



WACPRU

WA Cancer Prevention Research Unit



2018 Annual Report

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Acknowledgement: WACPRU is indebted to the management and staff of Cancer Council WA for their many contributions to the outputs listed in this report.

Photography of WACPRU staff courtesy of Dr Nadine Henley.

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Introduction

This report describes the various projects undertaken by the WA Cancer Prevention Research Unit (WACPRU) in collaboration with Cancer Council WA (CCWA) and other organisations and individuals during 2018. This document serves as both a reporting requirement and a notification to stakeholders of the Unit's activities.

WACPRU's research productivity in 2018 can be summarised as follows:

- 37 journal articles published or in press
- 20 manuscripts under review at journals
- 21 research reports produced
- 25 presentations delivered at conferences and other fora
- 4 submissions made to government consultations
- 5 PhD and 2 Honours students supervised
- 130 instances of media coverage recorded, reaching an estimated 3,924,842 audience members at a value of \$1,669,955

We look forward to building on existing relationships and extending WACPRU's research networks in 2019.

This report is structured as follows. Initially, an outline is provided of WACPRU as an organisational unit, its primary responsibilities and staffing, and the scope of its cancer prevention research activities. Reflecting the critical importance of mass media campaigns to Cancer Council's cancer prevention efforts, the next section summarises WACPRU's efforts to support these campaigns across multiple CCWA departments. A following section then provides detailed accounts of research activities relating to key cancer risk factors. Finally, a series of appendices provides a comprehensive list of WACPRU's current grant-funded activities, journal articles (published and in press), manuscripts under review, reports, presentations, and media coverage during 2018. Outputs in this report are listed according to their status at 31 December, 2018. For each output, the names of authors who were WACPRU staff members during 2018 are **bolded** and the names of Cancer Council staff members are ***bold italicised***.

WACPRU

About WACPRU

WACPRU was established on 1st September, 2014. As per contractual arrangements between Curtin University and CCWA, the aim of WACPRU is to:

Increase our understanding of individual and societal factors that increase the risk of cancer in the community, and through this understanding develop more effective policies and programs to reduce cancer risk in the community.

WACPRU is funded by the School of Psychology at Curtin University, CCWA, various grants from research funding bodies, and research consultancy income earned for research services commissioned by a range of government and not-for-profit organisations. This funding provides the opportunity to engage in cancer prevention research across formative, outcome, and impact research phases.

The expertise represented by WACPRU staff include the following substantive and methodological areas:

- Behaviour change
- Clinical psychology
- Communications and campaign evaluation research
- Consumer research
- Dietetics
- Health promotion
- Health psychology
- Medical practice
- Organisational psychology
- Qualitative and quantitative research methods
- Social marketing
- Sociology

WACPRU Staffing



WACPRU staff members as of 31 December, 2018

Director

Professor Simone Pettigrew

Deputy Director

Dr Michelle Jongenelis

Research Assistants and Associates

Liyuwork Mitiku Dana

Dr Cathy Drane

Ashleigh Parnell

Rajni Rai

Nina Sapountsis

Dr Zenobia Talati

Casual Staff

Elise Alexander

Sophie Cronin

Roos Maria Dekker

Kaela Farrier

Wendy Fullerton

Hayley Grant

Danyelle Greene

Greg Jongenelis

Caitlin Worrall

Cancer prevention research

A key function of WACPRU is to undertake research activities that support the cancer prevention program areas within the Cancer Prevention & Research Division of CCWA. These program areas are *Cancer Smart, Make Smoking History, Nutrition and Physical Activity, Regional Programs, Research & Projects, Stakeholder & Policy, and SunSmart*. The primary lifestyle behaviours addressed by these program areas include (in alphabetical order):

- Alcohol consumption
- Cancer screening
- General cancer prevention behaviours
- Nutrition
- Physical activity
- Smoking
- Sun exposure

The support WACPRU provides in relation to these lifestyle behaviours takes the forms of (i) exploratory research to guide program development and refinement, (ii) evaluation research to assess program performance, and (iii) the provision of ongoing advice relating to health promotion strategy. To provide these forms of support, WACPRU undertakes the following activities:

- Co-developing internal CCWA research projects to provide information to guide current and new programs and campaigns
- Assisting the development and refinement of campaign evaluation instruments
- Analysing campaign evaluation data
- Producing timely reports to CCWA to inform program and campaign planning
- Reporting research results in journal articles to articulate the outcomes of CCWA's work into the international evidence base on cancer prevention
- Disseminating the outcomes of CCWA's programs to national and international audiences via presentations at public health and cancer prevention conferences
- Engaging in research projects with other Cancer Council state organisations to share expertise and increase research capacity
- Conducting research projects with a broad range of other institutions in areas related to cancer prevention
- Providing representation on Government and NGO boards and committees undertaking work of relevance to cancer prevention
- Seeking funding from other sources to facilitate additional research that is of value to CCWA and Curtin University
- Obtaining media coverage of cancer prevention research outcomes to enhance community awareness of relevant issues
- Maintaining a regular presence in the CCWA offices to be available for consultation on an as-needs basis

Farewell Terry

WACPRU would like to express our enormous gratitude to Terry Slevin for his leadership and collegiality during his time as Director of Education and Research at CCWA. Terry was instrumental in the formation of WACPRU in 2014, which was a much harder job than it sounds. He also provided ongoing support, guidance, and inspiration for WACPRU, topped off with a well-developed sense of humour and an uncanny knack for getting to the nub of things. We wish Terry all the best in his new position as CEO of the Public Health Association of Australia where he will no doubt continue to be a formidable force for good.



We look forward to working with Melissa Ledger in her new role as Director of Cancer Prevention & Research at CCWA. Melissa brings a wealth of experience from her years as Manager of the Cancer Smart team within the previous Education and Research Division. She has mighty big shoes to fill, but fortunately she has wonderful taste in footwear.



Spotlight on mass media campaign research

A core element of CCWA's activities is the development and implementation of health promotion campaigns that educate the public about cancer risk factors and encourage healthy lifestyle behaviours that reduce the risk of cancer. WACPRU assists by:

- Conducting formative research to identify knowledge gaps and potentially effective messages to increase knowledge and encourage behavioural change
- Testing alternative message concepts
- Engaging in experiments to assess the efficacy of alternative media channels
- Evaluating the reach and impact of CCWA campaigns
- Conducting literature reviews on topics relating to campaign development and evaluation processes
- Conducting literature reviews on the nature and effectiveness of previous health promotion campaigns relating to cancer risk factors

In 2018, WACPRU assisted with CCWA's campaign activities relating to the Find Cancer Early, LiveLighter, Make Smoking History, and SunSmart campaigns. Brief details relating to these activities are outlined below, with specific outputs listed in the later sections dedicated to each cancer risk topic. Assistance was also provided for the Crunch&Sip, Healthier Workplace WA, Make Smoking History priority populations, and SunSmart UV meter programs. Information relating to these and other activities is provided elsewhere in this report.

Find Cancer Early



Back row: Melissa Pickering, Tina Pendlebury, Rachel Jolly, Fiona Webster, Mikala Atkinson
Front row: Elizabeth Bakowski, Cassandra Clayforth, Shanae Norris, Bruce Beamish



Hannah Cauchi

The Find Cancer Early program is delivered throughout regional Western Australia by the CCWA Regional Programs team. The aim of the program is to reduce mortality from cancer by encouraging early detection. A campaign evaluation was undertaken by the Find Cancer Early team in 2018 to assess the target audience's exposure to the campaign and attitudinal and behavioural responses. An initial analysis of the evaluation survey data by WACPRU showed consistent results to those of previous Find Cancer Early campaign evaluation waves.

Around two-thirds of those sampled recalled being exposed to the campaign and almost all of these respondents reported finding the campaign easy to understand and believable. Unprompted awareness of the Find Cancer Early campaign appears to be progressively increasing over time.

Journal article

Croager, E., Gray, V., Pratt, I.S., Slevin, T., Pettigrew, S., Holman, D., Bulsara, M., and Emery, J. (2018), "Find Cancer Early: Evaluation of a community education campaign to increase awareness of cancer signs and symptoms in people in regional Western Australians," *Frontiers in Public Health*, 6(22), doi: 10.3389/fpubh.2018.00022

LiveLighter



Jenny Atkins, Caitlin Kameron, Tina Moukhaiber, Steve Pratt, Gael Myers,
James Stevens-Cutler, Jo Campbell

Now in its seventh year, the LiveLighter campaign aims to encourage people to maintain a healthy weight by eating well and being physically active. In 2018, WACPRU worked with Cancer Council Victoria and CCWA to undertake the national Shape of Australia survey to identify key health issues that could form the basis of future LiveLighter campaign messages. The survey contained standardised questions from other national surveys administered by the Australian Bureau of Statistics and new questions to assess recent health behaviour trends (e.g., use of online and app-based food delivery services). The results highlight the particular importance of increasing vegetable consumption across the Australian population. In addition, they show how various unhealthy lifestyle behaviours cluster together, thereby providing insights into potential methods of addressing multiple behaviours within individual campaigns.

Reports

Dana, L.M., Sapountsis, N., and Pettigrew, S. (2018), "Shape of Australia 2018 Survey Final Report." Report prepared for Cancer Council Victoria and Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), November.

Sapountsis, N., Dana, L.M., and Pettigrew, S. (2018), "Shape of Australia 2018 Survey Interim Report: Results Tables." Report prepared for Cancer Council Victoria and Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), September.

The LiveLighter team also commissioned WACPRU to undertake an ad test study to investigate Western Australian adults' reactions to several different executions of a physical activity advertisement. The aim of the study was to provide CCWA with the information required to select the most effective execution for a future campaign wave focusing on encouraging people to incorporate more physical activity in their daily routines.

Reports

Jongenelis, M. and Pettigrew, S. (2018), "LiveLighter Ad Test Report - Top Line Results: Effectiveness of Five Advertising Executions Promoting Physical Activity." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), December.

Jongenelis, M. and Pettigrew, S. (2018), "LiveLighter Ad Test Report: Effectiveness of Five Advertising Executions Promoting Physical Activity." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), December.

Previous work undertaken for Healthway is also informing the approaches taken to promote physical activity in LiveLighter campaigns.



Presentation

Pettigrew, S. (2018), "Teens, diet, and physical activity: Knowledge, attitudes, and perceived trade-offs," *Joint Scientific Meeting of The Australian and New Zealand Obesity Society and the Breakthrough Discoveries in Metabolism, Diabetes and Obesity*, Melbourne, Australia, 16-18 October.

Make Smoking History



Sarah Beasley, Rebecca Salsano, Lorena Chapman, Zainab Zaki, Alicia King, Doris Neuwerth, Deb Rimmer, Bree Olsen, Libby Jardine

The Make Smoking History team has undertaken a large body of work in 2018 to develop and evaluate mass media campaigns that encourage smoking cessation and reinforce abstinence. This work has included formative research to develop new campaign ideas, ad testing to assess the potential effectiveness of message concepts, campaign wave evaluations, and campaign media experiments.

To continue the highly effective series of hard-hitting advertisements aired as part of the Make Smoking History program to date, WACPRU was commissioned to conduct a focus group study with medical practitioners who work with people diagnosed with smoking-related illnesses to identify future advertising concepts. This study found that two main suggestions were offered by medical practitioners as potentially motivating themes for future campaign waves: (i) the horrific consequences of head and neck cancers and (ii) the pain and quality of life implications of suffering from emphysema.

Report

Pettigrew, S. (2018), "Findings from Formative Focus Group Research with Medical Practitioners." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), January.

Following on from the successful From Every Quitter campaign (that has since been aired in other Australian states), WACPRU was commissioned to conduct an ad test on a variation of this campaign designed by Make Smoking History staff. This concept extension involved the development of vignettes featuring individuals from the original From Every Quitter ad who talked about their need to quit for the sake of their families. The ad test study showed that the vignettes resonated well with smokers and increased their intentions to quit.

Reports

Jongenelis, M. and **Pettigrew, S.** (2018), "Make Smoking History Ad-testing of Various Executions of the Extended 'From Every Quitter' Campaign: Top-line Results." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), July.

Jongenelis, M. and **Pettigrew, S.** (2018), "Make Smoking History Ad-testing of Various Executions of the Extended 'From Every Quitter' Campaign: Final Report." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), July.

Further research has been conducted to assess how different types of audiences react to different kinds of smoking cessation messages within advertising campaigns. The results of these studies highlight the importance of ensuring ads are tested with the primary target audience and indicate that smokers expect and prefer the use of hard-hitting fear appeals in quit ads.

Manuscript under review

Lizama, N., Slevin, T., and **Pettigrew, S.** (under first review), "Anti-smoking advertisement characteristics are perceived differently by smokers and individuals with health or advertising knowledge," *Health Education Research* (Impact factor - 1.479).

Presentation

Kennington, K., Rai, R., Pettigrew, S., and **Jongenelis, M.** (2018), "Using real-world comparisons of teenagers' versus adult responses to adult-targeted anti-smoking campaigns," *Australian Public Health Conference*, Cairns, Australia, 26-28 September.

Two different Make Smoking History campaigns (From Every Quitter, Terrie's Tips) spanning three waves (46, 47, 48) were aired during 2018. WACPRU evaluated these campaigns, with results showing that the Make Smoking History program continues to be effective in encouraging smokers to think about the effects of their smoking and increasing intentions to quit. The proportion of respondents engaging in quitting-related action was among the highest on record, with over three-quarters of respondents in each wave noting that they had either successfully quit smoking, attempted to quit smoking, or attempted to reduce their smoking.

