



Melbourne School  
of Psychological  
Sciences



# MELBOURNE CENTRE FOR BEHAVIOUR CHANGE

Extending and applying behaviour change science

rewards  
tools  
review  
achieve  
self-monitor  
resisting  
pay attention  
intention  
if-then plans  
goals imagine success  
self-efficacy  
overcome challenges  
behaviour change  
self-control  
co-design  
choice architectures  
develop habits  
feedback  
prioritise  
persistence  
set SMART goals  
make commitments  
nudge  
identify triggers  
graded steps  
timing  
practice development  
seek social support  
gather evidence  
self-management  
be informed  
break habits  
stories of change  
intervention  
affect regulation  
notice cues  
evaluate  
maintain improvements  
values

# ABOUT US

The Melbourne Centre for Behaviour Change (MCBC) is a major initiative led by researchers and clinicians who are recognised internationally for their contributions to understanding the individual, social, organisational, and environmental factors that affect behavioural patterns. Supported by the Melbourne School of Psychological Sciences and the Faculty of Medicine, Dentistry and Health Sciences, our mission is to generate research outcomes that contribute to population-level improvements in health and wellbeing and promote socially responsible behaviours.

MCBC is one of the few Centres in the world with the capacity to provide an integrated approach to all aspects of behaviour change. We adopt a person-centred approach to assist individuals in self-managing their health, and work with professionals and organisations to co-design health-enhancing policies and practices. We are specialists in the development, implementation, and evaluation of cutting-edge, evidence-based interventions, including those delivered via digital means or groups.

Our team studies a wide range of behaviours including physical activity, nutrition, smoking, vaping, alcohol consumption, sun protection, sleep, sexual activity, and health screening. We also have an interest in altruistic behaviours, especially those that contribute to protecting the health of our planet. Our research addresses many significant issues including:

- How can we deliver information in a way that promotes positive behaviour change?
- How can we motivate people to change their behaviour?
- How can we help people break and establish habits?
- How can we assist individuals in successfully managing long-term illnesses and disabilities?
- How can we deliver high-value interventions that are efficient and widely acceptable?
- How can we adapt interventions to meet the needs of vulnerable populations?
- What are the relative strengths and limitations of new technologies that aim to facilitate behaviour change?
- How can we change organisations and environments to support behaviour change?

# ENGAGE WITH US

MCBC is a highly active, collaborative, and internationally networked group of researchers and clinicians who foster and lead rewarding partnerships world-wide.

We welcome community and industry participation and seek to enable our partners to leverage our expertise in behaviour change. Whether you are interested in sponsoring a research project or forging a long-term strategic alliance, we will help you launch a successful and rewarding collaboration with researchers who are leaders in their fields. For example, we:

- Work with other behaviour change researchers to solve a diverse range of behaviour change problems and advance the field;
- Can assist practitioners and associated health professionals in their efforts to help their clients with behaviour change problems;
- Can assist organisations with an interest in improving professional behaviour on ways to optimise professional practice; and
- Can advise organisations, including governments, on environmental changes (i.e., “nudges”) that can lead to more adaptive behaviour.

# CONSULT WITH US

We offer consultancy services to organisations in both the profit and not-for-profit sectors, including Government. Our consultancy model is designed to build partnerships and capacity. Our services include (but are not limited to):

- Designing projects or programs focusing on behaviour change;
- Developing, refining, implementing, and evaluating behaviour change interventions;
- Translating available evidence into service improvement;
- Training staff to deliver interventions; and
- Developing implications for policy and practice.

