



**“IMPLEMENTING AND SUSTAINING  
ALCOHOL MANAGEMENT PRACTICES IN THE SPORTS  
SETTING”**

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A thesis submitted in fulfilment of the requirements for the  
degree of Doctor of Philosophy in Behavioural Science

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## STATEMENT OF ORIGINALITY

I hereby certify that the work embodied in the thesis is my own work, conducted under normal supervision. The thesis contains no material which has been accepted, or is being examined, for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made. I give consent to the final version of my thesis being made available worldwide when deposited in the University's Digital Repository, subject to the provisions of the Copyright Act 1968 and any approved embargo.

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## THESIS BY PUBLICATION

I hereby certify that this thesis is in the form of a series of papers. I have included as part of the thesis a written declaration from each co-author, endorsed in writing by the Faculty Assistant Dean (Research Training), attesting to my contribution to any jointly authored papers. The University of Newcastle Thesis by Publication Guidelines are included in Appendix 1

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## LIST OF PUBLICATIONS INCLUDED AS PART OF THE THESIS

This thesis consists of seven Chapters, five of which are published papers, with summary details listed below. There is some overlap in content between the papers, particularly in the introduction/background and methods sections, as these papers have been written as stand-alone publications. The papers included in the body of the thesis make reference to appendices, which were not included in the published versions.

**Table i** Outline of Thesis Chapters and associated publications.

Chapter	Chapter title	Research papers
Two	Effectiveness of strategies in sustaining the implementation of public health programs	Wolfenden L, Chai LK, Jones J, <b>McFadyen T</b> , Hodder R, Kingsland M, Milat AJ, Nathan N, Wiggers J, Yoong SL. What happens once a program has been implemented? A call for research investigating strategies to enhance public health program sustainability. Aust NZJ Public Health. 2019 Feb 1;43(3).
Three	The Feasibility and Acceptability of a Web-Based Alcohol Management Intervention in Community Sports Clubs: A Cross-Sectional Study	<b>McFadyen T</b> , Wolfenden L, Wiggers J, Tindall J, Yoong SL, Lecathelinais C, Gillham K, Sherker S, Rowland B, McLaren N, Kingsland M. The feasibility and acceptability of a web-based alcohol management intervention in community sports clubs: a cross-sectional study. JMIR research protocols. 2017;6(6):e123.
Four	Alcohol management practices in community sporting clubs: validation of on-line self-reporting	<b>McFadyen T</b> , Tindall J, Wiggers J, Kingsland M, Sherker S, Gillham K, Rowland B, Heaton R, Lecathelinais C, Wolfenden L. Alcohol management practices in community sporting clubs: Validation of an online self-report tool. Drug and alcohol review. 2018 Jul;37(5):580-7.

Chapter	Chapter title	Research papers
Five	A randomised controlled trial of a web-based program to sustain best-practice alcohol management practices by community sports clubs – Study protocol	<b>McFadyen T</b> , Wolfenden L, Kingsland M, Tindall J, Rowland B, Sherker S, Gillham K, Heaton R, Clinton-McHarg T, Lecathelinais C, Brooke D. Randomised controlled trial of a web-based programme in sustaining best practice alcohol management practices at community sports clubs: a study protocol. <i>BMJ open</i> . 2018 Jan 1;8(1):e017796.
Six	Sustaining the implementation of alcohol management practices by community sports clubs: A randomised controlled trial	<b>McFadyen T</b> , Wolfenden L, Kingsland M, Tindall J, Sherker S, Heaton R, Gillham K, Clinton-McHarg T, Lecathelinais C, Rowland B, Wiggers J. Sustaining the implementation of alcohol management practices by community sports clubs: a randomised control trial. <i>BMC Public Health</i> . 2019 Dec 1;19(1):1660.

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I once read an interesting analogy of the PhD process which has stuck with me over the years. The author likened undertaking a PhD to guiding a newborn through infancy. You have no idea what you are in for, until you are in the thick of it. A lot of joy and heartache comes with the process and once it is done there is a small part of you that will long for the feeling you had at the start of the journey and to do it all over again. My experience was more joy then heartache thanks to the people listed below. I do not, however, have the longing to do it all again, I am looking forward to what the next stage of my career entails.

I would like to start by thanking the gold standard supervisory team I was lucky enough to have guide me through this process – John Wiggers, Melanie Kingsland and Luke Wolfenden. Their ongoing support and encouragement were the foundations for creating an enjoyable PhD experience. John, with his never-ending enthusiasm for exploring new ideas, always taking the time to listen and encouraging me to see the bigger picture. As well as the generous mentorship along the way. Mel with her ability to make a seemly complicated issue simple and manageable, allowing me to come to her with many questions and being a continually positive light in even the hardest moments. Luke with his sound advice, ability to listen to my long and knotted questions, and always encouraging future growth. Without the support of these three people I believe my PhD experience would be vastly different. So, thank you John, Mel and Luke. It has been a wonderful journey.