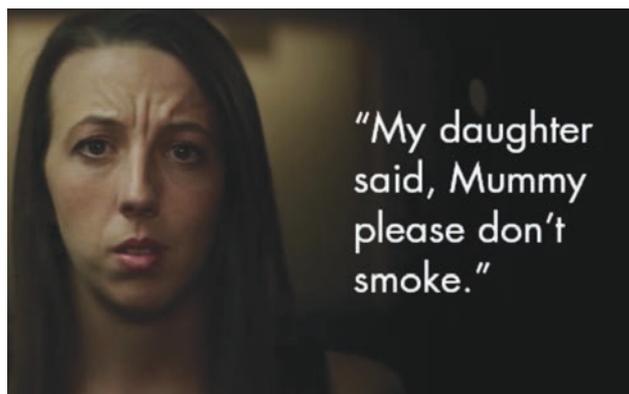
Reports

Jongenelis, M. and **Pettigrew, S.** (2018), "Make Smoking History Wave 45 Report." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), January.

Jongenelis, M. and **Pettigrew, S.** (2018), "Make Smoking History Wave 46 Report." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), July.

Jongenelis, M. and **Pettigrew, S.** (2018), "Make Smoking History Wave 47 Report." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), September.

Jongenelis, M. and **Pettigrew, S.** (2018), "Make Smoking History Wave 48 Report." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), December.



For several years, WACPRU has been working with the Make Smoking History team to experiment with various combinations of media channels to assess the cost-benefit ratios of using individual and combined media platforms. This work has provided tangible evidence of the cost-effectiveness of social media as a message dissemination media channel and the ongoing role of television advertising in ensuring campaign outcomes are optimised. The results of this research are assisting CCWA to determine appropriate media type selections and scheduling in an environment of rapid media fragmentation. The following outputs relating to this work were published in 2018.

Journal articles

Allom, V., Pettigrew, S., Jongenelis, M., Slevin, T., Keightley, S., Phillips, F., and Beasley, S. (2018), "Comparing the cost-effectiveness of campaigns delivered via various combinations of television and online media," *Frontiers in Public Health*, 6(83), doi:10.3389/fpubh.2018.00083.

Pettigrew, S., Jongenelis, M., Phillips, F., Slevin, T., Allom, V., Keightley, S., and Beasley, S. (2018), "Assessing audience members' ability to identify the media source of a health campaign disseminated via different media," *Frontiers in Public Health*, 6(196), doi:10.3389/fpubh.2018.00196.

SunSmart



Mark Strickland, Carolyn Minto, Hayley Staples, Sally Blane

Over the 2017/18 summer, the SunSmart team ran the Wes Bonny campaign to encourage Western Australians to cover up in the sun to reduce their risk of skin cancer. The campaign evaluation undertaken by WACPRU showed that the campaign performed very well. The outcomes for ad believability, personal relevance, using sun protection, and checking one's skin were among the highest recorded in recent years.

Report

Jongenelis, M. and Pettigrew, S. (2018), "Evaluation of the 2017/18 Wes Bonny (The sun is a killer. Defend yourself.) Campaign." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), April.

WACPRU was also commissioned to conduct an ad test study to inform the selection of the new sun protection message that will constitute the advertising campaign for the 2018/19 summer season. Three concepts were tested – 'UV Camera – How the Sun Sees You', 'Your DNA is Keeping Score', and 'UV Vultures'. Each ad focused on the cumulative damage caused by sun exposure when the UV index is 3 or above. The winning concept was 'UV Camera – How the Sun Sees You'. This concept produced the highest scores among survey respondents for acceptability, perceived effectiveness, and intended behavioural change. The campaign was subsequently disseminated across Western Australia.

Report

Parnell, A., Rai, R., Jongenelis, M., and Pettigrew, S. (2018), "SunSmart Ad Test Results Report: Keeping Score, UV Camera, and UV Vultures." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), October.



Cancer risk factors

Alcohol



Simone Pettigrew



Michelle Jongenelis



Roos Dekker



Cathy Drane

WACPRU works closely with other research groups to extend the evidence base relating to alcohol consumption and alcohol marketing. These groups include CCWA, the Centre for Behavioural Research in Cancer (CBRC, based at Cancer Council Victoria), the Alcohol Programs Team (Curtin University), and the National Drug Research Institute (Curtin University). Current projects have been funded by the following grants:

Research funding

Pettigrew, Chikritzhs, Rosenberg, Liang, **Pratt**, **Slevin**, and Glance, "Developing and testing cancer warning statements for alcoholic beverages," *Healthway Project Grant*, \$236,839.

Pettigrew, Miller, Kypri, Chikritzhs, **Jongenelis**, **Brennan**, and Hasking, "Promoting responsible drinking practices to drinkers to reduce the risk of alcohol-related harm," *NHMRC Project Grant*, \$271,000.

Pettigrew, **Wakefield**, Kypri, Chikritzhs, Hasking, and **Jongenelis**, "Developing health promotion messages to encourage responsible drinking practices," *Healthway Project Grant*, \$104,745.

Shaw, Johnston, Gilligan, and **Pettigrew**, "Supporting parents to delay and reduce adolescent alcohol use," *Healthway Project Grant*, \$328,537.

Wakefield, **Brennan**, **Durkin**, **Pettigrew**, Hoek, and Slater, "Can systematically developed alcohol health warnings reduce drinking intentions and behaviours?," *NHMRC Project Grant*, \$782,617.

Wakefield, Slater, **Dixon**, **Durkin**, **Brennan**, and **Pettigrew**, "Television advertising to promote NHMRC Guidelines for low risk alcohol consumption: experimental study," *NHMRC Project Grant*, \$649,356.



Helen Dixon

In addition, the following grant was awarded to Dr Helen Dixon from CBRC in late 2018:

Dixon, O'Brien, **Pettigrew**, Niederdeppe, and Vandenberg, "Countering the influence of alcohol sport sponsorship: A media intervention," *NHMRC Project Grant*, \$412,418.

Predictors of alcohol consumption and provision

An important precursor to alcohol intervention development is understanding the primary factors that encourage or discourage alcohol consumption and provision. This is especially important in the context of young people, whose alcohol initiation and use behaviours have a strong influence on their lifetime relationship with alcohol. Several research projects were conducted during 2018 to identify and describe relevant factors.

Journal articles

Johnston, R., **Stafford, J., Jongenelis, M.**, Shaw, T., Samsa, H., Costello, E., and Kirby, G. (2018), "Evaluation of a public education campaign to support parents to reduce adolescent alcohol use," *Drug and Alcohol Review*, 37(5), 588-598 (Impact factor - 2.855).

Jongenelis, M., Johnston, R., and **Stafford, J.** (2018), "Factors associated with parents' belief in the appropriateness of providing alcohol to their child," *Substance Use and Misuse*, 53(14), 2281-2290 (Impact factor - 1.132).

Jongenelis, M., Pettigrew, S., Lawrence, D., and Rikker, W. (Accepted 16 October, 2018), "Factors associated with poly drug use in adolescents," *Prevention Science* (Impact factor - 2.926).

Presentation

Brennan, E., Dunstone, K., Durkin, S., Pettigrew, S., Hoek, J., Slater, M., and **Wakefield, M.** (2018), "Population prevalence of drinkers' beliefs about long-term harms associated with alcohol," *Public Health Prevention Conference*, Sydney, Australia, 2-4 May.

Alcohol messaging



Melanie Wakefield



Emily Brennan



Sarah Durkin



Steve Pratt



Terry Slevin



Tanya Chikritzhs



Kypros Kypri

A particular focus of WACPRU's alcohol research is the development of messages that can effectively communicate to drinkers the risk of harm from alcohol consumption (especially cancer-related risk) and encourage them to engage in risk-reduction strategies. Recent projects with colleagues from CCWA, CBRC, Curtin University, and the

University of Newcastle have focused on a range of target audiences including the general drinking public, youth, and parents. These research projects have generated specific recommendations for the nature of messages that can be used to reduce alcohol-related harms in Australia. Other work has involved making a submission to the Australian Department of Health's consultation on pregnancy warning labels on packaged alcoholic beverages.

Journal articles

Dekker, M.R., Jongenelis, M., Wakefield, M., Kypri, K., Hasking, P., and **Pettigrew, S.** (2018), "A longitudinal examination of protective behavioral strategies and alcohol consumption among adult drinkers," *Addictive Behaviors*, 87, 1-7, doi:10.1016/j.addbeh.2018.06.017 (Impact factor - 2.686).

Jongenelis, M., Pettigrew, S., Wakefield, M., Slevin, T., Pratt, I.S., Chikritzhs, T., and Liang, W. (2018), "Investigating single- versus multiple-source approaches to communicating health messages via an online simulation," *American Journal of Health Promotion*, 32(4), 979-988 (Impact factor - 2.197).

Jongenelis, M., Pratt, I.S., Slevin, T., Chikritzhs, T., Liang, W., and **Pettigrew, S.** (2018), "The effect of chronic disease warning statements on alcohol-related health beliefs and consumption intentions among at-risk drinkers," *Health Education Research*, 33(5), 351-360 (Impact factor - 1.479).

Wakefield, M., Brennan, E., Dunstone, K., Durkin, S., Dixon, H., Pettigrew, S., and Slater, M. (2018), "Immediate effects on adult drinkers of exposure to alcohol harm reduction advertisements with and without drinking guideline messages: Experimental study," *Addiction*, 113(6), 1019-1029 (Impact factor - 6.048).

Manuscript under review

Dekker, M.R., Jongenelis, M., Wakefield, M., Kypri, K., Hasking, P., and **Pettigrew, S.,** "Factors associated with engagement in protective behavioral strategies among adult drinkers," *Addictive Behaviors* (Impact factor - 2.686).

Presentations

Jongenelis, M., Pratt, I.S., Slevin, T., and Pettigrew, S. (2018), "Effectiveness of warning labels at increasing awareness of alcohol-related cancer risk among heavy drinkers," *World Cancer Congress*, Kuala Lumpur, Malaysia, 1-4 October.

Pettigrew, S., Dekker, M.R., Jongenelis, M., Wakefield, M., Kypri, K., and Hasking, P. (2018), "Can you count?: Communicating about alcohol harm minimisation," *Australian Public Health Conference*, Cairns, Australia, 26-28 September.

Pettigrew, S. (2018), "Current evidence on the effects of alcohol advertising on children and young people," *Foundation for Alcohol Research and Education (FARE)*, Canberra, Australia, 21 June.

Pettigrew, S. (2018), "Preventing alcohol-related injuries and harm among young people," *Injury Matters*, Perth, Australia, 28 November.

Submission

Pettigrew, S., and **Jongenelis, M.** (2018), "The WA Cancer Prevention Research Unit's submission to the Australian Department of Health's consultation on pregnancy warning labels on packaged alcoholic beverages." WACPRU, Curtin University, June.

Alcohol industry strategies



Simone Pettigrew



Michelle Jongenelis



Julia Stafford



Hannah Pierce

Alcohol consumption in Australia remains high by world standards. Public health efforts to reduce alcohol-related harm are confounded by intensive efforts by the alcohol industry to promote their products. WACPRU works with the Curtin Alcohol Programs Team and a range of other researchers to identify and describe the strategies used by the alcohol industry to promote its products, and especially those strategies that facilitate access to child and youth audiences.

Journal articles

Pettigrew, S., Hafekost, C., Jongenelis, M., Pierce, H., Chikritzhs, T., and **Stafford, J.** (2018), "Behind closed doors: The priorities of the alcohol industry as communicated in a trade magazine," *Frontiers in Public Health*, 6(217), doi:10.3389/fpubh.2018.00217.

Pierce, H., **Stafford, J., Pettigrew, S., Kameron, C.,** Keric, D., and **Pratt, I.S.** (2018), "Regulation of alcohol marketing in Australia: A critical review of the Alcohol Beverages Advertising Code Scheme's new Placement Rules," *Drug and Alcohol Review*, doi:10.1111/dar.12872 (Impact factor - 2.855).

Practitioner article

Pettigrew, S. (2018), "How long before we see effective alcohol advertising control?" Institute of Alcohol Studies (UK) blog, <http://www.ias.org.uk>.

The Alcohol Beverages Advertising Code (ABAC) and the Alcohol Advertising Review Board (AARB) provide regulatory guidelines for the marketing of alcoholic products. In collaboration with colleagues within the Alcohol Programs Team, WACPRU is conducting an analysis of the 668 complaints submitted to the AARB in the 5 years since its inception (March 2012 to March 2017). This painstaking study involves independently assessing violations to both the ABAC and AARB codes. In addition, an analysis of the main themes evident in the ads is being undertaken to provide an account of the primary approaches being used by the alcohol industry to attract drinkers.



Greg Jongenelis

PhD student profile – Himanshu Gupta

Himanshu has recently submitted his PhD thesis on online alcohol marketing for examination. His research examined alcohol companies' use of various social media platforms to promote their products, with a particular focus on the extent to which this form of promotion targets and reaches underage drinkers. Himanshu collected data in Australia and India to analyse the extent to which alcohol promotion strategies transcend national markets and use a combination of standardised and customised approaches in particular markets.

Gupta, H., **Pettigrew, S.**, Lam, T., and Tait, R. (2016), "A systematic review of the impact of exposure to internet-based alcohol-related content on young people's alcohol use behaviours," *Alcohol and Alcoholism*, 51(6), 763-771.

Gupta, H., Lam, T., **Pettigrew, S.**, and Tait, R. (2017), "A cross-national comparison of the twitter feeds of popular alcohol brands in India and Australia," *Drugs: Education, Prevention and Policy*, 1-9, doi:10.1080/09687637.2017.1411886.