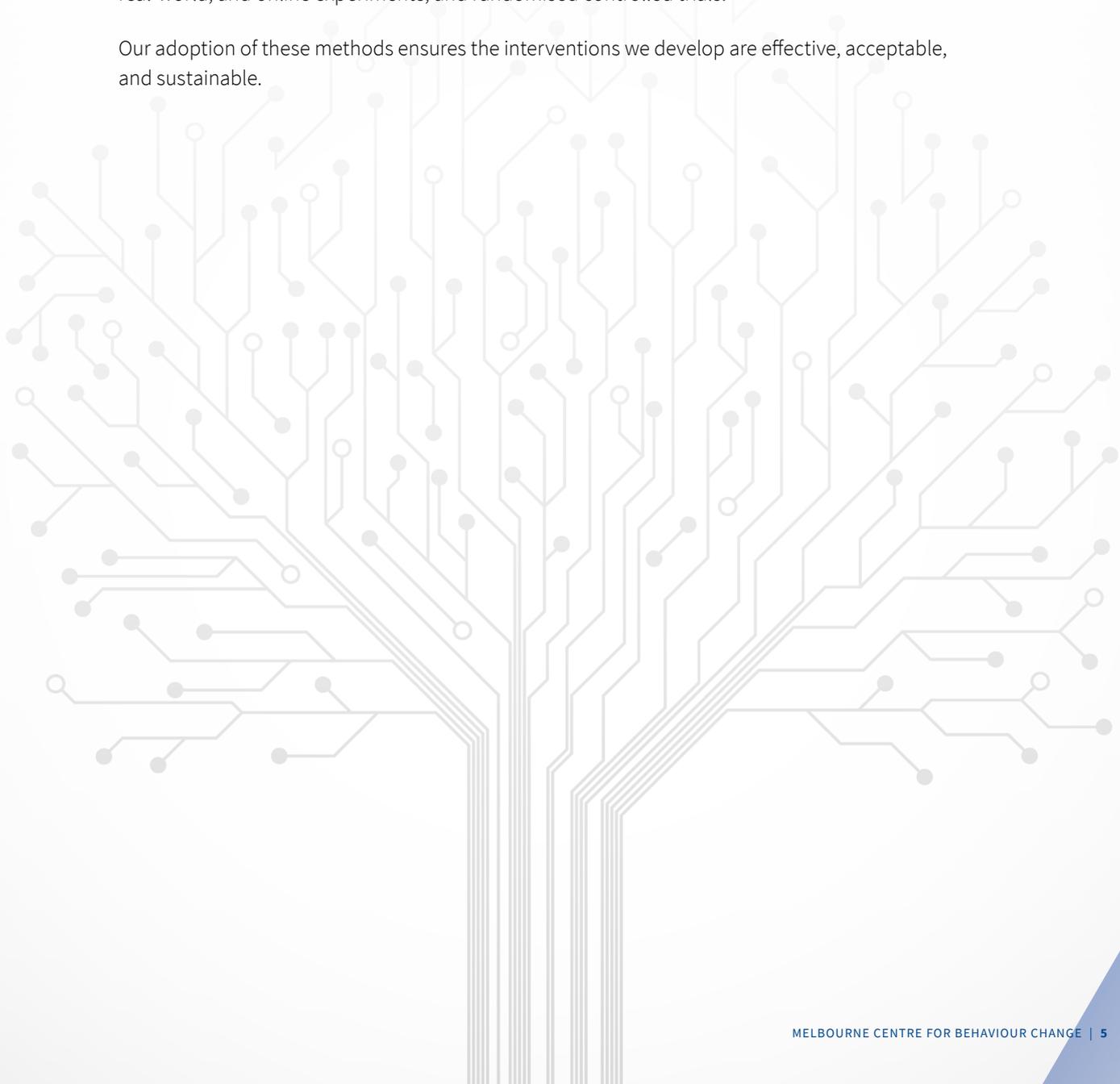
# OUR METHODS

Co-creation of interventions is critical to engagement in and maintenance of behaviour change. Interventions that fail to address the needs, priorities, and skills of citizens, patients, practitioners, managers, or policy makers are unlikely to be adopted, used for long, or show real-world impact. At MCBC, we adopt a collaborative, co-creation approach to our research and product development, and use integrated frameworks and theories that synthesise current evidence and our own experience in the field.

We use research to develop comprehensive theories, tools, and interventions that give individuals greater control and equip them with strategies to self-monitor, self-regulate, and self-manage their behaviour. We evaluate these theories, tools, and interventions at individual, group, organisational, and community levels, employing both outcome and process evaluations.

