programme. The insights identified will be fed back into research and sun protection programme planning. A scientific paper is in the process of being prepared for publication.

2.3 Secondary Schools Sun Protection Study
Last summer (2002-3), Mrs Jopson carried out a comprehensive baseline survey of secondary schools’ sun protection policies and practices, as well as related curriculum content and students’ sun protection knowledge, attitudes and behaviours. With support from the Auckland, Hawkes Bay and Wellington Divisions of the Cancer Society, fieldwork started in North Island schools in November 2002.

Data collection for the South Island schools participating in the baseline survey continued in February and was completed in early March 2003. A presentation of some preliminary results, made to the Cancer Society Health Promotion Workshop in Dunedin, November 2003, highlighted the need for improvement in policies and practices in secondary schools. The full technical report being produced from this work, as well as confidential individual reports to each of the 31 participating schools, will be completed early in 2004. We plan to prepare a paper for publication in a scientific journal.

Grant applications to support proposed on-going work to develop and pilot test a comprehensive, school-based intervention were unsuccessful. Accordingly, we are taking the opportunity to include recommendations in the technical report which will make the report suitable for wider distribution to any secondary schools interested in addressing the issue of sun protection.
2.4 Sun protection messages in media weather reports
Reports of solar ultraviolet radiation (UVR) levels within media weather forecasts have good potential to communicate the need for appropriate sun protection to a broad audience.

This study examined the provision of the Ultra Violet Index (UVI) and Burntime messages presented by New Zealand newspapers, radio, and television stations over a 4-year period. In addition, it examined the impact of the Cancer Society sponsorship of UV information provision which had the aim of addressing media concerns about the financial costs of accessing this information for broadcast. Newspaper and radio presentation of UVR information increased immediately after these costs were removed, but among radio stations there was a decline in subsequent years.

At the final assessment (summer 2001/2002), 66% of radio stations, both television channels, and 48% of newspapers reported at least one form of UVR information in summertime weather reports. It was concluded that efforts to further increase UVR presentation needed to take into account media concerns about time constraints on weather forecasts and perceptions of poor audience demand or understanding of UVI messages. A paper that fully describes the findings has been prepared for publication.

Subsequent research by Ms Nicky Kime used key informant interviews with media representatives and focus groups drawn from the general population to help clarify issues and identify barriers to media use of the UVI in weather reports. Ms Kime wrote up the study for her Master’s thesis in Health Promotion at Leeds Metropolitan University. Fourteen recommendations were made about ways to communicate information in weather reports that would help people to achieve summer sun protection. A UV Working Group was set up in 2003 to further the recommendations and assist presentation of the UVI. By the end of 2003 considerable progress had been achieved.

2.5 Outdoor workers’ perceptions of non-melanoma skin cancer risk
Collaboration continued with Dr Kawshi de Silva (Wellington Division of the Cancer Society), Professor Des Gorman (Head of Occupational Medicine, University of Auckland), and Associate Professor Keith Petrie (Health Psychology, University of Auckland) on the development of a three-stage research project on non-melanoma skin cancer among outdoor workers. Initial funding for the project has been provided by the Wellington Division of the Cancer Society.

In 2003, Dr Judith McCool (Health Psychology, University of Auckland) was appointed to work on the project and start qualitative data collection among workers in a range of outdoor occupations. In August, a face-to-face meeting of researchers was held in Auckland to review the preliminary qualitative findings. Based on that
research, a paper on outdoor workers’ perceptions of the risk of developing non-melanoma skin cancer is planned for publication in 2004. A progress report was prepared for the funder (the Wellington Division of the Cancer Society) in December 2003.

The second stage of the project, based on insights gained from the qualitative work, will involve the design of a questionnaire to be used for a quantitative survey of outdoor workers’ knowledge and beliefs about working in the sun and factors related to the workplace. It is planned to carry out this survey in 2004 and questionnaire design has already started. The proposed third stage of the project will be to design, implement, and evaluate a sun protection intervention targeted towards outdoor workers.

2.6 Local government survey
Dr Reeder and Mrs Jopson were successful in winning a University of Otago Research Grant to carry out a survey of the sun protection policies and practices of New Zealand territorial authorities. This research will be undertaken in 2004, based on a survey of the 74 territorial authorities (15 city councils and 59 district councils). The aim is to describe existing policies and procedures and identify opportunities to improve sun protection practices with respect to recreational and sporting facilities, swimming pools, outdoor workers, community events, and the granting of planning and building approvals.

