

National Centre of Implementation Science Annual Report 2019



NATIONAL CENTRE OF
IMPLEMENTATION SCIENCE



THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA



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Message from the Director

2019 was the launch year for the **National Centre of Implementation Science** (NCOIS). Our Centre of Research Excellence includes four streams and ten research projects, many of which are now underway. We are excited to share some of our activities and outputs with you in our 2019 Annual Report. We welcome our new postdoctoral fellows and PhD scholars, who will be actively involved in generating new knowledge on implementation for community prevention.

It is an exciting time to be working at the intersection of implementation science and health, as we work to identify facilitators and barriers towards closing the evidence-practice gaps to reduce the overall burden of disease.

NCOIS will be actively contributing to this new knowledge through research, publications, expert commentaries, hosted expert forums and promotion of international collaboration. A major focus will be to translate this new knowledge into evidence-based practice.

Our TIDIRH Australia 2020 implementation science training program, was also launched in 2019, which will roll out from January 2020.

We look forward to working with our colleagues and partners around the globe, towards implementing better chronic disease prevention for us all.



About Us: National Centre of Implementation Science

Background

In 2017 the National Health and Medical Research Council funded the Centre for Research Excellence in Implementation of Community Chronic Disease Prevention for a period of five years from February 2019 - January 2023. The NCOIS has been branded as the **National Centre of Implementation Science** (NCOIS or 'The Centre') and will operate under this name.

The Centre has been created to bridge the gap between what has been identified by research as best practice in chronic disease prevention, and what is actually being done in the community. The Centre will focus on improving the translation of evidence into policies and practices that target diet, physical activity, weight status, tobacco and/or alcohol use in community settings. These currently include childcares, schools, sports clubs and workplaces.

Brief outline of the NCOIS

The National Centre of Implementation Science seeks to undertake research, build research capacity, and facilitate collaboration between researchers and end-user organisations to improve the implementation of evidence-based chronic disease prevention policies and practices in community settings to improve public health. The Centre involves experts from Australia as well as internationally. The University of Newcastle is the primary administering institution.

NCOIS Criteria

There are five key criteria of the NCOIS:

Criteria 1: Generate new knowledge that leads to improved health outcomes.

Criteria 2: Promote effective transfer of research outcomes into health policy and/or practice.

Criteria 3: Develop the health and medical research workforce by providing opportunities to advance the training of new researchers, particularly those with capacity for independent research & future leadership roles.

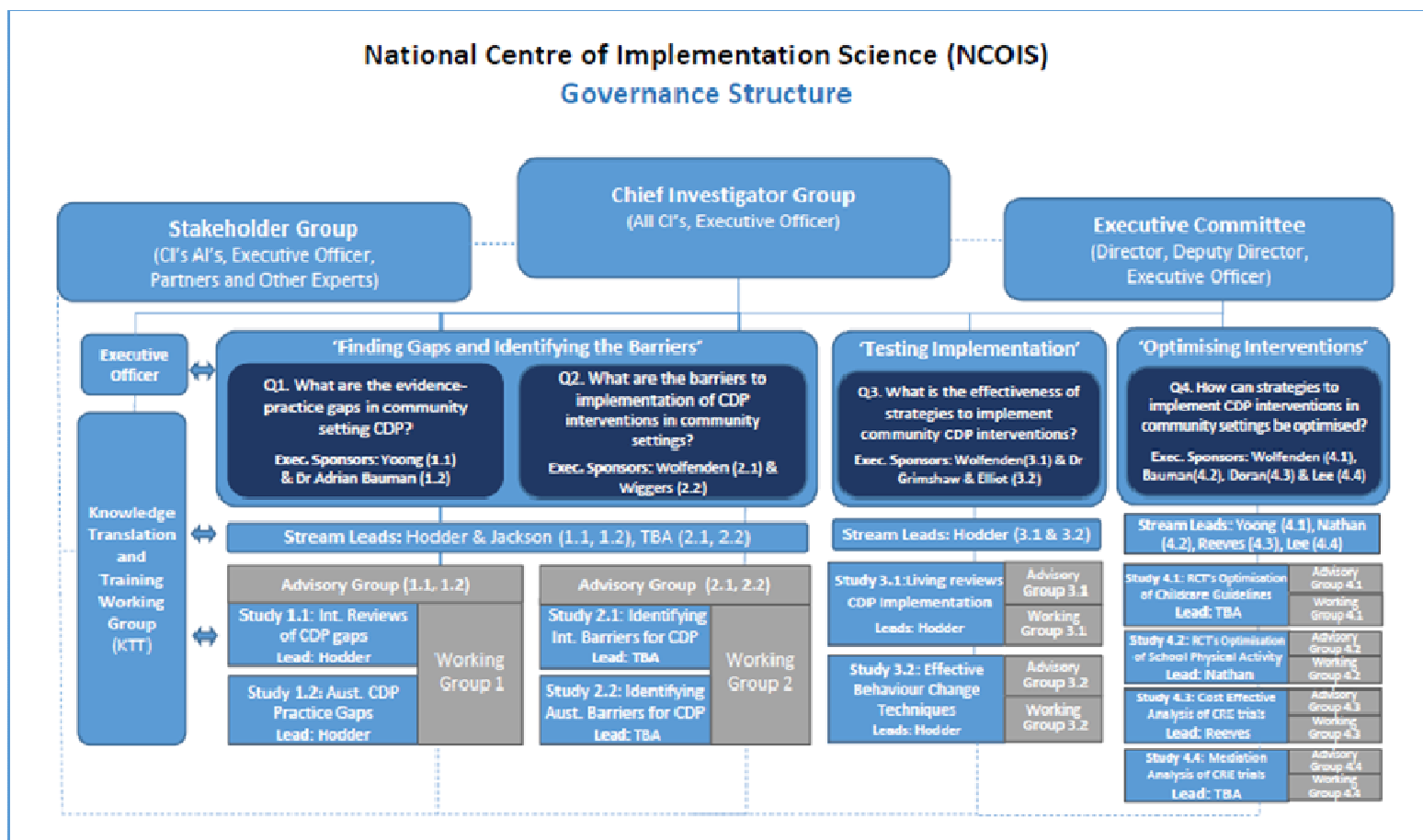
Criteria 4: Facilitate Collaboration.