We employ a wide range of research methodologies including surveys and quantitative analyses; interviews, focus groups, and qualitative analyses; reviews and meta-analyses; laboratory, real-world, and online experiments; and randomised controlled trials.

Our adoption of these methods ensures the interventions we develop are effective, acceptable, and sustainable.



# EXAMPLE APPROACHES

## CONFLICTING MOTIVATIONS:

### UNDERSTANDING WHY SOME BEHAVIOURS ARE HARD TO CHANGE

One of the key considerations in behaviour change is whether change involves adopting a new, adaptive behaviour or reducing or eliminating a maladaptive one. This can be conceptualised as an interplay between our brain's executive and operational processes, which in lay terms is the difference between what we want to do (Operational) and what we think we should do (Executive). This conceptualisation is illustrated in the figure below.

We have problems when the two systems are in conflict: Those behaviours we want to do but know we should not, such as smoking or drinking, and those that we do not want to do (at the time) but know we should, such as eating more fruit and vegetables or exercising regularly. These are depicted in the red boxes of the figure. The challenges that arise when attempting to support sustained behaviour change are very different for these two types of behaviours. At MCBC, we adapt our interventions according to these challenges, thus improving the effectiveness of these interventions.

### UNDERSTANDING WHY SOME BEHAVIOURS ARE HARD TO CHANGE: AN INTERPLAY BETWEEN OUR OPERATIONAL AND EXECUTIVE SYSTEMS

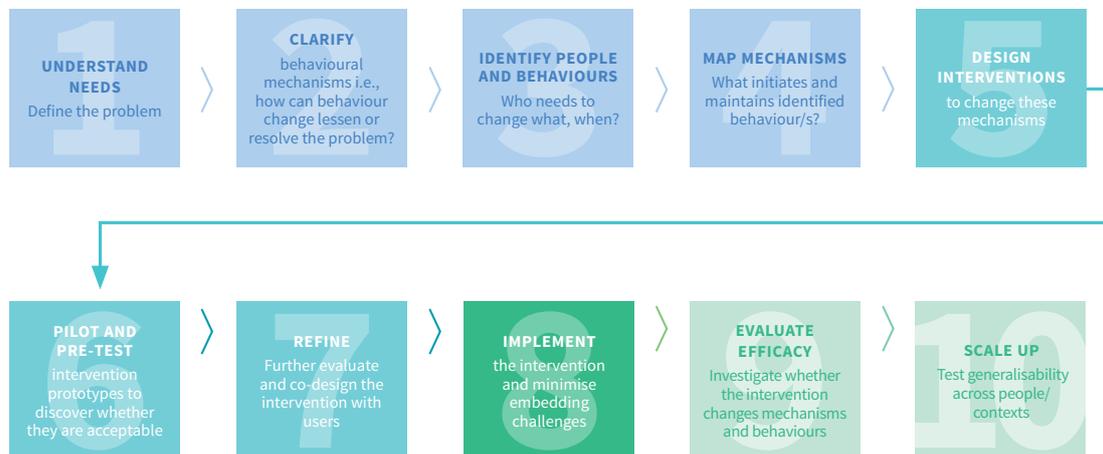