2.7 Consultancy and advocacy
Dr Reeder has continued to be an active participant in the Cancer Society SunSmart Operational Group (SOG) which, through regular teleconferences, helps to guide the skin cancer prevention programmes. Dr Reeder provided feedback on the draft Cancer Society report on shade in educational contexts. Consultation was provided to the Health Sponsorship Council for the 2003 Triennial sun survey and for the strategy for promoting the UVI. Dr Reeder gave a presentation about current research at the Sun Safety Research meeting, Wellington, 12 June 2003.

2.8 Collaboration
We have maintained close relations with Health Sponsorship Council staff working in the sun protection area, in particular, Wendy Billingsley and Kiri Milne.

In November 2003, Dr. Reeder and Mrs. Jopson attended the first meeting of the Expert Advisory Group established to facilitate collaborative research on aspects of solar radiation. Initially, group membership (in addition to ourselves) is as

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follows: Richard McKenzie and Caradee Wright (National Institute for Water and Atmospheric Research (NIWA), Christina MacKay (School of Design, Victoria University), Barrie Peake and Steve Rusak (Department of Chemistry, University of Otago), Raechel Laing, Cheryl Wilson, and Debra Carr (Clothing and Textile Sciences, University of Otago).

A directory of research interests, relevant expertise, and available equipment has been compiled. A “white paper” is being drafted on health and safety issues relating to UV exposure, and it is hoped that this document will highlight areas of potential collaboration within the group, and be a first step for grant funding applications. The group also has the potential to fulfill a role in terms of discussion of issues prior to publication of recommendations that may affect policy development.

During 2003, 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 2.4, above).

Dr Reeder gave a presentation at a planning meeting (while in Melbourne for the Tobacco Control Conference) and participated in a number of teleconferences to assist in the design of the first Australian national Sun Protection Survey, 2003-4.

Through Ms Kime’s MSc project in Health Promotion, collaboration was developed with the School of Health and Community Care based in the Faculty of Health and Environment at Leeds Metropolitan University, UK. Collaboration on sun protection project development has continued with NIWA staff at Lauder, in particular, Drs Greg Bodeker and Richard McKenzie, and also with Royal Society of New Zealand Science, Mathematics and Technology Teacher Fellow in 2003, Martin Allen.

2.9 Teaching, training, supervision and scholarships
Dr Reeder is the primary supervisor for Ms Caradee Wright’s PhD project (21.1, above), in collaboration with Dr Greg Bodeker (NIWA), and with Assoc. Prof. Brian Cox as epidemiological advisor. Ms Wright has already been awarded 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 has agreed to meet her first year of university fees as an overseas student, since (particularly with recent changes in international exchange rates) the NRF amount is insufficient to cover both overseas student fees and living expenses. Ms Wright’s PhD proposal was officially accepted by the University of Otago Academic Advisory Committee on 29 September 2003.
3. Healthy physical activity and nutrition

The profile of healthy physical activity and nutrition as cancer prevention strategies continues to rise - both singly and in combination. Physical activity and obesity have been identified as priority areas for the primary prevention of cancer, both in New Zealand\textsuperscript{21} and internationally.\textsuperscript{22} The International Agency for Research on Cancer report on weight control and physical activity concluded that there was “sufficient evidence” for the cancer preventive effects of both physical activity and the avoidance of weight gain.

While current New Zealand guidelines recommend a minimum on most days of 30 minutes of moderate intensity physical activity for health,\textsuperscript{23} the IARC review of the evidence suggests that 45-60 minutes of moderate to vigorous physical activity may be required to protect against some types of cancer.

3.1 Participation in vigorous physical activity, decisional balance scores and health status among young New Zealand adults.

This study documented perceptions of the “pros and cons” of increasing physical activity among almost 1,000 young adults in the Dunedin Multidisciplinary Health and Development Study (DMHDS) cohort at age 26 years. It also examined differences in those perceptions according to recent participation in vigorous physical activity and current physical health status.

Three quarters of young adults reported perceptions that they would be healthier if they increased their participation in physical activity, and two thirds reported they would feel better about themselves. The most commonly reported barrier to increasing physical activity was that it would result in less time being spent with family and friends.

Being female, obese, and having mid-range cardiovascular fitness level were associated with perceptions of greater pros than cons with respect to increased physical activity, however, decisional balance was not directly related to physical activity participation.