Criteria 5: Record of Research Translation and Achievement.



Our Governance Structure

NCOIS governance structure has been designed to ensure team integration, to delineate clear roles and accountability and maximise the impact of the Centre's research. NCOIS is comprised of investigators with expertise to conduct the proposed research including that relevant to the targeted chronic disease risks. NB: This structure may be updated as projects progress.



Our Team: Chief Investigators



LUKE WOLFENDEN
Associate Professor

Associate Professor Luke Wolfenden is a behavioural and implementation scientist. In 2013 he commenced an NHMRC Career Development Fellowship and in 2016 has been offered both NHMRC Practitioner and NHMRC Career Development and National Heart Foundation Fellowships. He has worked with internationally recognised research institutions such as the UK Cochrane Centre, was an invited visiting Fellow at the World Health Organization (WHO) and is a current Fellow of the Lancet Commission on Obesity.

Research Interests

Associate Professor Luke Wolfenden's research seeks to reduce the burden of chronic disease in the community by trialling interventions to reduce modifiable chronic disease risks, and trialling implementation strategies to increase the adoption of evidence based interventions. Nationally, he was responsible for the evaluation of one of Australia's largest (\$12 million) child obesity prevention programs (Good for Kids. Good for Life.). He has published over 177 of his 210 career manuscripts in peer reviewed journals since 2013.

Role in the Centre for Research Excellence:
Director, CIA and Executive Sponsor of Stream 2.1



JOHN WIGGERS
Professor

Professor Wiggers is the Director of the University of Newcastle Priority Research Centre for Health Behaviour, a group of approximately 80 health behaviour researchers, and Co-Director of the Hunter Institute of Medical Research Public Health Program. Concurrent with his academic appointments, Prof Wiggers has held a number of senior government health service delivery and policy positions, including Director of Population Health, Hunter New England Local Health District, and Acting State Director of Population Health, NSW Ministry of Health.

Research Interests

Prof Wiggers's research focuses on the prevention of obesity, smoking and alcohol-related harms, and the promotion of physical activity and healthy nutrition in the community. He has published extensively in many of these areas, with 146 publications in the past 5 years. Prof Wiggers' innovative research incorporates the use of a systems approach to intervention and practice design, including the use of technology and evidence-based behavioural change strategies.

Role in the Centre for Research Excellence:
CIB and Executive Sponsor of Stream 2.2.



ADRIAN BAUMAN
Professor

Professor Adrian Bauman is the Sesquicentenary Professor of Public Health and Director of the Prevention Research Collaboration at the University of Sydney. He co-directs the World Health Organization (WHO) Collaborating Centre on Physical Activity, Nutrition and Obesity. He is widely published in the peer reviewed scientific literature and has obtained recent research grants in physical activity, sedentary behaviour, and translational public health.