# EXAMPLE APPROACHES

## THE TEN TASK GUIDE TO INTERVENTION DEVELOPMENT

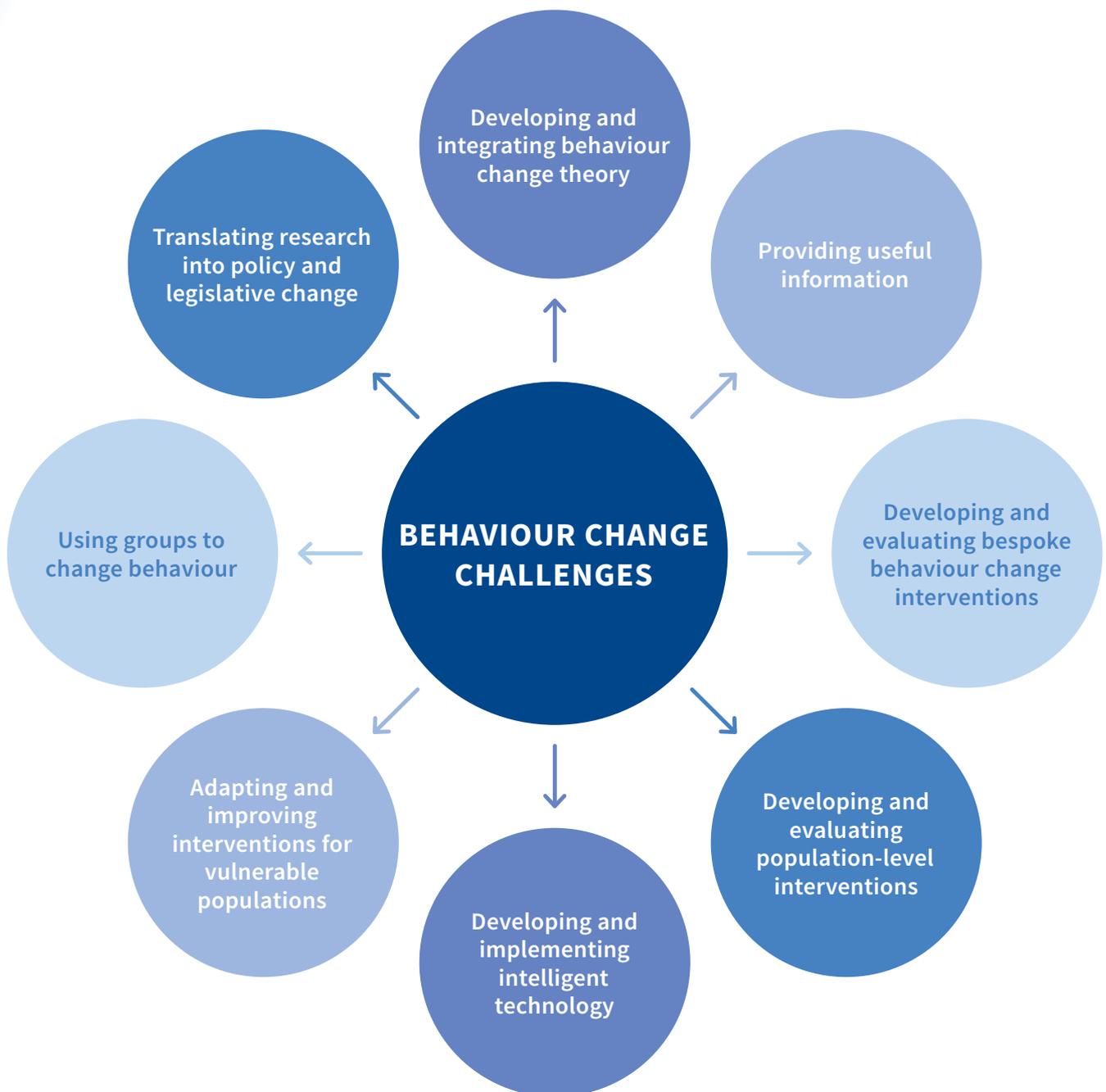
The development of effective behaviour change interventions requires careful planning and knowledge of the relevant theories that describe the mechanisms underpinning motivation, affect, and behaviour. MCBC uses the Ten Task Guide (illustrated in the figure below) to design, develop, implement, and evaluate behaviour change interventions. By adopting such an approach, we increase the scientific rigour of our work, ensuring the best possible outcomes.

## DESIGN, IMPLEMENTATION AND EVALUATION OF BEHAVIOUR CHANGE INTERVENTIONS: A TEN-TASK GUIDE



# OUR RESEARCH

Our research themes are organised around eight challenges. In dealing with any specific behaviour change problem, we draw on insights from these research themes as appropriate.



## **DEVELOPING AND INTEGRATING BEHAVIOUR CHANGE THEORY**

Understanding the complex processes that underpin human behaviour is prerequisite to the implementation of techniques that are capable of generating long term behaviour change. MCBC researchers have been at the forefront of developing integrated behaviour change theories and operationalising the active ingredients needed to develop effective tools and interventions that can generate real behaviour change over the long term. These integrated theories allow us to work outside generic lists of technique types to develop bespoke, problem-specific, and co-created interventions and evaluations.