Attempts to publish this paper in a peer-reviewed journal were unsuccessful. In order to ensure that the information was still available to relevant agencies, the findings were released as a technical report to the Cancer Society.

\textsuperscript{22} Vainio H, Bianchini F (Eds.) \textit{Weight control and physical activity}. IARC Handbooks of Cancer Prevention, Volume 6: Lyon, 2002.
3.2 Tracking sport participation from childhood to adulthood

Sport is one of several possible contexts within which physical activity takes place. Although most young New Zealanders are likely to experience some sport participation, there is little information available about the degree to which participation early in life “tracks” (i.e. remains stable) from childhood to adulthood.

Previous research has reported low to moderate tracking of sport participation, depending on the length of the time period covered and how sport was assessed. The present study examines tracking of sport participation from childhood to adulthood among the DMHDS, as measured by participation in club sport, as well as overall participation, time spent, and diversity of participation in a selection of 12 popular sports.

The tracking of participation in at least one of the selected sports from adolescence to adulthood was found to be moderate, while tracking of club sport participation was low (though still statistically significant) from childhood to adulthood.

The assumption that establishing physical activity participation in childhood contributes substantially to adult participation is often used to support the health promotion strategy of targeting physical activity promotion to children and adolescents. The results of the current study suggest some benefit from encouraging sport participation during childhood and adolescence for participation later in life. Nevertheless, the substantial movement into and out of sport participation observed, both here and in 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.

3.3 Interest and participation in selected sports among New Zealand adolescents

Sport and Recreation New Zealand (SPARC) research suggests that between half to two thirds of adolescents are interested in participating in a new sport or active leisure. There is an opportunity to further examine interest in sport using information obtained in the Youth Lifestyle Study. As part of this project, participation and interest in 18 selected popular sports was examined among a large sample of New Zealand adolescents. Preliminary findings suggest that for several sports there are quite large groups of young people who express an interest but do not participate. For these sports, in particular, there may be the potential to increase opportunities and support for participation in order to convert interest into increased participation in health promoting physical activity. A draft report has been prepared for the Health Sponsorship Council and it is planned to prepare a paper for publication in 2004.
3.4 The Tailored Nutrition Communication Project

Dr Reeder continued to collaborate with the research team based in the University of Otago’s Department of Human Nutrition (primary investigators Dr Caroline Horwath and Ms Louise Mainvil) on the project to increase fruit and vegetable intake among those who do not meet the “5-a-day” recommendations. Grant funding received last year from the National Heart Foundation will carry this research through to the intervention and evaluation stages.

During 2003, the focus has been on developing a message library and computer delivery system for stage-targeted, individually tailored print communications (ITPC) for all Stages of Change24 with respect to fruit and vegetable intake. These materials will be 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 has been 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.

The work on this study has also been useful in the provision of advice by Dr Horwath and Ms Mainvil to the Cancer Society for the analysis of the fruit and vegetable data consumption data obtained from the SPARC / Cancer Society Physical Activity and Nutrition in New Zealand Survey - to help identify priority groups for health promotion efforts.

3.5 Conference attendances and presentations

Ms Richards presented a Departmental student research seminar and, with support from the Department of Preventive & Social Medicine, attended and presented a paper (based on 3.2, above) at the Australian National Physical Activity Conference, Freemantle. Ms Mainvil presented findings from the Tailored Nutrition Communication Project at five conferences and workshops in New Zealand during 2003.

3.6 Collaboration, consultation and advocacy

The increased tempo of activity in these topic areas, first noted in the 2002 report, continued during 2003. Since local government is a key player in influencing opportunities for physical activity in New Zealand, it represents an important target for advocacy. At this stage, our involvement in advocacy to local government is mainly concentrated on the promotion of active transport. With appropriate planning and promotion, active transport such as walking and cycling has great

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potential for increasing participation in physical activity in New Zealand. Participation in active transport provides an opportunity for people to build into their personal daily routines a regular contribution to meeting recommended levels of activity. For those who are overweight, walking provides an appropriate starting point for becoming more physically active. We complemented this work by assisting in the preparation of a Cancer Society submission to support aspects of the Road Traffic Reduction bill.

Through participation in the Active Dunedin network, Ms Richards assisted in the preparation of a submission on the Ministry of Transport’s ‘Getting there on foot and by bicycle: a draft strategy to increase walking and cycling in New Zealand transport.’ Advocacy and collaboration on this issue at a local level, again as part of Active Dunedin, included Ms Richards’s involvement in a submission to the Dunedin City Council Annual plan and attendance at meetings of the Dunedin Cycling and Pedestrian Interest Groups.