Gupta, H., Lam, T., **Pettigrew, S.**, and Tait, R. (2018), "The association between exposure to social media alcohol marketing and youth alcohol use behaviors in India and Australia," *BMC Public Health*, 18(1), 726 doi:10.1186/s12889-018-5645-9 (Impact factor - 2.42).

Gupta, H., Lam, T., **Pettigrew, S.**, and Tait, R. (2018), "Alcohol marketing on YouTube: Content adaptation to enhance user engagement in different cultural contexts," *BMC Public Health*, 18(1), 141, doi:10.1186/s12889-018-5035-3 (Impact factor - 2.42).

Gupta, H., **Pettigrew, S.**, Lam, T., and Tait, R. (2018), "How alcohol marketing engages users with alcohol brand content on Facebook: An Indian and Australian perspective," *Critical Public Health*, 28(4), 402-411.

PhD student profile – Julia Stafford

Julia is completing a PhD on the use of evidence and the framing of alcohol issues by policy actors that participate in government-led consultations relevant to alcohol policy in Australia. Her supervisors are Professor Simone Pettigrew (WACPRU) and Professor Kypros Kypri (University of Newcastle). Julia is undertaking detailed analyses of submissions to Australian alcohol policy consultations over a five-year period. Of particular interest is the influence of commercial interests on alcohol policy development. Her research aims to provide a greater understanding of the role of competing interests in policy development processes in Australia and inform approaches for limiting the involvement of commercial interest groups.



General cancer prevention and screening

The Regional Programs, Cancer Smart, and Stakeholder & Policy team members manage projects across a diverse range of areas including general cancer prevention, regional health, cancer screening, workplace health, and GP education. WACPRU staff provide research assistance as required across these program areas and undertake related research projects. Several of these projects are profiled below.

Healthier Workplace WA



Zenobia Talati



Simone Pettigrew

CCWA delivers the Healthier Workplace WA (HWWA) program. This program is sponsored by the WA Department of Health and supports organisations in their efforts to provide healthy workplaces for their employees. Particular emphasis is placed on the 'SNAP' risk factors of smoking, nutrition, alcohol, and physical activity. WACPRU provides assistance with program evaluation by advising on instrument design, performing data analyses, and producing outcome reports.

Journal article

Talati, Z., Davey, E., Grapes, C., Shilton, T., and Pettigrew, S. (2018), "Evaluation of a workplace health and wellbeing training course delivered online and face-to-face," *International Journal of Environmental Research and Public Health*, 15(11), 2422 (Impact factor - 2.145).

Manuscripts under review

Talati, Z., Grapes, C., Davey, E., Shilton, T., and Pettigrew, S. (under first review), "Evaluation of a large-scale healthy workplace initiative across multiple worksites," *Health Promotion International* (Impact factor - 1.866).

Talati, Z., Grapes, C., Davey, E., Shilton, T., and Pettigrew, S. (under first review), "Predictors of uptake of general and tailored services to improve employee health and wellbeing," *Health Promotion Journal of Australia* (Impact factor - 1.097).

Report

Talati, Z., Pettigrew, S., and O'Connell, H. (2018), "Healthier Workplace WA Evaluation Report 2017-18." Report prepared for Cancer Council WA by the WA Cancer Prevention Unit (WACPRU), October.

Presentation

Pettigrew, S., Davey, E., Shilton, T., Quinn, N., Martin, C., Ledger, M., and Brown, E. (2018), "Healthier Workplace WA – learnings from a comprehensive state-wide workplace health promotion program," *Australian Public Health Conference*, Cairns, Australia, 26-28 September.

Knowledge of cancer risk factors

Up to one-third of incident cancers in Australia are attributable to modifiable dietary and lifestyle factors¹. Given previous research suggests that awareness of cancer risk factors may be associated with engagement in protective behaviours and adherence to health guidelines, WACPRU is working with the Stakeholder & Policy Team at CCWA to measure awareness of risk and protective factors for cancer among Western Australian adults. Results have the potential to inform the development of public health campaigns aiming to educate the general population about cancer risk reduction behavioural strategies.

1. Whiteman, D.C., Webb, P.M., Green, A.C., et al. (2015), "Cancers in Australia in 2010 attributable to modifiable factors: summary and conclusions," *Australian and New Zealand Journal of Public Health*, 39(5), 477-484.

Prevention and screening



Caitlin Kameron, Natalia Lizama, Kelly Kennington, Fiona Phillips, Deb Langridge

Manuscript under review

Lizama, N., Jongenelis, M., and Slevin, T. (under second review), "Awareness of cancer risk factors and protective factors among Australian adults," *Health Promotion Journal of Australia* (Impact factor - 1.097).

Behavioural Research in Cancer Control (BRCC) Conference

CCWA is hosting the 2019 BRCC conference in Perth. Dr Emma Croager from CCWA's Research & Projects program area has organised an impressive line-up of invited speakers and a diverse program covering many aspects of cancer prevention, screening, and patient care. WACPRU is providing support by chairing the conference and WACPRU staff will be delivering 13 presentations at the conference.



Emma Croager

Lung cancer screening

Dr Dave Manners from St John of God Midland Public and Private Hospitals is leading a body of work identifying effective means of encouraging lung cancer screening among eligible candidates. An important aspect of the work is developing appropriate communication strategies that avoid triggering the desire for screening among those who are unlikely to benefit from the process.



Dave Manners

Manuscript under review

Manners, D., Piccolo, F., Brims, F., **Pettigrew, S.**, McWilliams, A., and Lake, F. (under first review), "Development and evaluation of a consumer information resource, including Patient Decision Aid, for lung cancer screening: A quasi-experimental study," *Translational Behavioral Medicine* (Impact factor - 2.521).

Environmental monitoring

Exposure to advertising for products such as unhealthy food, alcohol, and gambling has been found to influence young people's attitudes and behaviours. Outdoor advertising has been identified as a particular concern due to its unrestricted audience and industry's ineffective self-regulatory system. To gain a better understanding of the advertisements to which school-aged children are exposed, an audit was conducted of the volume and type of advertisements displayed on bus shelters within 500 metres of schools in five local government areas in Perth.



Ashleigh Parnell

Journal article

Parnell, A., Edmunds, M., Pierce, H., and Stoneham, M. (2018), "The volume and type of unhealthy bus shelter advertising around schools in Perth, Western Australia: Results from an explorative study," *Health Promotion Journal of Australia*, doi:10.1002/hpja.55 (Impact factor - 1.097).

Presentation

Edmunds, M., Stoneham, M., **Parnell, A.**, and Pierce, H. (2018), "Just what do kids see while they are waiting for the bus?," *Public Health Prevention Conference, Sydney, Australia, 2-4 May*.

CARE-Dads

In a collaborative research project with the University of Western Australia (UWA) and the Telethon Kids Institute (TKI), WACPRU is conducting a study of new fathers to assess their health and well-being. CARE-Dads (CArdiovascular Risk Evaluation in expectant fathers) is part of the larger ORIGINS project being conducted by TKI that will follow 10,000 families over a decade to improve outcomes for children and their families. Fathers participating in CARE-Dads receive a health check that includes a wide range of physical and mental health components. More than 200 fathers have participated in CARE-Dads to date.



Sophie Cronin



Bu Yeap

Prevention and screening

Healthy Ageing



Michelle Jongenelis



Simone Pettigrew



Rajni Rai



Liyuwork Dana



Caitlin Worrall



Greg Jongenelis

Australia's population is ageing rapidly, resulting in increasing prevalence of age-related cancers. Engagement in formal volunteering has been identified as a strategy to facilitate healthy ageing because of its association with favourable outcomes across multiple health domains, including those related to cancer risk. Of particular importance is the potential of volunteering to increase physical activity and therefore reduce cancer risk. In collaboration with colleagues at Edith Cowan University, UWA, and LaTrobe University, WACPRU conducted a randomised controlled trial assessing the link between volunteering and health. To inform the development of strategies designed to increase engagement in volunteering among older adults, ongoing analyses are assessing (i) the extent to which trialling volunteering can change attitudes to this activity and (ii) which aspects of the volunteering experience are most associated with favourable health outcomes for older people.

Research funding

Pettigrew, Newton, Warburton, and Jackson, "Investigating the health benefits of volunteering by seniors", *ARC Discovery Grant*, \$360,000.

Journal article

Pettigrew, S., Jongenelis, M., Jackson, B., and Newton, R. (2018), "'Charity begins at home': Informal caring barriers to formal volunteering among older people," *Voluntas*, doi:10.1007/s11266-018-0017-8 (Impact factor - 1.098).

Manuscripts under review

Dana, L.M., Jongenelis, M., Jackson, B., Newton, R., and **Pettigrew, S.** (under first review), "Reliability and validity of a brief 'Attitudes to volunteering in retired older adults' scale," *Nonprofit and Voluntary Sector Quarterly* (Impact factor - 1.932).

Jongenelis, M., Dana, L.M., Warburton, J., Jackson, B., Newton, R., **Talati, Z.**, and **Pettigrew, S.** (under first review), "Factors associated with formal volunteering in Australian seniors," *The Journals of Gerontology: Series B* (Impact factor - 3.054).

Jongenelis, M., Jackson, B., Warburton, J., Newton, R. U., and **Pettigrew, S.** (under first review), "Improving attitudes to volunteering among older adults: A trial approach," *The Gerontologist* (Impact factor - 4.078).

Nutrition

WACPRU is involved in numerous research projects that involve developing methods of communicating with the public about healthy eating and building the evidence base relating to the need for effective regulation of food advertising. Many of these projects involve CCWA programs and investments, including LiveLighter, Crunch&Sip, HWWA, and the National Secondary School Diet and Activity (NaSSDA) survey. Others are externally funded and/or led by collaborators at a range of institutions, especially CBRC and SAHMRI (South Australian Health and Medical Research Institute). Specific research projects are outlined below.

Crunch&Sip

Crunch&Sip®



Mikala Atkinson, Jasmine Teo, Steve Pratt, Shannon Wright



Gael Myers

The evolution of the Crunch&Sip program to feature a vegetable focus has been a smooth transition over recent years. This change was prompted by evidence that children's vegetable consumption levels remain highly suboptimal and that urgent efforts are needed to encourage and facilitate higher levels of intake. WACPRU has assisted the evolution of Crunch&Sip to a vegetable focus by conducting formative, process, and evaluation research. Many thanks to Gael Myers for spending a spell as both a WACPRU and CCWA staff member to share her Crunch&Sip expertise.

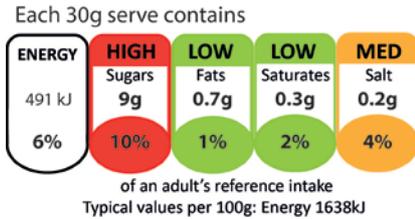
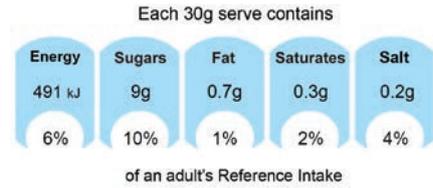
Journal article

Myers, G., Wright, S., Blane, S., Pratt, I.S., and Pettigrew, S. (2018), "A process and outcome evaluation of an in-class vegetable promotion program," *Appetite*, 125, 182-189 (Impact factor - 3.174).

Presentation

Pettigrew, S., Jongenelis, M., Pratt, I.S., Wright, S., and Myers, G. (2018), "Normalising vegetable consumption in schools," *Public Health Prevention Conference, Sydney, Australia*, 2-4 May.

Food labelling



Through prior involvement in a federal food labelling review² and ongoing representation on Australian Department of Health food labelling committees, WACPRU has long-standing and ongoing involvement in food labelling policy in Australia. This has included a very productive project funded by an ARC Linkage grant in collaboration with the National Heart Foundation, SAHMRI, Cancer Council NSW, and Cancer Council Victoria.

In 2018, a second major research project was undertaken with a research team based at University of Paris 13 in France. This project was part-funded by Santé Publique France and examined the relative effectiveness of five food labels currently in use around the world. The study was conducted across 12 countries to identify the aspects of food labels that are universally effective.

The outcomes of both the national and international studies have been made available to the Australian Department of Health for consideration in ongoing developments in food labelling policy. In addition, the results of the international study have been presented to the European Union Commission.



2. Blewett, N., Goddard, N., **Pettigrew**, S., Reynolds, C., Yeatman, H. (2011). Labelling logic. Food Labelling Review Panel, Commonwealth of Australia: Canberra.

Research funding

Pettigrew, S., Kelly, B., Ball, K., Neal, B., **Hughes, C.**, Miller, C., and **Dixon, H.**, "The independent and combined effects of front-of-pack food labelling systems and health claims on consumers' food-related beliefs and behaviours," *ARC Linkage with National Heart Foundation, SAHMRI, Cancer Council NSW, and Cancer Council Victoria*, \$353,513.

Julia, C. and Hercberg, S., "'Study of the perception, objective understanding, and purchasing intention associated with different front-of-pack nutrition labels in consumers from various countries," *Santé Publique France*, €60,000.

Journal articles

Egnell, M., **Talati, Z.**, Hercberg, S., **Pettigrew, S.**, and Julia, C. (2018), "Objective understanding of front-of-package nutrition labels: An international comparative experimental study across 12 countries," *Nutrients*, 10(10), 1542 (Impact factor - 4.196).