## **PROVIDING USEFUL INFORMATION**

Knowledge is prerequisite to belief, motivation, and behaviour change. We are bombarded with information and advice but often it is not the information we need to make good choices and manage self-improving change. At MCBC, we conduct research that helps us understand how we can create and effectively deliver useful information. We incorporate critical knowledge into concrete illustrations and use personal relevance and stories where appropriate to illuminate the practical implications of the information provided.

## **DEVELOPING AND EVALUATING BESPOKE BEHAVIOUR CHANGE INTERVENTIONS**

Developing effective behaviour change interventions requires knowledge of the relevant theoretical frameworks that describe the mechanisms underpinning motivation, affect, and behaviour and applying these, where appropriate, to the behaviour change challenge at hand. At MCBC, we are skilled at using relevant knowledge to develop tailored interventions and adapting these interventions to available, acceptable, and affordable delivery modes. We also have expertise in experimentation to refine and improve complex behavioural interventions. Our research methods enable us to identify what intervention components work well, when, and for whom. This, combined with our client-centred approach, enables us to deliver high-value interventions that are efficient, fit for purpose, and widely acceptable.

# OUR RESEARCH

## DEVELOPING AND EVALUATING POPULATION-LEVEL INTERVENTIONS

Our environments prompt, shape, and challenge our actions so that default response patterns become predictable. These “choice architectures” can be used to promote helpful behaviour change but may also present considerable barriers to change. For example, the installation of well-maintained walking and running trails at a local park may promote increased engagement in physical activity among those of all ages. By contrast, vending machines located in highly frequented public buildings may promote excessive consumption of energy-dense but nutrient-poor foods and sugary drinks. At MCBC, we investigate how to change and harness environments to facilitate initiation and maintenance of positive behaviours. This involves working with developers of home, organisational, community, and digital environments to embed evidence-based behaviour-change tools into everyday systems to optimise people’s behaviours.

## DEVELOPING AND IMPLEMENTING INTELLIGENT TECHNOLOGY

Digital systems facilitate efficient intervention delivery and offer unique intervention opportunities. They can provide useful information; facilitate goal setting and goal review; empower people to initiate and sustain self-care actions; help users remember and prioritise plans; allow users to self-monitor feelings and behaviours; and provide users with moment-to-moment feedback. These systems can also identify when people may need professional help and can facilitate communication with relevant health care professionals. Evidence supports the capacity of digital systems to facilitate improved self-management of health-related behaviour and care of long-term illnesses. The team at MCBC is expert in the development of a variety of intelligent, evidence-based systems and devices, such as mobile phone apps and exercise ‘wearables’.

## ADAPTING AND IMPROVING INTERVENTIONS FOR VULNERABLE POPULATIONS

People with existing illness and those with limited capacities or social networks require different kinds of additional help and/or adaptation of interventions to meet their needs. At MCBC, we have considerable experience adapting interventions to meet the needs of vulnerable populations. Our client-centred approach means we reshape interventions or build new ones with the specific needs of the target population front of mind.

## **USING GROUPS TO CHANGE BEHAVIOUR**

Much of our behaviour is regulated within social relationships, obligations, and identities. Understanding how people relate in small groups and designing groups to help people change their behaviour has been shown to be effective. However, not everyone has easy access to groups, especially those who live in remote areas or are socially isolated. This may be resolved by using virtual groups that can provide advice, instruction, prescription, and the opportunity to share problems and successes with others facing similar challenges. MCBC is developing new approaches to the management and facilitation of virtual behaviour change groups.

## **TRANSLATING RESEARCH INTO POLICY AND LEGISLATIVE CHANGE**

The power of information, inducements, and environments means that individual behaviour change has limited capacity to generate population-level change. Understanding the needs and challenges of politicians and legislators and helping them plan and instigate well-specified, rewarding actions can generate effective change at this level. At MCBC, we develop interventions that translate policy aspirations into concrete action plans to create new legislative environments.