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## **CONFLICT OF INTEREST STATEMENT**

Tameka-rae McFadyen reports no conflict of interest.

## OTHER PAPERS PUBLISHED DURING CANDIDATURE

### PAPERS RELATED TO SPORTS CLUBS

- 1 **McFadyen T**, Chai LK, Wyse R, Kingsland M, Yoong SL, Clinton-McHarg T, Bauman A, Wiggers J, Rissel C, Williams CM, Wolfenden L. Strategies to improve the implementation of policies, practices or programmes in sporting organisations targeting poor diet, physical inactivity, obesity, risky alcohol use or tobacco use: a systematic review. *BMJ open*. 2018 Sep 1;8(9):e019151.
- 2 Ooi JY, Wiggers JH, Kingsland M, Lecathelinais C, Tindall J, **McFadyen T**, Rowland BC, Sherker S, Murphy A, Heaton R, Wolfenden L. Exposure to fast-food and sweetened-drink marketing at community sports clubs in Australia. *marketing*. 2019 Dec;1(5.6):5-6.

### PAPERS RELATED TO IMPLEMENTATION

- 1 Wolfenden L, Reilly K, Kingsland M, Grady A, Williams CM, Nathan N, Sutherland R, Wiggers J, Jones J, Hodder R, Finch M, **McFadyen T**. Identifying opportunities to develop the science of implementation for community-based non-communicable disease prevention: A review of implementation trials. *Preventive medicine*. 2018 Nov 20.
- 2 Wolfenden L, Jones J, Finch M, Wyse RJ, Yoong SL, Steele EJ, Williams AJ, Wiggers J, **Small T**, Seward K, Williams CM. "Strategies to improve the implementation of healthy eating, physical activity and obesity prevention policies, practices or programmes within childcare services – Protocol" *The Cochrane Library* (2015) Issue 7.
- 3 Wolfenden L, Jones J, Finch M, Wyse RJ, Yoong SL, Steele EJ, Williams AJ, Wiggers J, **Small T**, Seward K, Williams CM. "Strategies to improve the implementation of healthy eating, physical activity and obesity prevention policies, practices or programmes within childcare services" *Cochrane Database of Systematic Reviews* (2016), Issue 10. Art. No.: CD011779.

- 4 Dray J, Bowman J, Campbell E, Freund M, Wolfenden L, Hodder R, McElwaine K, Tremain D, **Small T**, Bartlem K, Bailey J, Wiggers J. Systematic review of the effect of school-based, resilience-focussed interventions on child and adolescent mental health. *Journal of the Canadian Academy of Child and Adolescent Psychiatry* (2016).
- 5 Williams, C. M., Nathan, N., Delaney, T., Yoong, S. L., Wiggers, J., Preece, S., Lubans, N., Sutherland, R., Pinfold, J., Smith, K., **Small, T.**, Reilly, K. L., Butler, B., Wyse, R. J., Wolfenden, L. CAFÉ: a multicomponent audit and feedback intervention to improve implementation of healthy food policy in primary school canteens: protocol of a randomised controlled trial. *BMJ open* (2015), 5(6), e006969.

## PAPERS RELATED TO ALCOHOL

- 1 Gilligan C, Wolfenden L, Foxcroft DR, Kingsland M, Williams AJ, Hodder RK, **Small T**, Sherker S, Rae J, Tindall J, Stockings E, Wiggers J. Family-based prevention programs for alcohol use in young people. – Protocol Cochrane Database of Systematic Reviews (2016), Issue 7. Art. No.: CD012287.
- 2 Gilligan C, Wolfenden L, Foxcroft DR, Williams AJ, Kingsland M, Hodder RK, Stockings E, **McFadyen T**, Tindall J, Sherker S, Rae J. Family-based prevention programmes for alcohol use in young people. *Cochrane database of systematic reviews*. 2019(3).

## **CONFERENCE PRESENTATIONS GIVEN DURING CANDIDATURE AND RELEVANT TO THIS THESIS**

During the candidature, the candidate presented the contents of this thesis at eight conferences, six of which were international conferences. The details of these presentations are provided below.

2017 – ASBHM/APS Conference. “Can sports clubs sustain the implementation of responsible alcohol management practices?” (oral) and “The feasibility and acceptability of a web-based program to support the implementation of alcohol management practices in community sports clubs.” (oral)

2017 - World Congress on Public Health. “Can sports clubs sustain the implementation of responsible alcohol management practices?” (oral) and “The feasibility and acceptability of a web-based program to support the implementation of alcohol management practices in community sports clubs.” (oral)

2017 - Global Implementation Conference. “The feasibility and acceptability of a web-based program to support the implementation of alcohol management practices in community sports clubs.” (poster)

2016 - International Congress of Behavioural Medicine. “Can sports clubs sustain the implementation of responsible alcohol management practices?” (oral) and “The feasibility and acceptability of a web-based program to support the implementation of alcohol management practices in community sports clubs.” (poster)