Talati, Z., Norman, R., **Pettigrew, S.**, Kelly, B., **Dixon, H.**, Neal, B., and Miller, C. (2018), "A randomized trial assessing the effects of health claims on choice of foods in the presence of front-of-pack labels," *American Journal of Clinical Nutrition*, 108(6), 1275-1282 (Impact factor - 6.77).

Talati, Z., **Pettigrew, S.**, Kelly, B., Ball, K., Neal, B., **Dixon, H.**, Shilton, T., and Miller, C. (2018), "Can front-of-pack labels influence portion size judgements for unhealthy foods?," *Public Health Nutrition*, 21(15), 2776-2781 (Impact factor - 2.485).

Manuscript under review

Talati, Z., Egnell, M., Hercberg, S., Julia, C., and **Pettigrew, S.** (under first review), "Food choice under five front-of-package label conditions: An experimental study across 12 countries," *American Journal of Public Health* (Impact factor - 4.38).

Report

Julia, C., Hercberg, S., Egnell, M., **Pettigrew, S.**, and **Talati, Z.** (2018), "Front-of-Pack International Comparative Experimental study: Preliminary Results." Report prepared for the European Union Commission by Paris 13 University, Nutritional Epidemiology Research Team (EREN) and Curtin University, School of Psychology.

Presentation

Talati, Z., **Pettigrew, S.**, Norman, R., Kelly, B., **Dixon, H.**, Neal, B., and Miller, C. (2018), "Can front-of-pack nutrition labels overcome any biasing effects of nutrient and health claims?" *Joint Scientific Meeting of The Australian and New Zealand Obesity Society and the Breakthrough Discoveries in Metabolism, Diabetes and Obesity*, Melbourne, Australia, 16-18 October.

Submissions

Pettigrew, S. (2018), "The WA Cancer Prevention Research Unit's submission to the Australian Department of Health's consultation on labelling of sugars on packaged foods and drinks." WACPRU, Curtin University, September.

Pettigrew, S. (2018), "The WA Cancer Prevention Research Unit's submission to the Australian Senate's Select Committee into the obesity epidemic in Australia consultation." WACPRU, Curtin University, June.

School canteens



Megan Sauzier and Amanda Ferguson (WASCA)

WACPRU continues to provide evaluation services for the WA School Canteen Association (WASCA) in relation to government schools' implementation of the WA Healthy Food and Drink Policy. Following on from a 10-year evaluation study that provided evidence from school stakeholders that the Policy has been effective in improving the healthiness of foods across Western Australia, the 2018 evaluation adopted an observational approach to compare school menus with Policy requirements. The results show overall high levels of compliance and provide strong endorsement of the support provided by WASCA to Western Australian schools. Areas of focus for future WASCA strategies to assist schools with any remaining areas of compliance difficulty were identified.

Journal articles

Pettigrew, S., Talati, Z., Sauzier, M., and Ferguson, A. (2018), "Stakeholder perceptions of a school food policy ten years on," *Public Health Nutrition*, 21(7), 1370-1374 (Impact factor - 2.485).

Pettigrew, S., Talati, Z., Sauzier, M., and Ferguson, A. (Accepted 28 November, 2018), "Hungry for more: Key stakeholders' support for more stringent school food policies," *Public Health Nutrition* (Impact factor - 2.485).

Manuscript under review

Myers, G., Sauzier, M., Ferguson, A., and **Pettigrew, S.** (under second review), "Objective assessment of compliance with a state-wide school food service policy via menu audits," *Public Health Nutrition* (Impact factor - 2.485).

Research reports

Myers, G., and **Pettigrew, S.** (2018), "Healthy Food and Drink Policy Canteen Menu Audit 2017 Results." Report prepared for the WA School Canteen Association by the WA Cancer Prevention Research Unit (WACPRU), March.

Pettigrew, S. (2018), "WASCA Evaluation Plan and Survey Instrument Review." Report prepared for the WA School Canteen Association by the WA Cancer Prevention Research Unit (WACPRU), October.

NaSSDA

Rates of obesity in adolescents represent a significant public health issue in Australia and worldwide. Behavioural and environmental determinants, specifically, poor diet, physical inactivity, and sedentariness, have been highlighted as key modifiable factors that play a crucial role in the development and maintenance of overweight and obesity and are associated with negative health outcomes. Promoting physical activity and a healthy diet in adolescents has therefore been identified as a health priority. To promote and support healthy lifestyles and reduce the social and economic burden of obesity and preventable disease in Western Australia, WACPRU is collaborating with colleagues at CCWA and CBRC and using data from the NaSSDA Survey to identify the determinants of physical inactivity, poor diet, and sedentariness in Western Australian adolescents.

Journal article

Jongenelis, M., Scully, M., Morley, B., and Pratt, I.S. (2018), "Vegetable and fruit intake in Australian adolescents: Trends over time and perceptions of consumption," *Appetite*, 129, 49-54 (Impact factor - 3.174).

Grandparents' feeding practices



Australia has experienced significant growth in maternal employment which, in combination with continuing high hours of paternal employment, has seen grandparents become a regular and key source of childcare. As a result, grandparents are having a measurable impact on the nutrition environment and eating habits of their grandchildren. The significant contribution of grandparents remains overlooked despite evidence they use more maladaptive feeding practices compared to parents, and children cared for by grandparents are more likely to be overweight. It is therefore crucial to extend efforts to increase healthy eating in children beyond the parental level and include grandparents as targets of interventions designed to improve child nutrition and prevent obesity. In collaboration with CCWA and CBRC, WACPRU is working on a project to identify the feeding goals, styles, and practices of grandparents when caring for their grandchildren to explore the implications for the nutritional intake and eating behaviours of children.



Research funding

Jongenelis, M., Talati, Z., Pratt, I. S., and Morley, B. "Grandparent feeding practices: Implications for healthy eating in children," *Healthway Exploratory Grant*, \$59,706. 2018-2020.

Journal article

Jongenelis, M., Talati, Z., Morley, B., and Pratt, I.S. (2018), "The role of grandparents as providers of food to their grandchildren," *Appetite*, 134, 78-85 (Impact factor - 3.174).

Nutrition in older age

WACPRU is also continuing work in the area of seniors' nutrition and ways of optimising people's diets into old age.

Presentation

Pettigrew, S., Worrall, C., Biagioni, N., Talati, Z., and Jongenelis, M. (2018), "Intervention implications of older adults' nutrition decision making," *Public Health Prevention Conference*, Sydney, Australia, 2-4 May.

Sugary drinks



Caroline Miller

Professor Caroline Miller and colleagues from SAHMRI and the University of Adelaide are leading multiple large-scale projects to identify potential means of reducing soft drink consumption in Australia to reduce obesity and improve health outcomes. The studies include both population-level and adolescent applications to ensure the interests of both the general public and a particularly vulnerable group are served.

Research funding

Miller, **Wakefield, Pettigrew**, Coveney, **Durkin**, and Roder, "Warning labels for sugar sweetened beverages," *NHMRC Project Grant*, \$780,824.

Miller, **Wakefield, Pettigrew**, Coveney, Wittert, **Durkin**, and Roder, "Reducing sugar sweetened beverages consumption among young adults," *Beat Cancer Project – Cancer Council SA and SA Health*, \$75,000.

Miller, **Wakefield, Pettigrew**, Coveney, Wittert, **Durkin**, and Roder, "Reducing sugar sweetened beverages consumption among young adults," *NHMRC Targeted Research Grant*, \$671,119.

Manuscript under review

Miller, C., Dono, J., **Wakefield, M., Pettigrew, S.**, Coveney, J., Roder, D., **Durkin, S.**, Wittert, G., Martin, J., and Ettridge, K. (under first review), "Australians are ready for warning labels, marketing bans and sugary drink taxes: Two cross-sectional surveys measuring support for policy responses to sugar-sweetened beverages," *BMJ Open* (Impact factor - 2.413).

Presentations

Miller, C., Dono, J., Ettridge, K., **Wakefield, M., Pettigrew, S.**, Coveney, J., Wittert, G., **Durkin, S.**, Roder, D., and Martin, J. (2018), "Receptiveness to sugary drink policy interventions in an Australian national survey," *Public Health Prevention Conference*, Sydney, Australia, 2-4 May.

Miller, C., Dono, J., Ettridge, K., **Wakefield, M., Pettigrew, S.**, Coveney, J., Wittert, G., **Durkin, S.**, Roder, D., and Martin, J. (2018), "The attitudes, beliefs and behaviours associated with sugary drink consumption in Australia," *Public Health Prevention Conference*, Sydney, Australia, 2-4 May.

Miller, C., **Wakefield, M.**, Dono, J., Ettridge, K., Coveney, J., **Pettigrew, S., Durkin, S.**, Wittert, G., Martin, J., and Roder, D. (2018), "It would definitely make you think twice, even after you've finished the drink, it's in your car, like the empty bottle, you'd look at it": Young adults' reactions to warning labels on the bottles of sugary drinks," *Joint Scientific Meeting of The Australian and New Zealand Obesity Society and the Breakthrough Discoveries in Metabolism, Diabetes and Obesity*, Melbourne, Australia, 16-18 October.

Sports sponsorship



Helen Dixon



Melanie Wakefield

Colleagues at CBRC are leading experimental studies designed to assess the effects of unhealthy foods promotion via sports sponsorship. The results have direct implications for policy makers and those managing healthy eating campaigns.

Research funding

Dixon, Wakefield, Kelly, Pettigrew, Niederdeppe, and Chapman, "Harnessing the power of elite sport sponsorship to promote healthy eating by young adults," *NHMRC Targeted Research Grant*, \$304,220.

Journal article

Dixon, H., Scully, M., Wakefield, M., Kelly, B., Pettigrew, S., Chapman, K., and Niederdeppe, J. (2018), "The impact of unhealthy food sponsorship vs. pro-health sponsorship models on young adults' food preferences: A randomised controlled trial," *BMC Public Health*, 18(1399), doi:10.1186/s12889-018-6298-4 (Impact factor - 2.42).

Presentations

Dixon, H., Scully, M., Niederdeppe, J., Pettigrew, S., Kelly, B., Chapman, K., and Wakefield, M. (2018), "Can counter-advertising inoculate spectators against influence by unhealthy food sponsorship of sport?," *Joint Scientific Meeting of The Australian and New Zealand Obesity Society and the Breakthrough Discoveries in Metabolism, Diabetes and Obesity*, Melbourne, Australia, 16-18 October.

Dixon, H., Scully, M., Wakefield, M., Kelly, B., Pettigrew, S., Niederdeppe, J., and Chapman, K. (2018), "Harnessing elite sport sponsorship to promote healthy eating by young adults," *Public Health Prevention Conference*, Sydney, Australia, 2-4 May.

Physical activity

Physical activity

According to the Australian Institute of Health and Welfare's (AIHW) burden of disease estimates, physical inactivity makes a substantial contribution to cancer risk. For example, about one-third of bowel and breast cancers in Australia have been attributed to inactivity³. Several of WACPRU's current projects relate to factors influencing engagement in physical activity and methods of increasing participation in various forms of physical activity. These projects include the previously mentioned LiveLighter campaign ad testing study, the Shape of Australia survey, and the HWWA program evaluation. In addition, WACPRU is undertaking analyses of determinants of physical activity in later life and the potential impacts of new forms of transport technology on incremental exercise, active transport, and planned physical activity. These projects are outlined below.

Physical activity in later life



Rajni Rai



Michelle Jongenelis



Simone Pettigrew



Rob Newton



Ben Jackson



Elissa Burton



Keith Hill

Physical activity is a key determinant of healthy ageing, and insufficient activity is a crucial risk factor contributing to the national disease burden, including cancer burden. A majority of older adults exhibit low levels of activity, and are therefore an important target group for interventions aimed to increase physical activity. WACPRU's research on physical activity has focused on factors affecting seniors' participation in specific and general forms of physical activity to inform the development of interventions designed to improve health outcomes for this age group. This work has been funded by the Australian Research Council and Healthway.

Research funding

Pettigrew, Newton, Warburton, and Jackson, "Investigating the health benefits of volunteering by seniors," *ARC Discovery Grant*, \$360,000.

Hill, Lewin, **Pettigrew**, Hill, Burton, and Marston, "Improving community participation in strengthening programs for older people," *Healthway Project Grant*, \$131,000.

3. Australian Institute of Health and Welfare (2016). Australian Burden of Disease Study: Impact and causes of illness and death in Australia 2011. Australian Burden of Disease Study series no. 3. BOD 4. Canberra: AIHW.

Journal articles

Pettigrew, S., Burton, E., **Farrier, K.**, Hill, A., Bainbridge, L., Airey, P., Lewin, G., and Hill, K. (2018), "Encouraging older people to engage in resistance training: a multi-stakeholder perspective," *Ageing & Society*, doi:10.1017/S0144686X1800034X (Impact factor - 1.62).

Rai, R., Jongenelis, M., Jackson, B., Newton, R., **Pettigrew, S.** (2018), "Exploring factors associated with physical activity in older adults: An ecological approach," *Journal of Aging and Physical Activity*, doi:10.1123/japa.2018-0148 (Impact factor - 1.966).

Manuscripts under review

Pettigrew, S., Rai, R., Jongenelis, M., Jackson, B., Beck, B., and Newton, R. (under second review), "The implications of housing type for older people's physical activity levels," *Journal of Applied Gerontology* (Impact factor - 1.992).

Rai, R., Jongenelis, M., Jackson, B., Newton, R., and **Pettigrew, S.** (under first review), "Factors influencing physical activity participation among older people with low activity levels," *Ageing and Society* (Impact factor - 1.62).