# OUR PEOPLE

## THE EXECUTIVE

Based within the Melbourne School of Psychological Sciences at the University of Melbourne, MCBC is ideally placed to lead and contribute to state-of-the-art behaviour change research. Members of our executive team are highly active and internationally renowned for their expertise in behaviour change.



### **PROFESSOR CHARLES ABRAHAM**

Director | Founding Member

[charles.abraham@unimelb.edu.au](mailto:charles.abraham@unimelb.edu.au)

Professor Abraham is an applied social and health psychologist specialising in behaviour change and translational health research. He employs a range of quantitative, qualitative, and review methods to research many behaviour-change challenges. His research focuses on the design and evaluation of behaviour change interventions, including those using digital and group-based components. Areas of application include preventive behaviour patterns, health service usage, and management of long-term illnesses. He has held scientific advisor positions with the UK Department of Health, the UK National Institute for Health and Care Excellence (NICE), and the UK House of Lords.



### **PROFESSOR RON BORLAND**

Deputy Director | Founding Member

[rborland@unimelb.edu.au](mailto:rborland@unimelb.edu.au)

Professor Borland is a behavioural scientist who takes a broad systems approach to behaviour and behaviour change, integrating efforts at individual and population levels. He developed CEOS theory: a comprehensive theory of hard to maintain behaviour change. He is a Principal Investigator of the International Tobacco Control Policy Evaluation Project, an international collaboration analysing the impact of policies on smoking that has led to a better understanding of the challenges of supporting smoking cessation and preventing relapse. Professor Borland has also developed mass-disseminable smoking cessation interventions of demonstrated effectiveness. His current interests focus on enhancing engagement with effective interventions, helping people prioritise life changes, and ways of strengthening executive capacities to drive desired behaviours.



**DR CAMILLE SHORT**

Senior Research Fellow | Founding Member

**[camille.short@unimelb.edu.au](mailto:camille.short@unimelb.edu.au)**

Dr Short is a senior behavioural scientist with expertise in digital health and behaviour change for chronic disease management. Her research focuses on the use of technology for improving access to high quality, personalised, and multidisciplinary health services and lifestyle support. She is also interested in how technology can be used to prompt behaviour change and improve mental health among individuals with chronic and complex health conditions. Dr Short has made significant contributions to understanding engagement in digital behaviour change interventions, the role of personalisation in effective behaviour change support, and the development and evaluation of several digital behaviour change interventions for chronic disease control, including cancer.



**DR MICHELLE JONGENELIS**

Director of Centre Operations | Senior Research Fellow | Founding Member

**[michelle.jongenelis@unimelb.edu.au](mailto:michelle.jongenelis@unimelb.edu.au)**

Dr Jongenelis is an accredited clinical psychologist with expertise in health promotion, cancer prevention, intervention development and evaluation, and behavioural psychology. She works across multiple and diverse health-related behaviours including alcohol and tobacco control, nutrition, and physical activity. She also has an interest in body image disturbances and eating disorders. Dr Jongenelis works as a researcher and consultant for a broad range of organisations covering the not-for-profit and government sectors. She sits on the Australian Council of Smoking and Health and is a member of the Alcohol Advertising Review Board.

# OUR PEOPLE

## HONORARY PROFESSORIAL FELLOWS

MCBC works closely with and facilitates collaboration between global leaders in research to create strong multidisciplinary teams capable of delivering health-related research of international importance. Our Honorary Professorial Fellows are internationally-recognised behavioural scientists with exceptional research influence and applied behaviour change skills.



### **PROFESSOR RIK CRUTZEN**

Maastricht University, The Netherlands

Professor Crutzen is a world-leading expert in Intervention Mapping; a systematic way of approaching the development, evaluation, and implementation of behaviour change interventions. His work focuses on how technological innovations can be used to improve both the reach and efficacy of behaviour change interventions. Professor Crutzen received the European Health Psychology Society (EHPS) Early Career Award in recognition of his research excellence and outstanding contributions to the EHPS and professional practice. He serves the academic community by being a member of the Executive Committees of the EHPS and the Health Psychology division of the International Association for Applied Psychology (IAAP).