Effective physical activity programmes and policy rely on good research to provide information for their development and evaluation. In addition to the research carried out within the SBG, our group has been consulted on the development of research projects carried out by other agencies active in this area.

At a local level, Ms Richards provided comment on monitoring and program evaluative research carried out by Public Health South. Ms Richards has continued participation in the “Walking Bus” steering group and attended community meetings on both cycling and pedestrian issues. These local initiatives serve as models for advocacy and public policy change while providing opportunities for gaining experience in building alliances with other agencies.

Helen Darling and Rose Richards are members of the steering committee for the Kids on Bikes programme. This programme aims to promote safe cycling to children 4-12 years of age. An evaluation of the pilot programme will be undertaken in 2004.

At the national level, comment was provided on a joint SPARC and Cancer Society research brief, which aimed to identify target populations for physical activity and nutrition interventions. Ms Richards is a member of the Cancer Society’s Physical Activity and Nutrition Advisory Committee. The SBG assisted in preparation of a Cancer Society submission to support aspects of the Road Traffic Reduction bill.

3.7 Teaching and supervision
Dr Reeder continues to be primary co-supervisor for Ms Richards’ PhD project. Dr McGee and Dr Reeder presented an afternoon seminar for students taking the HUNT453 Community and Public Health Nutrition paper on Health Promotion Planning and Evaluation.
4. Other research in cancer control and health promotion

Although the SBG is mainly involved in specific areas of cancer prevention, we also carry out some generic research that fits into the overall national cancer control strategy. Our work aims to help inform and guide future action.

4.1 Public perceptions of cancer risk, prevention and treatment

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.

A paper on public perceptions of the causes and primary prevention of common fatal cancers in New Zealand was published in 2003. The research found that there was high, unprompted awareness that tobacco smoke and sun exposure affected lung cancer and skin cancer risk, respectively, but that there was less awareness of protective strategies for other cancers. It was concluded that perceptions are affected by high profile programmes and that, given known risks and the potential for prevention, bowel cancer deserved greater attention. This paper received wide media coverage.\textsuperscript{25, 26, 27}

A second paper, on public perceptions of treatment and alternative and complementary therapies (CAM) is in preparation and will be submitted for publication during 2004.

4.2 New Zealand secondary school students’ disposable income, saving, and spending on gambling, alcohol, fast food and cigarettes

In most western societies part-time employment is a normal occurrence that provides adolescents with opportunities to obtain experience and disposable income. Additionally, adolescents provide labour that is generally paid at lower rates and they are often prepared to engage in employment that is monotonous or boring. Employment has been associated with some risk for adolescents, for example, an increased risk of gambling and tobacco smoking and hours of employment that can interfere with education. Using YLS data, we have initiated work to investigate the relationship between employment, disposable income, and health risk behaviours that are directly attributable to spending behaviour, including gambling and the purchasing of tobacco products and fast food.

\textsuperscript{25} Joanna Norris. Many people unaware of deadly cancer causes. New Zealanders ignorant about the causes of deadly cancers and greater awareness could help save lives, University of Otago experts have found. \textit{Otago Daily Times}, 30 September 2003
\textsuperscript{27} Marianne Betts. Cancer survey surprises. The Dominion-Post, 1 October 2003.
4.3 Sponsorship and fundraising in New Zealand schools
The sponsorship of events and resources for young New Zealanders in order to ‘market’ healthy behaviours is a common practice among organisations such as the Cancer Society and Health Sponsorship Council. In addition to this ‘healthy’ sponsorship, anecdotal evidence suggests that schools are also receiving support for educational activities through less healthy sponsorship or fundraising practices. Examples include the selling of chocolate bars, “fast food” nights, “sausage sizzles”, and the provision of soft-drink machines on school grounds. In the United States, concerns have been raised about the impact of such commercial activities in school settings\textsuperscript{28-29} 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{30}

A study is being conducted by Rose Richards and Helen Darling to examine the nature of sponsorship and fundraising partnerships in New Zealand schools and the types of products and messages introduced into school communities as a result. The potential obstacles and opportunities for health promotion identified will be summarised in a discussion document for key stakeholders which will be circulated for comment early in 2004.