Rai, R., Jongenelis, M., Newton, R., Jackson, B., and **Pettigrew, S.** (under first review), "Retirement and physical activity: The opportunity of a lifetime or the beginning of the end?" *Journal of Aging and Physical Activity* (Impact factor - 1.966).

Presentation

Jongenelis, M., Jackson, B., Newton, R., and **Pettigrew, S.** (2018), "Vulnerability to physical inactivity in Australian older adults," *7th International Society for Physical Activity and Health Congress*, London, United Kingdom, 15-17 October.

Technology and physical activity



Simone Pettigrew



Richard Norman



Zenobia Talati



Liyuwork Dana



Sophie Cronin



Caitlin Worrall

Impending changes in both public and private forms of transportation have substantial implications for incidental and purposeful physical activity, including work- and leisure-related activity. Multiple WACPRU research projects have investigated the nature of these implications and made recommendations for policy and practice. These studies have been supported by the Bankwest Curtin Economics Centre and Curtin University.



Physical activity

Research funding

Pettigrew, Norman, and Fritschi, "Investigating the strategic options for autonomous vehicle adoption in WA," *Bankwest Curtin Economics Centre*, \$59,500.

Journal articles

Pettigrew, S., Cronin, S., and Norman, R. (2018), "The unrealized potential of autonomous vehicles for an aging population," *Journal of Aging and Social Policy*, doi:10.1080/08959420.2018.1500860 (Impact factor - 1.512).

Pettigrew, S., Fritschi, L., and Norman, R. (2018), "The potential implications of autonomous vehicles in and around the workplace," *International Journal of Environmental Research and Public Health*, 15(9), 1876 (Impact factor - 2.145).

Pettigrew, S., Talati, Z., and Norman, R. (2018), "The health benefits of autonomous vehicles: Public awareness and receptivity in Australia," *Australian and New Zealand Journal of Public Health*, 42(5), 480-483 (Impact factor - 1.889).

Manuscripts under review

Pettigrew, S. and Cronin, S. (under first review), "Stakeholder views on the social issues relating to the introduction of autonomous vehicles," *Transport Policy* (Impact factor - 2.512).

Pettigrew, S., Dana, L.M., and Norman, R. (under second review), "Clusters of potential autonomous vehicles users according to propensity to use individual versus shared vehicles," *Transport Policy* (Impact factor - 2.512).

Pettigrew, S., Nelson, J., and Norman, R. (under first review), "Autonomous vehicles and cycling: Implications and management issues," *Journal of Transport & Health* (Impact factor - 2.774).

Pettigrew, S., Worrall, C., Talati, Z., Fritschi, L., and Norman, R. (under second review), "Dimensions of attitudes to autonomous vehicles," *Urban, Planning and Transport Research*.

Presentations

Pettigrew, S. (2018), "Do you already own the last car you'll ever buy?", *TEDxPerth*, Perth, Australia, 3 November. Invited presentation.

Pettigrew, S. (2018), "Getting around: Transport issues and solutions for the seniors of tomorrow," *Leading Innovation through Diversity Forum: Bridging Research, Policy and Practice for Age Friendly Care*, UWA, Perth, Australia, 29 June. Invited presentation.

Pettigrew, S., Cronin, S., and Norman, R. (2018), "The Implications of AVs for an Ageing Population," *International Driverless Vehicle Summit*, Adelaide, Australia, 31 October-1 November. Invited presentation.

Pettigrew, S., Dana, L.M., Talati, Z., Worrall, C., Norman, R., and Fritschi, L. (2018), "Does greater familiarity with autonomous vehicles increase adoption intentions?" *28th Australian Road Research Board International Conference*, Brisbane, Australia, 30 April-4 May.

Pettigrew, S., Talati, Z., Norman, R., and Fritschi, L. (2018), "Community fears about autonomous vehicles," *28th Australian Road Research Board International Conference*, Brisbane, Australia, 30 April-4 May.

Smoking



Sarah Beasley, Rebecca Salsano, Lorena Chapman, Zainab Zaki, Alicia King, Doris Neuwerth, Deb Rimmer, Bree Olsen, Libby Jardine

Priority settings: Community Service Organisations (CSOs)

One of the main priority areas for the Make Smoking History team is to address the high rates of tobacco use among people experiencing disadvantage. As part of a Healthway-funded project, WACPRU and CCWA have conducted formative research with clients and staff at community service organisations that assist people experiencing various forms of disadvantage (examples of services include mental health, alcohol and other drugs, and homelessness services). Data collected through interviews and surveys is being used to tailor programs to the needs of these high smoking prevalence groups.



Ashleigh Parnell



Simone Pettigrew



Emily Box



Lorena Chapman



Research funding

Pettigrew, Bonevski, Coffin, **Slevin**, and Anwar McHenry, "Developing effective smoking cessation programs for the disadvantaged for delivery via community service organisations," *Healthway Project Grant*, 2016-2017, \$75,000.

Smoking

Journal articles

Parnell, A., Box, E., Biagioni, N., Bonevski, B., Coffin, J., **Slevin, T.,** Anwar-McHenry, J., and **Pettigrew, S.** (2018), "Attitudinal and behavioural responses to increasing tobacco control regulation among high smoking prevalence groups: A qualitative study," *Drug and Alcohol Review*, doi:10.1111/dar.12869 (Impact factor - 2.855).

Parnell, A., Box, E., Bonevski, B., **Slevin, T.,** Anwar-McHenry, J., **Chapman, L.,** and **Pettigrew, S.** (Accepted 10 December, 2018), "Potential sources of cessation support for high smoking prevalence groups: A qualitative study," *Australian and New Zealand Journal of Public Health* (Impact factor - 1.889).

Reports

Parnell, A. and **Pettigrew, S.** (2018), "CSO Staff Results: Make Smoking History Community Service Organisation Project." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), June.

Parnell, A. and **Pettigrew, S.** (2018), "Organisational Survey Results: Make Smoking History Community Service Organisation Project." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), June.

Parnell, A. and **Pettigrew, S.** (2018), "The Beacon Staff Survey Results: Make Smoking History Community Service Organisation Project." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), July.

E-cigarettes



Michelle Jongenelis



Simone Pettigrew



Emily Brennan



Terry Slevin



Caitlin Kameron

Several leading health authorities have raised concerns about the safety of e-cigarettes and the potential for their use to result in the renormalisation of smoking behaviours. Despite these concerns, e-cigarettes are growing in popularity, particularly among young adults. To inform the development of future health promotion and prevention strategies, WACPRU, in collaboration with colleagues at CCWA, CBRC, and UWA, is assessing young adults' attitudes to e-cigarettes and their perceptions of the harms associated with e-cigarette use. Results to date suggest that a substantial minority of young adults do not believe e-cigarettes are harmful to health. Furthermore, a majority of young adult smokers and a substantial minority of young adult non-smokers have used an e-cigarette, with nicotine and flavoured e-cigarettes being the preferred options. Contrary to popular belief, very few young adult e-cigarette users report using the devices to quit smoking and instead report using them for enjoyment and fun. This finding supports concerns that e-cigarettes are not discouraging use of traditional cigarettes and may be contributing to the evolution of a new population of smokers. Given e-cigarette use has the potential to result in subsequent tobacco cigarette initiation among young adults, WACPRU's work in this area shows that maintaining existing regulations limiting the accessibility of these products in Australia is crucial to minimising potential increases in tobacco smoking prevalence.

Journal articles

Jongenelis, M., Brennan, E., Slevin, T., Kameron, C., Rudaizky, D., and **Pettigrew, S.** (2018), "Differences in use of electronic nicotine delivery systems by smoking status and demographic characteristics among Australian young adults," *Health Promotion Journal of Australia*, doi:10.1002/hpja.202 (Impact factor - 1.097).

Jongenelis, M., Kameron, C., Brennan, E., Rudaizky, D., Slevin, T., and Pettigrew, S. (2018), "E-cigarette product preferences among Australian young adult e-cigarette users," *Australian and New Zealand Journal of Public Health*, 42(6), 572-574 (Impact factor - 1.889).

Jongenelis, M., Kameron, C., Rudaizky, D., Slevin, T., and Pettigrew, S. (2018), "Perceptions of harm, addictiveness, and smoking cessation effectiveness of e-cigarettes among Australian young adults," *Addictive Behaviors*, 90, 217-221, doi:10.1016/j.addbeh.2018.11.004 (Impact factor - 2.686).

Manuscript under review

Jongenelis, M., Kameron, C., Rudaizky, D., and Pettigrew, S. (under third review), "Support for e-cigarette regulations among Australian young adults," *BMC Public Health* (Impact factor - 2.42).

Submission

Jongenelis, M. and Pettigrew, S. (2018), "The WA Cancer Prevention Research Unit's submission to the Australian Department of Health's consultation to inform the development of the National Tobacco Strategy." WACPRU, Curtin University, August.

PhD student profile – Todd Subritzky

Todd is in the final year of his PhD candidacy. In recent years he has produced a comprehensive body of work analysing the factors influencing the emergence and subsequent evolution of the recreational cannabis market in Colorado in the US. The results of Todd's work are providing valuable insights into methods for addressing the public health implications of increased cannabis availability.



Journal articles

Subritzky, T., **Pettigrew, S.**, and Lenton, S. (2016), "Issues in the implementation and evolution of the commercial recreational cannabis market in Colorado," *International Journal of Drug Policy*, 27, 1-12.

Subritzky, T., Lenton, S., and **Pettigrew, S.** (2016), "Legal cannabis industry adopting strategies of the tobacco industry," *Drug and Alcohol Review*, 35(5), 511-513.

Subritzky, T., **Pettigrew, S.**, and Lenton, S. (2017), "Into the void: Regulating pesticide use in Colorado's commercial cannabis markets," *International Journal of Drug Policy*, 42, 86-96.

Lenton, S., and Subritzky, T. (2017), "On sentinel samples, sales data and potency," *Addiction*, 112(7), 1137-1138.

Subritzky, T. (2018), "Beyond deficit and harm reduction: Incorporating the spectrum of wellness as an interpretive framework for cannabis consumption," *International Journal of Drug Policy*, 60, 18-23.

SunSmart



Mark Strickland, Carolyn Minto, Hayley Staples, Sally Blane

UV meters in schools

Adolescents are often less likely to engage in sun protection behaviours than other age groups, putting them at greater risk of developing skin cancer later in life. UV meters have been suggested as a possible method of increasing engagement in sun protection behaviours among this group. As part of a Healthway-funded exploratory research study assessing UV meters' potential, two secondary schools have been selected as intervention and control sites. The data collection stage of the study will begin in the first semester of 2019, and will measure students' exposure to UV radiation while at school and their engagement in sun protective behaviours such as seeking shade and wearing hats.



Research funding

Pettigrew, Lucas, **Strickland**, Whiteman, Neale, and Milne, "The health promotion potential of locating UV meters in high schools," *Healthway Exploratory Grant*, \$38,174, 2017-2018.

UV meters in workplaces

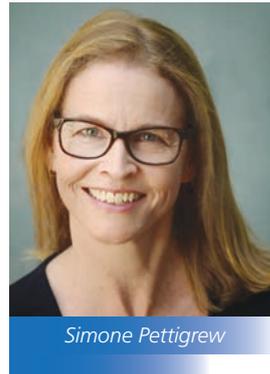
As part of a collaborative project between WACPRU, the SunSmart team at CCWA, the Curtin Institute for Computation, and Curtin's Properties, Facilities, and Development Department, a UV meter has been installed on Curtin's Bentley campus. During 2019, signs will be placed around campus to display UV levels. The sun protection behaviours employed by students, staff, and visitors will be recorded and compared to the control sites on campus to assess the potential of the UV meters to increase protective behaviours in a university setting.



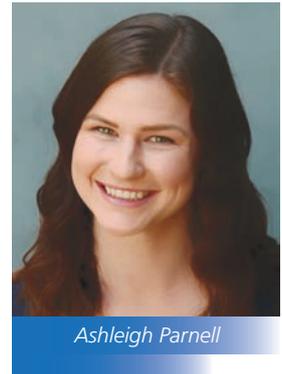
Mark Strickland



Graham Arndt



Simone Pettigrew



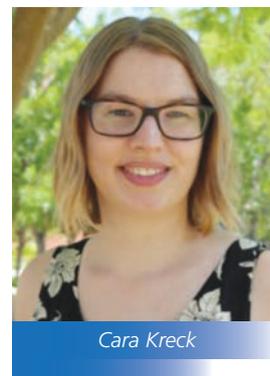
Ashleigh Parnell



Alex Goh



Kevin Chai



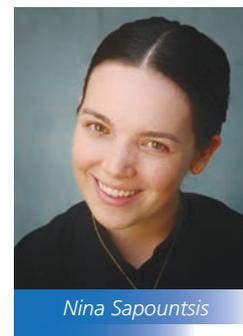
Cara Kreck

Conference presentation

Jongenelis, M., Strickland, M., Minto, C., Slevin T., and Pettigrew, S. (2018), "New approaches to skin cancer prevention: Can encouraging skin checking increase engagement in sun protection behaviours?" *World Cancer Congress*, Kuala Lumpur, Malaysia, 1-4 October.



Literature reviews



A dedicated team of casual staff performs literature reviews for WACPRU across a wide range of relevant topic areas. These reviews provide access to up-to-date information to facilitate the preparation of manuscripts, reports, and grant applications. The following literature reviews were commenced or progressed in 2018.