For more information, visit <http://www.crutzen.net/>



### **PROFESSOR RALPH MADDISON**

Deakin University, Australia

Professor Maddison is a behavioural scientist specialising in the modification of lifestyle risk-factors for the prevention and management of non-communicable disease. His research program involves the development and evaluation of digital and mobile health (mHealth) interventions as a means of increasing reach, access, and delivery of lifestyle programs for the management of chronic diseases such as cardiovascular disease, diabetes, and obesity. Professor Maddison leads the Digital Health for Disease Prevention and Management research group at Deakin University's Institute for Physical Activity and Nutrition.

For more information, visit <https://www.deakin.edu.au/ipan>



**PROFESSOR ALEKSANDRA LUSZCZYNSKA**

SWPS University, Poland

Professor Luszczynska is expert in the processes of health behaviour change and the psychological, social, and cognitive resources that facilitate adaptation to and recovery from severe or chronic illness and trauma. Her research deals with the development, implementation, and evaluation of health behaviour change interventions and policies. Professor Luszczynska leads the Center for Applied Research on Health Behaviour and Health.

For more information, visit <http://www.care-beh.eu/>



**PROFESSOR PASCHAL SHEERAN**

University of North Carolina - Chapel Hill, USA

Professor Sheeran is a translational social psychologist whose research program focuses on self-regulation and health behaviour change. His expertise lies in the examination of how people direct their thoughts, feelings, and actions to achieve their goals. He is the recipient of multiple awards for his exceptional research influence and contributions to behaviour change research.

For more information, visit <http://psheeran.web.unc.edu/>

# OUR PEOPLE

## MEMBERS

MCBC aims to connect researchers with expertise and applied interests in behaviour change, including those working to advance behaviour change theory and practice. Our members come from across the University, allowing MCBC to facilitate linkages between disciplines and draw upon relevant expertise for specific research and consultancy projects.

Our members include researchers from each of the following research hubs within the Melbourne School of Psychological Sciences (MSPS): Ethics and Wellbeing, Complex Human Data, Decision Science, and Brain and Mental Health. More broadly within the Faculty of Medicine, Dentistry and Health Sciences (FMDHS), we have members representing the Melbourne School of Population and Global Health, Melbourne School of Health Sciences, Melbourne Medical School, and Centre for Digital Transformation of Health. Beyond FMDHS, we have links with the Faculty of Engineering and Information Technology (through the School of Computing and Information Systems), the Faculty of Arts (through the School of Social and Political Sciences), the Faculty of Business and Economics (through the Department of Management and Marketing), and the Melbourne Law School. Many of our members hold external appointments with organisations such as Cancer Council Victoria, the Peter MacCallum Cancer Centre, and the Victorian Comprehensive Cancer Centre.

In the following pages we profile just a few of our members to illustrate the broad expertise encompassed by MCBC. For extended biographies of each of our members, please visit [psychologicalsciences.unimelb.edu.au/research/hubs/melbourne-centre-for-behaviour-change/people](https://psychologicalsciences.unimelb.edu.au/research/hubs/melbourne-centre-for-behaviour-change/people).



### **ASSOCIATE PROFESSOR STEFAN BODE**

Melbourne School of Psychological Sciences

Associate Professor Bode is expert in the neural and cognitive mechanisms underlying decision-making, applying experimental psychology and cognitive neuroscience theory and methods to his research. His work can help illuminate how decisions and self-regulation are processed in the brain and how we can generate sustainable change.

For more information, visit

[psychologicalsciences.unimelb.edu.au/decision-science-hub](https://psychologicalsciences.unimelb.edu.au/decision-science-hub)



### **PROFESSOR WENDY CHAPMAN**

Centre for Digital Transformation of Health

Professor Chapman is expert in the application of informatics to clinical care and research, with her research focusing on how digital resources can be developed to transform health care delivery both in terms of quality of care and new care delivery modes.