4.4 Workshop presentations
At the Cancer Society Health Promotion Workshop in Dunedin, November 2003, Dr Reeder presented key findings from the cancer perceptions study and Rose Richards presented preliminary findings of the sponsorship and fundraising in schools study.

4.5 Advocacy, consultation and collaboration
Dr Reeder served on the Primary Prevention Expert Working Group which assisted in the development of the NZ Cancer Control Strategy. In their report,\textsuperscript{31} the Group identified prevention priorities which they recommended should be included in the New Zealand Cancer Control Strategy.

Dr Judy Trevena accepted a position in the Department of Psychological Medicine, but we look forward to continued collaboration in the area of public perceptions of cancer.


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.

Part 2: Staff publications, by major topic area, 1992-2003
(In chronological order)

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 journals**


TN2 (Reeder, A.) How things have changed. *Link*. Otago-Southland Division of the Cancer Society of New Zealand.

**Reports**


Conference presentations (since 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. 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. Presented as a paper at the 12th World Conference on Tobacco or Health, Helsinki, Finland, 3-8 August 2003.
Darling, H & Reeder, A. Exposure to second hand smoke at home and its relation to daily smoking among New Zealand youth. Presented as a paper at the 12th World Conference on Tobacco or Health, Helsinki, Finland, 3-8 August 2003.


Workshop presentations (2003)


Tertiary seminars and lectures (2003)
1. Reeder AI. Tobacco control. Seminars for 5th year medical students public health attachment (four seminars throughout year).


4. Darling H. School, family, and social factors that protect young people from cigarette smoking. Student research seminar series, Department of Preventive & Social Medicine, 16 October 2003.

Public seminar presentations (from 1998)

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 spitoons, 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.

**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

Refereed papers


**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.


Conference presentations (from 1998)


**Public seminar presentations (from 1998)**


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

**Workshop presentations (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.


Conference presentations (since 1998)


**Workshop presentation (2003)**


**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**


PS5 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.

PS6 McGee, R. *Child safety around Dunedin schools.* Submission to the Dunedin City Council Planning and Environment Standing Committee. November, 2003 on behalf of Mornington Area Cluster Schools and Otago Primary Principal Association.

**3b Nutrition and alcohol**

**Papers in refereed journals**


**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

Adolescent health

Refereed papers


Invited editorial

Conference presentations (from 1998)


Workshop presentation (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: 2004 Dissemination plans 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?

2. The prevalence of youth cigarette smoking and access to tobacco products.

3. The relations between use of the internet for health information and cigarette smoking among a sample of New Zealand youth.

4. Disposable income, spending on gambling, alcohol, fast food and cigarettes and saving by New Zealand secondary school students.

5. The ‘permissive household’ and tobacco use by New Zealand youth.

6. Is cigarette smoking associated with suicidal ideation among young people?

7. Early predictors of young adults quitting smoking.

8. Smoking cessation in a large sample of New Zealand women.

9. Tobacco smoking and anxiety disorders.


Reports


PhD thesis

Darling, H. Personal, family, school and other factors that protect young people from cigarette smoking.

Proposed conference attendances 2004

It is proposed that SBG staff working in the tobacco control area will attend and make presentations at the Public Health Association Annual Conference, Christchurch, June 30 to July 2, and the National Smokefree Conference, Wellington, September 13-14.
2. Sun protection and skin cancer prevention

Technical reports

Refereed papers
1. Fine forecasts: encouraging the media to include ultraviolet radiation information in summertime weather forecasts. (Under consideration for publication by Health Education Research.)

2. Adolescent sun protection: barriers and opportunities.

3. Sun protection in secondary schools in New Zealand: obstacles and opportunities.

Reports
1. Sun protection in secondary schools in New Zealand: obstacles and opportunities. Individual reports will also be provided to 31 participating schools

2. Sun Protection policies and practices of territorial authorities in New Zealand.


Conference presentations
It is intended that a presentation on UVR measurement will be made to the NIR Conference in Spain in May 2004.

3 Physical activity, nutrition and alcohol

Refereed papers
1. Participation and tracking of physical activity from childhood to adulthood.

2. Participation and interest in physical activity among New Zealand adolescents: findings from the Youth Lifestyle Study.

3. Alcohol-related problems experienced by university students in New Zealand.


4. Other research in cancer control and health promotion

Refereed papers

New Zealand adults’ perceptions of cancer treatment, alternative and complementary therapies.

Report
Sponsorship and fundraising in New Zealand Schools: A discussion document.