Awareness of the obesity-disease link

The aim of this review was to investigate adolescents' awareness of the association between obesity and chronic diseases (e.g., diabetes, heart disease, and cancer). Research on adolescents was found to be lacking, with the identified studies conducted on adult populations. Results from these studies suggest that awareness of the link between obesity and chronic diseases (especially cancer) among adults is low. Increased knowledge of the association between obesity and chronic disease was found to be associated with positive behavioural changes across multiple studies.

Alcohol company sponsorship of sport

This review focused on the extent to which alcohol promotion aligned with sporting events continues to be a method via which young people are exposed to substantial amounts of alcohol advertising. The review was limited to research on this topic published within the last five years. The identified studies have taken two main approaches: (i) analyses of the extent of exposure to alcohol promotion during sporting events and broadcasts and (ii) analyses of digital forms of alcohol marketing that include sporting themes. Across these studies there is the general conclusion that young people are being exposed to a large amount of alcohol promotion in sports-related contexts due to loopholes in current advertising regulations that need to be addressed.

Clustering of unhealthy lifestyle behaviours

This review explored the clustering of unhealthy lifestyle behaviours. Research tends to focus on the grouping of four key behaviours: tobacco use, alcohol consumption, physical activity, and diet. A limited number of studies also include additional variables such as overweight/obesity, cancer screening, depression, and drug use. Smoking, harmful levels of alcohol consumption, physical inactivity, and a poor diet (e.g., low fruit and vegetable intake and/or high intake of energy-dense nutrient-poor foods) have been consistently found to co-occur. Population groups in which this clustering was found to be most prevalent were males, young people, those on lower incomes and with lower education levels, and those living alone.

Food decisions

This review focused on factors that influence consumers' food choice decisions. Several cognitive factors have been found to influence food-related decision-making processes, which are in turn related to a range of environmental, social, and policy factors. Studies consistently show that convenience, healthiness, price, and taste are the key food choice determinants. While there have been differences in prioritising these factors, taste has been generally found to be the most important across different countries.

Measurement of physical activity via accelerometer devices

Sedentary behaviour (SB) and levels of physical activity (PA) among older people are of current research interest due to their recognised independent contribution to health-related risks and non-communicable disease outcomes. These outcomes include various types of cancer, Type II diabetes, and cardiovascular disease. While much previous research has used subjective measures (e.g., self-report), the recognised limitations and biases associated with these approaches have contributed to the increasing use of objective measures, such as accelerometers. This review focused on the use of accelerometers to assess levels of PA among older adults. The search was limited to papers published within the last five years. Current accelerometer literature appears to focus on three areas: i) validating and comparing accelerometer makes and models, ii) the impact of PA and SB on various health risks and disease outcomes, and iii) defining accelerometer methods (e.g., data collection protocols and data processing criteria). Preliminary findings suggest that accelerometers are becoming increasingly popular due to their capacity to address previous limitations with evaluating PA among older adults. However, the methods or recommendations for using accelerometers are yet to be sufficiently determined. More methodologically robust studies are necessary to enable standardised comparisons across studies, thus enabling more meaningful meta-analyses to be conducted. Findings of studies using accelerometers support existing evidence that engaging in moderate to vigorous physical activity is likely to foster better health outcomes and that how older adults spend their sedentary time is also important.

Older people's participation in the active arts

This review focused on the extent to which the physical, cognitive, or social health outcomes of older people are affected through regular participation in the performing arts. The review was limited to research on this topic published within the last three years. The identified studies have taken two main approaches: (i) examining changes in the older person's physical, cognitive, or social health when participating in performing arts pursuits and (ii) providing performing arts programmes and access to these programs to support the quality of life of older people. Across these studies there is the general finding that the health and well-being of older people are supported through participation in the performing arts.

Pregnancy alcohol warnings

This review focused on the effectiveness of pregnancy-related alcohol warning labels in reducing alcohol consumption among expectant mothers. The identified studies used a range of qualitative and quantitative methodologies and investigated diverse populations (e.g., Caucasian, African American, low and high socioeconomic status), but tended to focus on alcohol warning labels more broadly rather than pregnancy labels specifically. In qualitative studies, participants reported that current pregnancy alcohol warning labels are too small, obstructed by other design elements, vague, and ineffective. Quantitative studies report mixed results about the effectiveness of pregnancy alcohol warning labels. Broadly, there is some consensus that current alcohol warning labels may reduce alcohol consumption among expectant women who are light/social drinkers, but are less likely to be effective at reducing alcohol consumption among expectant women who are heavy drinkers.

Relationship between obesity and diseases such as asthma and epilepsy

This review explored the evidence base relating to the link between obesity and the chronic diseases of asthma and epilepsy. In terms of asthma, the identified studies had two broad hypotheses regarding the direction of the association: (i) obesity leads to the development of asthma and (ii) asthma leads to weight gain. Some studies report that individuals who are currently overweight may develop asthma over time as central body fat can restrict deep breathing, which may cause airways to narrow. Other studies report that individuals with asthma may avoid exercise as a result of the breathlessness they experience and that this physical inactivity contributes

to weight gain over time. There is some agreement that both these hypotheses may be valid and the association is bidirectional. In terms of epilepsy, the majority of studies focus on two main categories of possible causes of weight gain for individuals with epilepsy: (i) biological/pharmaceutical causes and (ii) psychological causes. Pharmaceutical studies that focus on the side-effects of medications agree that the intake of certain medications used to treat epilepsy may cause adverse metabolic effects that lead to weight gain. Studies on psychological causes suggest that individuals with epilepsy may fear that exercise will cause a seizure, leading to exercise avoidance and weight gain over time.

Relationship between socioeconomic status and cancer risk

This review focused on the relationship between socioeconomic status (SES) and cancer risk. There was heterogeneity across the identified studies given the various measurements of SES and the type of cancers examined. Across these studies, there was a general consensus that the risk of cancer increases with decreasing SES, but that this relationship is complex and is often confounded by various other factors linked to low SES. These studies also highlighted the need for education and awareness about cancer in lower SES areas due to lower cancer screening rates, and if diagnosed the cancer was often in the more advanced and complicated stage.

Volunteering

This review focused on mediators of the relationship between volunteering and psychological well-being. The majority of the identified studies were cross-sectional and analysed only one or two mediators. Mediators tended to fall into two broad categories: (i) psychological resources (e.g., self-esteem and self-efficacy) and (ii) social resources (e.g., social integration and social connectedness). Evidence suggests that volunteering increases an individual's psychological and social resources, which in turn increases their psychological well-being. Across studies there is a consensus that self-esteem, self-efficacy, optimism, social connectedness, and social integration mediate the associations between volunteering and psychological well-being.

Academic service

WACPRU staff contribute to the research community by:

- (i) Performing manuscript and grant application reviews,
- (ii) Sitting on journal editorial boards, advisory boards, and committees, and
- (iii) Supervising research students.

Manuscript reviewing

In total, 36 manuscript reviews were completed for the following journals:

- Accident Analysis & Prevention
- Addiction
- AIMS Public Health
- Alcohol and Alcoholism
- American Journal of Health Promotion
- Appetite
- Drug and Alcohol Review
- Food & Nutrition Research
- Food Research International
- Food Quality and Preferences
- Harm Reduction Journal
- Health Psychology
- Health Promotion Journal of Australia
- International Journal of Drug Policy
- International Journal of Methods in Psychiatric Research
- Journal of Public Health
- Journal of Sports Sciences
- Journal of Studies on Alcohol and Drugs
- Nutrients
- Public Health Nutrition
- Public Health
- Scientific Reports

Grant reviewing

During 2018, 53 grant applications were reviewed for the following funding bodies:

- National Health and Medical Research Council
- Australian Research Council
- Health Research Council (New Zealand)

Board and Committee representation

Positions were held on the editorial boards of the following journals:

- Appetite
- Consumption, Markets and Culture
- Journal of Research for Consumers
- Journal of Social Marketing

Positions were held on the following committees/boards:

- Alcohol Advertising Review Board Steering Committee
- Australian Department of Health, Health Star Rating Advisory Committee
- Australian Department of Health, Health Star Rating Social Marketing Advisory Group
- Cancer Council Australia, Nutrition and Physical Activity Committee
- Foundation for Alcohol Research and Education Board
- Mentally Healthy WA, Act Belong Commit Steering Committee
- WA Mental Health Commission, Young People and Alcohol advertising campaign advisory group

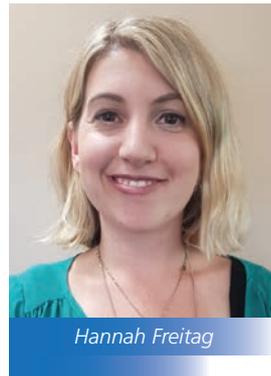
Research student supervision

The following students were supervised by WACPRU staff during 2018:

- Jessica Brown Honours
- Charlotte Edgson Honours
- Tess Fletcher PhD
- Himanshu Gupta PhD
- Julia Stafford PhD
- Todd Subritzky PhD
- Caitlin Worrall PhD

Acknowledgements

Thank you to the wonderful staff at Curtin University who provide administrative support for WACPRU's activities.



Appendix 1: Current Funding

1. **Dixon**, O'Brien, **Pettigrew**, Niederdeppe, and Vandenberg, "Countering the influence of alcohol sport sponsorship: A media intervention," *NHMRC Project Grant*, \$412,418, 2019-2020.
2. **Dixon**, **Wakefield**, Kelly, **Pettigrew**, Niederdeppe, and Chapman, "Harnessing the power of elite sport sponsorship to promote healthy eating by young adults," *NHMRC Targeted Research Grant*, \$304,220, 2016-2018.
3. **Jongenelis**, **Talati**, **Pratt**, and **Morley**, "Grandparent feeding practices: Implications for healthy eating in children," *Healthway Exploratory Grant*, \$59,706, 2018-2020.
4. Miller, **Wakefield**, **Pettigrew**, Coveney, Wittert, **Durkin**, and Roder, "Reducing sugar sweetened beverages consumption among young adults," *NHMRC Targeted Research grant*, \$671,000, 2016-2019.
5. Miller, **Wakefield**, **Pettigrew**, Coveney, **Durkin**, and Roder, "Warning labels for sugar sweetened beverages," *NHMRC Project Grant*, \$780,824, 2017-2019.
6. **Pettigrew**, Lucas, **Strickland**, Whiteman, Neale, and Milne, "The health promotion potential of locating UV meters in high schools," *Healthway Exploratory Grant*, \$38,174, 2017-2018.
7. **Pettigrew**, Miller, Kypri, Chikritzhs, **Jongenelis**, **Brennan**, and Hasking, "Promoting responsible drinking practices to drinkers to reduce the risk of alcohol-related harm," *NHMRC Project Grant*, \$271,000, 2018-2019.
8. **Pettigrew**, **Wakefield**, Kypri, Chikritzhs, Hasking, and **Jongenelis**, "Developing health promotion messages to encourage responsible drinking practices," *Healthway Project Grant*, \$104,745, 2017-2018.
9. Shaw, Johnston, Gilligan, and **Pettigrew**, "Supporting parents to delay and reduce adolescent alcohol use," *Healthway Project Grant*, \$328,537, 2018-2020.
10. **Wakefield**, **Brennan**, **Durkin**, **Pettigrew**, Hoek, and Slater, "Can systematically developed alcohol health warnings reduce drinking intentions and behaviours?," *NHMRC Project Grant*, \$782,617, 2017-2021.
11. **Wakefield**, Slater, **Dixon**, **Durkin**, **Brennan**, and **Pettigrew**, "Television advertising to promote NHMRC Guidelines for low risk alcohol consumption: Experimental study," *NHMRC Project Grant*, \$649,356.

Appendix 2: Journal Articles

1. **Allom, V., Pettigrew, S., Jongenelis, M., Slevin, T., Keightley, S., Phillips, F., and Beasley, S.** (2018), "Comparing the cost-effectiveness of campaigns delivered via various combinations of television and online media," *Frontiers in Public Health*, 6(83), doi: 10.3389/fpubh.2018.00083
2. **Croager, E., Gray, V., Pratt, I.S., Slevin, T., Pettigrew, S.,** Holman, D., Bulsara, M., and Emery, J. (2018), "Find Cancer Early: Evaluation of a community education campaign to increase awareness of cancer signs and symptoms in people in regional Western Australians," *Frontiers in Public Health*, 6(22), doi: 10.3389/fpubh.2018.00022
3. **Dekker, M.R., Jongenelis, M., Wakefield, M.,** Kypri, K., Hasking, P., and **Pettigrew, S.** (2018), "A longitudinal examination of protective behavioral strategies and alcohol consumption among adult drinkers," *Addictive Behaviors*, 87, 1-7, doi:10.1016/j.addbeh.2018.06.017 (Impact factor - 2.686).
4. **Dixon, H., Scully, M., Wakefield, M.,** Kelly, B., **Pettigrew, S.,** Chapman, K., and Niederdeppe, J. (2018), "The impact of unhealthy food sponsorship vs. pro-health sponsorship models on young adults' food preferences: A randomised controlled trial," *BMC Public Health*, 18(1399), doi:10.1186/s12889-018-6298-4 (Impact factor - 2.42).
5. Egnell, M., **Talati, Z.,** Hercberg, S., **Pettigrew, S.,** and Julia, C. (2018), "Objective understanding of front-of-package nutrition labels: An international comparative experimental study across 12 countries," *Nutrients*, 10(10), 1542 doi:10.3390/nu10101542 (Impact factor - 4.196).
6. Gupta, H., Lam, T., **Pettigrew, S.,** and Tait, R. (2018), "Alcohol marketing on YouTube: Content adaptation to enhance user engagement in different cultural contexts," *BMC Public Health*, 18(1), 141 (Impact factor - 2.42).
7. Gupta, H., Lam, T., **Pettigrew, S.,** and Tait, R. (2018), "The association between exposure to social media alcohol marketing and youth alcohol use behaviors in India and Australia," *BMC Public Health*, 18(1), 726 (Impact factor - 2.42).
8. Johnston, R., **Stafford, J., Jongenelis, M.,** Shaw, T., Samsa, H., Costello, E., and Kirby, G. (2018), "Evaluation of a public education campaign to support parents to reduce adolescent alcohol use," *Drug and Alcohol Review*, 37(5), 588-598 (Impact factor - 2.855).
9. **Jongenelis, M., Brennan, E., Slevin, T., Kameron, C.,** Rudaizky, D., and **Pettigrew, S.** (2018), "Differences in use of electronic nicotine delivery systems by smoking status and demographic characteristics among Australian young adults," *Health Promotion Journal of Australia*, doi:10.1002/hpja.202 (Impact factor - 1.097).
10. **Jongenelis, M.,** Johnston, R., and **Stafford, J.** (2018), "Factors associated with parents' belief in the appropriateness of providing alcohol to their child," *Substance Use and Misuse*, 53(14), 2281-2290 (Impact factor - 1.132).
11. **Jongenelis, M., Kameron, C., Brennan, E.,** Rudaizky, D., **Slevin, T.,** and **Pettigrew, S.** (2018), "E-cigarette product preferences among Australian young adult e-cigarette users," *Australian and New Zealand Journal of Public Health*, 42(6), 572-574 (Impact factor - 1.889).
12. **Jongenelis, M., Kameron, C.,** Rudaizky, D., **Slevin, T.,** and **Pettigrew, S.** (2018), "Perceptions of harm, addictiveness, and smoking cessation effectiveness of e-cigarettes among Australian young adults," *Addictive Behaviors*, 90, 217-221 (Impact factor - 2.686).