2016 - European Public Health Conference. “Can sports clubs sustain the implementation of responsible alcohol management practices.” (oral) and “The feasibility and acceptability of a web-based program to support the implementation of alcohol management practices in community sports clubs.” (poster)



2016 - Australasian Implementation Conference. "The feasibility and acceptability of a web-based program to support the implementation of alcohol management practices in community sports clubs." (oral)

2015 - Population Health Congress. "Population health improvement through sports clubs: issues, opportunities and effective interventions." (oral) and "Alcohol consumption and sport: a cross-sectional study of alcohol management practices associated with at-risk alcohol consumption at community football clubs." (poster)

2014 - Global eHealth Research and Innovation Cluster Showcase. "A randomised controlled trial of a web-based intervention in sustaining best practice alcohol management practices at community sports clubs." (poster)

## **THESIS ABSTRACT**

### **BACKGROUND**

People involved with organised sport have been found to consume alcohol at greater levels compared to the general population. Previous studies have found sports clubs to be a promising setting for the implementation of interventions to reduce such excessive consumption. Unfortunately, existing implementation and sustainability research suggests that once primary intervention support is withdrawn, implementation of such interventions attenuates, resulting in a loss of the intended benefit of such interventions.

### **AIMS**

This thesis aimed:

- 1 To review the effectiveness of implementation strategies in sustaining improvements in public health program sustainability (Chapter 2).
- 2 To assess community sports clubs' perceptions regarding the usefulness, ease of use and intentions to use a web-based program to support the sustainability of club implementation of alcohol management policies (Chapter 3).
- 3 To assess the validity of web-based self-report of alcohol-management practices in community football clubs (Chapter 4).
- 4 To assess the effectiveness of a web-based program in supporting community sports clubs to sustain the implementation of alcohol management practices (Chapter 5, 6).

### **METHODS**

Aim 1 was addressed through a review of published and grey literature. Aims 2 and 3 were addressed through a series of studies undertaken with community football clubs in urban and regional areas of New South Wales, Australia. These studies involved: a cross-sectional survey of 73 community football club administrators (Aim 3); a cross-sectional survey and an observation audit of 78 community football clubs (Aim 4). Aim 4 was addressed through a randomised

control trial undertaken with 188 community football clubs in Australia, in regional areas of the state of New South Wales (NSW) and throughout metropolitan and regional areas of the state of Victoria.

## **KEY FINDINGS**

- There was no evidence of effective strategies to support the sustainable implementation of interventions targeting health risk behaviours in community settings.
- The use of the web to support sports clubs in implementing alcohol harm reduction policies and practices was found to be both feasible and acceptable.
- Sports clubs would use a web-based program to support the implementation alcohol harm reduction policies and practices if one was provided.
- The web was found to be a valid method of measuring self-reported implementation of some but not all alcohol management practices in community sporting clubs.
- A web-based program was able to support community sports clubs to sustain their implementation of alcohol management practices, and at an equivalent level as face-to-face support.

## **CONCLUSION**

This thesis provides the first evidence of the effectiveness of strategies to support the sustained implementation of evidence-based alcohol harm reduction practices by community sports clubs. It further provides robust evidence of the ability of web-based strategies to support community sports clubs to sustain their implementation of such practices. In doing so, the thesis demonstrates a potential method for ensuring that the intended benefits of public health interventions more generally can be sustained over time. Further research is required to confirm and to test the generalisability of these findings, to determine the cost effectiveness of web-based sustainability support strategies, and to identify opportunities for further enhancing the sustainability of public health program implementation.

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## LIST OF ABBREVIATIONS AND GLOSSARY

<b>AFL</b>	Australian Football League
<b>ARIA</b>	Accessibility/Remoteness Index of Australia score
<b>ASGC</b>	Australian Standard Geographical Classification
<b>AUDIT</b>	Alcohol Use Disorders Identification Test
<b>BIA</b>	Budget Impact Analysis
<b>CATI</b>	Computer Assisted Telephone Interview
<b>CBA</b>	Cost Benefit Analysis
<b>CCA</b>	Cost Consequence Analysis
<b>CEA</b>	Cost Effectiveness Analysis
<b>DALY</b>	Disability-Adjusted Life Year
<b>HREC</b>	Human Research Ethics Committee
<b>ICER</b>	Incremental Cost-Effectiveness Ratio
<b>NSW</b>	New South Wales
<b>MI</b>	Multiple Imputation
<b>OR</b>	Odds ratio
<b>PRISMA</b>	Preferred Reporting Items for Systematic Reviews and Meta-analyses
<b>RCT</b>	Randomised controlled trial
<b>RSA</b>	Responsible service of alcohol
<b>SES</b>	Socio-economic status

### **Club Member**

A person affiliated with a sports club either as a paid financial member (player or non-player) or as a known supporter/fan of the club.

### **Football Sports Codes**

Including Association football (Soccer), Rugby League, Rugby Union, Australian Rules football and Gaelic Football.

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