For more information, visit

[mdhs.unimelb.edu.au/our-organisation/institutes-centres-departments/habic](https://mdhs.unimelb.edu.au/our-organisation/institutes-centres-departments/habic)



**PROFESSOR YOSHIHISA KASHIMA**

Melbourne School of Psychological Sciences

Professor Kashima is an expert in cultural dynamics, social influence, sustainability, and climate change mitigation and adaptation. He develops integrative theoretical models to further our understanding of utopian thinking and collective action. These models can help shape many current societal behaviour challenges and the manner in which behaviour change can be developed and implemented.

For more information, visit

[psychologicalsciences.unimelb.edu.au/research/msps-research-groups/social-action-laboratory/lab](https://psychologicalsciences.unimelb.edu.au/research/msps-research-groups/social-action-laboratory/lab)



**PROFESSOR KIM BENNELL**

Centre for Health, Exercise & Sports Medicine, Department of Physiotherapy, Melbourne School of Health Sciences

Professor Bennell is a research physiotherapist with expertise in conservative non-drug management of musculoskeletal conditions; in particular, the role of exercise in both prevention and management of such conditions. In collaboration with Professor Bennell, MCBC is developing interventions to assist those with osteoarthritis manage their condition using self-management strategies such as exercise, weight loss, and pain coping skills, thus reducing medication need.

For more information, visit

[healthsciences.unimelb.edu.au/departments/physiotherapy/about-us/chesm](https://healthsciences.unimelb.edu.au/departments/physiotherapy/about-us/chesm)



**PROFESSOR JANE HOCKING**

Sexual Health Unit, Centre for Epidemiology and Biostatistics Research, Melbourne School of Population and Global Health

Professor Hocking is an epidemiologist with considerable expertise in the evaluation of complex interventions in primary care. She is currently collaborating with MCBC on the development of behavioural interventions for controlling sexually transmitted infections.

For more information, visit

[mspgh.unimelb.edu.au/research-groups/centre-for-epidemiology-and-biostatistics-research/sexual-health](https://mspgh.unimelb.edu.au/research-groups/centre-for-epidemiology-and-biostatistics-research/sexual-health)

# MEMBERS



## **DR GREG WADLEY**

School of Computing and Information Systems

Dr Wadley works in digital health and has expertise in optimising the design and use of digital technologies. In collaboration with Dr Wadley, MCBC is building intelligent, digital software to optimise delivery of behavioural interventions.

For more information, visit

[people.eng.unimelb.edu.au/gwadley/](http://people.eng.unimelb.edu.au/gwadley/)



## **ASSOCIATE PROFESSOR JO-ANNE MANSKI-NANKERVIS**

Department of General Practice, Melbourne Medical School

Associate Professor Manski-Nankervis is an academic GP whose research focuses on the development and implementation of technology to inform decision making in general practice. MCBC is working with Associate Professor Manski-Nankervis to develop systems that facilitate increased use of behaviour change resources within general practice.

For more information, visit

[medicine.unimelb.edu.au/research-groups/general-practice-research/data-driven-quality-improvement](http://medicine.unimelb.edu.au/research-groups/general-practice-research/data-driven-quality-improvement)



## **ASSOCIATE PROFESSOR HELEN DIXON**

Centre for Behavioural Research in Cancer, Cancer Council Victoria

Associate Professor Dixon examines the psychosocial determinants of health-related behaviour and the design and impact of mass media health-related communications. In collaboration with Associate Professor Dixon, MCBC is investigating how health communication interventions can be optimised to promote healthy lifestyles at the population level.

For more information, please visit

[www.cancervic.org.au/research/behavioural](http://www.cancervic.org.au/research/behavioural)

Membership of MCBC is open to University staff or Honorary Affiliates who share our mission of generating research outcomes that contribute to population-level improvements in health and wellbeing and promote socially responsible behaviours. Please contact us if you would like to become a member.





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# CONTACT US

We welcome your interest in our Melbourne Centre for Behaviour Change. If you want to know more, or explore opportunities for collaboration, please get in touch.

► [psychologicalsciences.unimelb.edu.au/melbourne-centre-for-behaviour-change](https://psychologicalsciences.unimelb.edu.au/melbourne-centre-for-behaviour-change)

✉ [behaviourchangecentre-MCBC@unimelb.edu.au](mailto:behaviourchangecentre-MCBC@unimelb.edu.au)

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