13. **Jongenelis, M., Pettigrew, S.,** Lawrence, D., and Rikker, W. (Accepted 16 October, 2018), "Factors associated with poly drug use in adolescents," *Prevention Science* (Impact factor - 2.926).
14. **Jongenelis, M., Pettigrew, S., Wakefield, M., Slevin, T., Pratt, I.S.,** Chikritzhs, T., and Liang, W. (2018), "Investigating single- versus multiple-source approaches to communicating health messages via an online simulation," *American Journal of Health Promotion*, 32(4), 979-988 (Impact factor - 2.197).
15. **Jongenelis, M., Pratt, I.S., Slevin, T.,** Chikritzhs, T., Liang, W., and **Pettigrew, S.** (2018), "The effect of chronic disease warning statements on alcohol-related health beliefs and consumption intentions among at-risk drinkers," *Health Education Research*, 33(5), 351-360 (Impact factor – 1.479).
16. **Jongenelis, M., Scully, M., Morley, B., and Pratt, I.S.** (2018), "Vegetable and fruit intake in Australian adolescents: Trends over time and perceptions of consumption," *Appetite*, 129, 49-54, doi:10.1016/j.appet.2018.06.033 (Impact factor - 3.174).
17. **Jongenelis, M., Talati, Z., Morley, B., and Pratt, I.S.** (2018), "The role of grandparents as providers of food to their grandchildren," *Appetite*, 134, 78-85 (Impact factor - 3.174).
18. **Myers, G., Wright, S., Blane, S., Pratt, I.S., and Pettigrew, S.** (2018), "A process and outcome evaluation of an in-class vegetable promotion program," *Appetite*, 125, 182-189 (Impact factor - 3.174).
19. **Parnell, A., Box, E., Biagioni, N.,** Bonevski, B., Coffin, J., **Slevin, T.,** Anwar-McHenry, J., and **Pettigrew, S.** (2018), "Attitudinal and behavioural responses to increasing tobacco control regulation among high smoking prevalence groups: A qualitative study," *Drug and Alcohol Review*, doi:10.1111/dar.12869 (Impact factor - 2.855).
20. **Parnell, A., Box, E.,** Bonevski, B., **Slevin, T.,** Anwar-McHenry, J., **Chapman, L., and Pettigrew, S.** (Accepted 10 December, 2018), "Potential sources of cessation support for high smoking prevalence groups: A qualitative study," *Australian and New Zealand Journal of Public Health* (Impact factor - 1.889).
21. **Parnell, A.,** Edmunds, M., Pierce, H., and Stoneham, M. (2018), "The volume and type of unhealthy bus shelter advertising around schools in Perth, Western Australia: Results from an explorative study," *Health Promotion Journal of Australia*, doi:10.1002/hpja.55 (Impact factor - 1.097).
22. **Pettigrew, S.,** Burton, E., Farrier, K., Hill, A., Bainbridge, L., Airey, P., Lewin, G., and Hill, K. (2018), "Encouraging older people to engage in resistance training: A multi-stakeholder perspective," *Ageing & Society*, doi:10.1017/S0144686X1800034X (Impact factor - 1.62).
23. **Pettigrew, S., Cronin, S.,** and Norman, R. (2018), "The unrealized potential of autonomous vehicles for an aging population," *Journal of Aging and Social Policy*, doi:10.1080/08959420.2018.1500860 (Impact factor - 1.512).
24. **Pettigrew, S.,** Fritschi, L., and Norman, R. (2018), "The potential implications of autonomous vehicles in and around the workplace," *International Journal of Environmental Research and Public Health*, 15(9), 1876 (Impact factor - 2.145).
25. **Pettigrew, S., Hafekost, C., Jongenelis, M.,** Pierce, H., Chikritzhs, T., and **Stafford, J.** (2018), "Behind closed doors: The priorities of the alcohol industry as communicated in a trade magazine," *Frontiers in Public Health*, 6(217), doi:10.3389/fpubh.2018.00217.
26. **Pettigrew, S., Jongenelis, M., Biagioni, N., Pratt, I.S., and Moore, S.** (2018), "Results of a long-term follow-up evaluation of an Australian adult nutrition education program," *Asia Pacific Journal of Clinical Nutrition*, 27(5), 1155-1159 (Impact factor - 1.816).

27. **Pettigrew, S., Jongenelis, M.,** Jackson, B., and Newton, R. (2018), "'Charity begins at home': Informal caring barriers to formal volunteering among older people," *Voluntas*, doi:10.1007/s11266-018-0017-8 (Impact factor - 1.098).
28. **Pettigrew, S., Jongenelis, M., Phillips, F., Slevin, T., Allom, V., Keightley, S.,** and **Beasley, S.** (2018), "Assessing audience members' ability to identify the media source of a health campaign disseminated via different media," *Frontiers in Public Health*, doi: 10.3389/fpubh.2018.00196.
29. **Pettigrew, S., Talati, Z.,** and Norman, R. (2018), "The health benefits of autonomous vehicles: Public awareness and receptivity in Australia," *Australian and New Zealand Journal of Public Health*, 45(5), 408-483 (Impact factor - 1.889).
30. **Pettigrew, S., Talati, Z.,** Sauzier, M., and Ferguson, A. (2018), "Stakeholder perceptions of a school food policy ten years on," *Public Health Nutrition*, 21(7), 1370-1374 (Impact factor - 2.485).
31. **Pettigrew, S., Talati, Z.,** Sauzier, M., and Ferguson, A. (Accepted 28 November, 2018), "Hungry for more: Key stakeholders' support for more stringent school food policies," *Public Health Nutrition* (Impact factor - 2.485).
32. Pierce, H., **Stafford, J., Pettigrew, S., Kameron, C.,** Keric, D., and **Pratt, I.S.** (2018), "Regulation of alcohol marketing in Australia: A critical review of the Alcohol Beverages Advertising Code Scheme's new Placement Rules," *Drug and Alcohol Review*, doi: 10.1111/dar.12872 (Impact factor - 2.855).
33. **Rai, R., Jongenelis, M.,** Jackson, B., Newton, R., and **Pettigrew, S.** (2018), "Exploring factors associated with physical activity in older adults: An ecological approach," *Journal of Aging and Physical Activity*, doi:10.1123/japa.2018-0148 (Impact factor - 1.966).
34. **Talati, Z., Davey, E., Grapes, C.,** Shilton, T., and **Pettigrew, S.** (2018), "Evaluation of a workplace health and wellbeing training course delivered online and face-to-face," *International Journal of Environmental Research and Public Health*, 15(11), 2422, doi: 10.3390/ijerph15112422 (Impact factor - 2.145).
35. **Talati, Z.,** Norman, R., **Pettigrew, S.,** Kelly, B., **Dixon, H.,** Neal, B., and Miller, C. (2018), "A randomized trial assessing the effects of health claims on choice of foods in the presence of front-of-pack labels," *American Journal of Clinical Nutrition*, 108(6), 1275-1282 (Impact factor - 6.77).
36. **Talati, Z., Pettigrew, S.,** Kelly, B., Ball, K., Neal, B., **Dixon, H.,** Shilton, T., and Miller, C. (2018), "Can front-of-pack labels influence portion size judgements for unhealthy foods?," *Public Health Nutrition*, 21(15), 2776-2781 (Impact factor - 2.485).
37. **Wakefield, M., Brennan, E., Dunstone, K., Durkin, S., Dixon, H., Pettigrew, S.,** and Slater, M. (2018), "Immediate effects on adult drinkers of exposure to alcohol harm reduction advertisements with and without drinking guideline messages: Experimental study," *Addiction*, 113(6), 1019-1029 (Impact factor - 6.048).

Appendix 3:

Manuscripts under Review

1. **Dana, L.M., Jongenelis, M.,** Jackson, B., Newton, R., and **Pettigrew, S.** (under first review), "Reliability and validity of a brief 'Attitudes to volunteering in retired older adults' scale," *Nonprofit and Voluntary Sector Quarterly* (Impact factor - 1.932).
2. **Dekker, M.R., Jongenelis, M., Wakefield, M.,** Kypri, K., Hasking, P., and **Pettigrew, S.** (under first review), "Factors associated with engagement in protective behavioral strategies among adult drinkers," *Addictive Behaviors*, (Impact factor - 2.686).
3. **Jongenelis, M., Dana, L.M.,** Warburton, J., Jackson, B., Newton, R., **Talati, Z.,** and **Pettigrew, S.** (under first review), "Factors associated with formal volunteering in Australian seniors," *The Journals of Gerontology: Series B* (Impact factor - 3.054).
4. **Jongenelis, M.,** Jackson, B., Warburton, J., Newton, R. U., and **Pettigrew, S.** (under first review), "Improving attitudes to volunteering among older adults: A trial approach," *The Gerontologist* (Impact Factor - 4.078)
5. **Jongenelis, M., Kameron, C.,** Rudaizky, D., and **Pettigrew, S.** (under third review), "Support for e-cigarette regulations among Australian young adults," *BMC Public Health* (Impact factor - 2.42).
6. **Lizama, N., Jongenelis, M.,** and **Slevin, T.** (under second review), "Awareness of cancer risk factors and protective factors among Australian adults," *Health Promotion Journal of Australia* (Impact factor - 1.097).
7. **Lizama, N., Slevin, T.,** and **Pettigrew, S.** (under first review), "Anti-smoking advertisement characteristics are perceived differently by smokers and individuals with health or advertising knowledge," *Health Education Research* (Impact factor - 1.479).
8. Manners, D., Piccolo, F., Brims, F., **Pettigrew, S.,** McWilliams, A., and Lake, F. (under first review), "Development and evaluation of a consumer information resource, including Patient Decision Aid, for lung cancer screening: A quasi-experimental study," *Translational Behavioral Medicine* (Impact factor - 2.521).
9. Miller, C., Dono, J., **Wakefield, M., Pettigrew, S.,** Coveney, J., Roder, D., **Durkin, S.,** Wittert, G., Martin, J., and Ettridge, K. (under first review), "Australians are ready for warning labels, marketing bans and sugary drink taxes: Two cross-sectional surveys measuring support for policy responses to sugar-sweetened beverages," *BMJ Open* (Impact factor - 2.413).
10. **Myers, G.,** Sauzier, M., Ferguson, A., and **Pettigrew, S.** (under second review), "Objective assessment of compliance with a state-wide school food service policy via menu audits," *Public Health Nutrition* (Impact factor - 2.485).
11. **Pettigrew, S.** and **Cronin, S.** (under first review), "Stakeholder views on the social issues relating to the introduction of autonomous vehicles," *Transport Policy* (Impact factor - 2.512).
12. **Pettigrew, S., Dana, L.M.,** and Norman, R. (under second review), "Clusters of potential autonomous vehicles users according to propensity to use individual versus shared vehicles," *Transport Policy* (Impact factor - 2.512).
13. **Pettigrew, S.,** Nelson, J. and Norman, R. (under first review), "Autonomous vehicles and cycling: Implications and management issues," *Journal of Transport & Health* (Impact factor - 2.774).

14. **Pettigrew, S., Rai, R., Jongenelis, M.**, Jackson, B., Beck, B., and Newton, R. (under first review), "The implications of housing type for older people's physical activity levels," *Journal of Applied Gerontology* (Impact factor - 1.992).
15. **Pettigrew, S., Worrall, C., Talati, Z.**, Fritschi, L., and Norman, R. (under second review), "Dimensions of attitudes to autonomous vehicles," *Urban, Planning and Transport Research*.
16. **Rai, R., Jongenelis, M.**, Jackson, B., Newton, R., and **Pettigrew, S.** (under first review), "Factors influencing physical activity participation among older people with low activity levels," *Ageing and Society* (Impact factor - 1.62).
17. **Rai, R., Jongenelis, M.**, Newton, R., Jackson, B., and **Pettigrew, S.** (under first review), "Retirement and physical activity: The opportunity of a lifetime or the beginning of the end?," *Journal of Aging and Physical Activity* (Impact factor - 1.966).
18. **Talati, Z.**, Egnell, M., Hercberg, S., Julia, C., and **Pettigrew, S.** (under first review), "Food choice under five front-of-package label conditions: An experimental study across 12 countries," *American Journal of Public Health* (Impact factor - 4.38).
19. **Talati, Z., Grapes, C.**, Davey, E., Shilton, T., and **Pettigrew, S.** (under first review), "Evaluation of a large-scale healthy workplace initiative across multiple worksites," *Health Promotion International* (Impact factor - 1.866).
20. **Talati, Z., Grapes, C.**, Davey, E., Shilton, T., **Pettigrew, S.** (under first review), "Predictors of uptake of general and tailored services to improve employee health and wellbeing," *Health Promotion Journal of Australia* (Impact factor - 1.097).

Appendix 4: Reports

1. **Dana, L.M., Sapountsis, N., and Pettigrew, S.** (2018), "Shape of Australia 2018 Survey Final Report." Report prepared for Cancer Council Victoria and Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), November.
2. **Jongenelis, M. and Pettigrew, S.** (2018), "Evaluation of the 2017/18 Wes Bonny (The sun is a killer. Defend yourself.) Campaign." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), April.
3. **Jongenelis, M. and Pettigrew, S.** (2018), "LiveLighter Ad Test Report - Top Line Results: Effectiveness of Five Advertising Executions Promoting Physical Activity." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), December.
4. **Jongenelis, M. and Pettigrew, S.** (2018), "LiveLighter Ad Test Report: Effectiveness of Five Advertising Executions Promoting Physical Activity." Reported prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), December.
5. **Jongenelis, M. and Pettigrew, S.** (2018), "Make Smoking History Ad-testing of Various Executions of the Extended 'From Every Quitter' Campaign: Final Report." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), July.
6. **Jongenelis, M. and Pettigrew, S.** (2018), "Make Smoking History Ad-testing of Various Executions of the Extended 'From Every Quitter' Campaign: Top-line Results." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), July.
7. **Jongenelis, M. and Pettigrew, S.** (2018), "Make Smoking History Wave 45 Report." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), January.
8. **Jongenelis, M. and Pettigrew, S.** (2018), "Make Smoking History Wave 46 Report." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), July.
9. **Jongenelis, M. and Pettigrew, S.** (2018), "Make Smoking History Wave 47 Report." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), September.
10. **Jongenelis, M. and Pettigrew, S.** (2018), "Make Smoking History Wave 48 Report." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), December.
11. Julia, C., Hercberg, S., Egnell, M., **Pettigrew, S.,** and **Talati, Z.** (2018), "Front-of-Pack International Comparative Experimental study: Preliminary Results." Report prepared for the European Union Commission, Paris 13 University, Nutritional Epidemiology Research Team (EREN), and Curtin University, School of Psychology.
12. **Myers, G. and Pettigrew, S.** (2018), "Healthy Food and Drink Policy Canteen Menu Audit 2017 Results." Report prepared for the WA School Canteen Association by the WA Cancer Prevention Research Unit (WACPRU), March.
13. **Parnell, A. and Pettigrew, S.** (2018), "CSO Staff Results: Make Smoking History Community Service Organisation Project." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), June.

14. **Parnell, A.** and **Pettigrew, S.** (2018), "Organisational Survey Results: Make Smoking History Community Service Organisation Project." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), June.
15. **Parnell, A.** and **Pettigrew, S.** (2018), "The Beacon Staff Survey Results: Make Smoking History Community Service Organisation Project." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), July.
16. **Parnell, A., Rai, R., Jongenelis, M.,** and **Pettigrew, S.** (2018), "SunSmart Ad Test Results Report: Keeping Score, UV Camera, and UV Vultures." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), October.
17. **Pettigrew, S.** (2018), "Findings from Formative Focus Group Research with Medical Practitioners." Report prepared for Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), January.
18. **Pettigrew, S.** (2018), "WASCA Evaluation Plan and Survey Instrument Review." Report prepared for the WA School Canteen Association by the WA Cancer Prevention Research Unit (WACPRU), October.
19. **Sapountsis, N., Dana, L.M.,** and **Pettigrew, S.** (2018), "Shape of Australia 2018 Survey Interim Report: Results Tables." Report prepared for Cancer Council Victoria and Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), September.
20. **Talati, Z., Pettigrew, S.,** and **O'Connell, H.** (2018), "Healthier Workplace WA Evaluation Report 2017-18." Report prepared for Cancer Council WA by the WA Cancer Prevention Unit (WACPRU), October.
21. **WACPRU** (2018), "WA Cancer Prevention Research Unit 2017 Annual Report." Report prepared for Curtin University and Cancer Council WA by the WA Cancer Prevention Research Unit (WACPRU), February.

Appendix 5: Presentations

1. **Brennan, E., Dunstone, K., Durkin, S., Pettigrew, S.,** Hoek, J., Slater, M., and **Wakefield, M.** (2018), "Population prevalence of drinkers' beliefs about long-term harms associated with alcohol," *Public Health Prevention Conference*, Sydney, Australia, 2-4 May.
2. **Dixon, H., Scully, M.,** Niederdeppe, J., **Pettigrew, S.,** Kelly, B., Chapman, K., and **Wakefield, M.** (2018), "Can counter-advertising inoculate spectators against influence by unhealthy food sponsorship of sport?," *Joint Scientific Meeting of The Australian and New Zealand Obesity Society and the Breakthrough Discoveries in Metabolism, Diabetes and Obesity*, Melbourne, Australia, 16-18 October.
3. **Dixon, H., Scully, M., Wakefield, M.,** Kelly, B., **Pettigrew, S.,** Niederdeppe, J., and Chapman, K. (2018), "Harnessing elite sport sponsorship to promote healthy eating by young adults," *Public Health Prevention Conference*, Sydney, Australia, 2-4 May.
4. Edmunds, M., Stoneham, M., **Parnell, A.,** and Pierce, H. (2018), "Just what do kids see while they are waiting for the bus?," *Public Health Prevention Conference*, Sydney, Australia, 2-4 May.
5. **Jongenelis, M.,** Jackson, B., Newton, R., and **Pettigrew, S.** (2018), "Vulnerability to physical inactivity in Australian older adults," *7th International Society for Physical Activity and Health Congress*, London, United Kingdom, 15-17 October.
6. **Jongenelis, M., Pratt, I.S., Slevin, T.,** and **Pettigrew, S.** (2018), "Effectiveness of warning labels at increasing awareness of alcohol-related cancer risk among heavy drinkers," *World Cancer Congress*, Kuala Lumpur, Malaysia, 1-4 October.
7. **Jongenelis, M., Strickland, M., Minto, C., Slevin T.,** and **Pettigrew, S.** (2018), "New approaches to skin cancer prevention: Can encouraging skin checking increase engagement in sun protection behaviours?" *World Cancer Congress*, Kuala Lumpur, Malaysia, 1-4 October.
8. **Kennington, K., Rai, R., Pettigrew, S.,** and **Jongenelis, M.** (2018), "Using real-world comparisons of teenagers' versus adult responses to adult-targeted anti-smoking campaigns," *Australian Public Health Conference*, Cairns, Australia, 26-28 September.
9. Miller, C., Dono, J., Ettridge, K., **Wakefield, M., Pettigrew, S.,** Coveney, J., Wittert, G., **Durkin, S.,** Roder, D., and Martin, J. (2018), "Receptiveness to sugary drink policy interventions in an Australian national survey," *Public Health Prevention Conference*, Sydney, Australia, 2-4 May.
10. Miller, C., Dono, J., Ettridge, K., **Wakefield, M., Pettigrew, S.,** Coveney, J., Wittert, G., **Durkin, S.,** Roder, D., and Martin, J. (2018), "The attitudes, beliefs and behaviours associated with sugary drink consumption in Australia," *Public Health Prevention Conference*, Sydney, Australia, 2-4 May.
11. Miller, C., **Wakefield, M.,** Dono, J., Ettridge, K., Coveney, J., **Pettigrew, S., Durkin, S.,** Wittert, G., Martin, J., and Roder, D. (2018), "It would definitely make you think twice, even after you've finished the drink, it's in your car, like the empty bottle, you'd look at it": Young adults' reactions to warning labels on the bottles of sugary drinks," *Joint Scientific Meeting of The Australian and New Zealand Obesity Society and the Breakthrough Discoveries in Metabolism, Diabetes and Obesity*, Melbourne, Australia, 16-18 October.
12. **Pettigrew, S.** (2018), "Annual awards event presentation," Cancer Council of WA, Perth, Australia, 11 April. Invited presentation.
13. **Pettigrew, S.** (2018), "Current evidence on the effects of alcohol advertising on children and young people," Foundation for Alcohol Research and Education (FARE), Canberra, Australia, 21 June. Invited presentation.

14. **Pettigrew, S.** (2018), "Do you already own the last car you'll ever buy?", *TEDxPerth*, Perth, Australia, 3 November. Invited presentation.
15. **Pettigrew, S.** (2018), "Getting around: Transport issues and solutions for the seniors of tomorrow," *Leading Innovation through Diversity Forum: Bridging Research, Policy and Practice for Age Friendly Care*, UWA, Perth, Australia, 29 June. Invited presentation.
16. **Pettigrew, S.** (2018), "Preventing alcohol-related injuries and harm among young people," Injury Matters seminar, Perth, Australia, 28 November. Invited presentation.
17. **Pettigrew, S.** (2018), "Teens, diet, and physical activity: Knowledge, attitudes, and perceived trade-offs," *Joint Scientific Meeting of The Australian and New Zealand Obesity Society and the Breakthrough Discoveries in Metabolism, Diabetes and Obesity*, Melbourne, Australia, 16-18 October.
18. **Pettigrew, S., Cronin, S.,** and Norman, R. (2018), "The Implications of AVs for an Ageing Population," *International Driverless Vehicle Summit*, Adelaide, Australia, 31 October - 1 November. Invited presentation.
19. **Pettigrew, S., Dana, L.M., Talati, Z., Worrall, C.,** Norman, R., and Fritschi, L. (2018), "Does greater familiarity with autonomous vehicles increase adoption intentions?," *28th Australian Road Research Board International Conference*, Brisbane, Australia, 30 April-4 May.
20. **Pettigrew, S.,** Davey, E., Shilton, T., Quinn, N., **Martin, C., Ledger, M.,** and Brown, E. (2018), "Healthier Workplace WA – learnings from a comprehensive state-wide workplace health promotion program," *Australian Public Health Conference*, Cairns, Australia, 26-28 September.
21. **Pettigrew, S., Dekker, M.R., Jongenelis, M., Wakefield, M.,** Kypri, K., and Hasking, P. (2018), "Can you count? Communicating about alcohol harm minimisation," *Australian Public Health Conference*, Cairns, Australia, 26-28 September.
22. **Pettigrew, S., Jongenelis, M., Pratt, I.S., Wright, S.,** and **Myers, G.** (2018), "Normalising vegetable consumption in schools," *Public Health Prevention Conference*, Sydney, Australia, 2-4 May.
23. **Pettigrew, S., Talati, Z.,** Norman, R., and Fritschi, L. (2018), "Community fears about autonomous vehicles," *28th Australian Road Research Board International Conference*, Brisbane, Australia, 30 April-4 May.
24. **Pettigrew, S., Worrall, C., Biagioni, N., Talati, Z.,** and **Jongenelis, M.** (2018), "Intervention implications of older adults' nutrition decision making," *Public Health Prevention Conference*, Sydney, Australia, 2-4 May.
25. **Talati, Z., Pettigrew, S.,** Norman, R., Kelly, B., **Dixon, H.,** Neal, B., and Miller, C. (2018), "Can front-of-pack nutrition labels overcome any biasing effects of nutrient and health claims?" *Joint Scientific Meeting of The Australian and New Zealand Obesity Society and the Breakthrough Discoveries in Metabolism, Diabetes and Obesity*, Melbourne, Australia, 16-18 October.

Appendix 6: Submissions

1. **Jongenelis, M.** and **Pettigrew, S.** (2018), "The WA Cancer Prevention Research Unit's submission to the Australian Department of Health's consultation to inform the development of the National Tobacco Strategy." WACPRU, Curtin University, August.
2. **Pettigrew, S.** (2018), "The WA Cancer Prevention Research Unit's submission to the Australian Department of Health's consultation on labelling of sugars on packaged foods and drinks." WACPRU, Curtin University, September.
3. **Pettigrew, S.** (2018), "The WA Cancer Prevention Research Unit's submission to the Australian Senate's Select Committee into the obesity epidemic in Australia consultation." WACPRU, Curtin University, June.
4. **Pettigrew, S.** and **Jongenelis, M.** (2018), "The WA Cancer Prevention Research Unit's submission to the Australian Department of Health's consultation on pregnancy warning labels on packaged alcoholic beverages." WACPRU, Curtin University, June.

Appendix 7: Media Coverage

Media type	Number of media articles	Audience reach	\$ value
Radio	53	1,781,000	91,353
Newspaper	9	881,516	88,584
TV	2	384,000	17,463
Magazine	1	660,000	11,552
Online News	64	218,326	1,236,048
Social Network	1	n/a	224,955
Total	130	3,924,842	1,669,955

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