Research Interests:

Prof Bauman's research interest is in chronic disease prevention, with a longstanding focus on physical activity and public health. Recent interests include the epidemiology of inactivity and sitting time, and in translation and upscaling of physical activity and chronic disease prevention programs to the population level. Prof Bauman's major research contributions have been leadership in physical activity and public health research. He has extended this work into new areas of sedentary behaviour research and epidemiology. Since 2013 CIC Bauman has published over 240 peer-reviewed publications in journals including: The Lancet, British Medical Journal, JAMA.

Role in the Centre for Research Excellence:
CIC and Executive Sponsor of Stream 1.2.



CHRIS RISSEL
Professor

Professor Chris Rissel is an expert health promotion academic and practitioner, with a PhD in Behavioural Epidemiology. He holds an academic position as a Professor of Public Health at the University of Sydney, with the Prevention Research Collaboration. He is also Director of the NSW Office of Preventive Health where he is responsible for supporting the implementation and evaluation of priority state-wide preventive health programs (including obesity). The office also provides high level strategic advice to the NSW Ministry of Health to inform evidence-based implementation of health promotion program in the state.

Research interests:

Prof Rissel's work has included epidemiological and intervention trials examining the impact of risky behaviours on population health and efforts to reduce such behaviour. He has a particular interest in the translation of research into practice and relationships between evaluation and policy.

Role in the Centre for Research Excellence:
CID and Executive Sponsor of Stream 1.1.



ANDREW WILSON
Professor

Professor Andrew Wilson is Co-Director of the Menzies Centre for Health Policy at the University of Sydney and Director of the NHMRC Australian Prevention Centre administered by the Sax Institute. The Australian Prevention Centre collaboration involves researchers and practitioners from 15 universities and research institutes and 20 other government and non-government agencies including NHMRC, NSW Ministry of Health, ACT Ministry of Health, Commonwealth Department of Health and HCF (Health and Medical Research Foundation). He also chairs the Pharmaceutical Benefits Advisory Committee.

Research Interests:

Professor Andrew Wilson's research interests concern the application of epidemiology to informing decision making in clinical medicine, public health, and health service policy and planning. His publications include aspects of prevention and management of chronic disease, evaluation of the effectiveness and responsiveness of health care systems and the impact of social and physical environment on health.

Role in the Centre for Research Excellence:
CIE and Executive Sponsor of Stream 2.2 and 4.1.

Our Team: Chief Investigators



JEREMY GRIMSHAW
Professor

Professor Jeremy Grimshaw is a Senior Scientist in the Clinical Epidemiology Program, Ottawa Health Research Institute and a Full Professor in the Department of Medicine, University of Ottawa. He is also a Tier 1 Canada Research Chair in Health Knowledge Transfer and Uptake and the President of the Board of the Campbell Collaboration (since 2015).

Research Interests:

His research focuses on the evaluation of Knowledge Translation and Implementation (KTI) strategies, targeting healthcare professionals (HCPs) and health systems. His research often involves interdisciplinary groups of program experts, including independent researchers, knowledge users and trainees, based locally, nationally and internationally (Canada, Australia, Europe, United Kingdom). He has published over 600 peer reviewed journals.

Role in the Centre for Research Excellence:
CIF and Executive Sponsor of Stream 3.2.



SZE LIN YOONG
Doctor

Dr Sze Lin (Serene) Yoong is an early career researcher and dietitian with a significant track record in undertaking implementation science in community-based settings including early childhood education and care sectors. She has collaborated with leading health agencies internationally including the World Health Organization and the Cochrane collaboration. She was a visiting fellow and consultant with the World Health Organization and is a member of the Cochrane-Global Burden of Disease collaboration that seeks to inform and prioritise the conduct of systematic reviews.

Research Interests:

Dr Sze Lin Yoong's research interests to date have focused on developing effective, scalable interventions to reduce preventable risk factors for chronic diseases, including technology based and low intensity, high yield strategies. Dr Yoong has published 84 career manuscripts in peer reviewed journals since 2013, with 40 of these as first or senior author.

Role in the Centre for Research Excellence:
CIG and Executive Sponsor of Stream 2.1, 2.2 and 4.1.



JULIAN ELLIOTT
Associate Professor

Associate Professor Julian Elliott is Head of Clinical Research in the Department of Infectious Diseases, Alfred Hospital and Monash University.

He is also Senior Research Fellow at Cochrane Australia and Lead for Evidence Systems for Cochrane globally. He was awarded the 2017 recipient of the Commonwealth Health Minister's Award for Excellence in Health and Medical Research.

Research Interests:

Associate Professor Julian Elliott's research is focused on the use of new technology and systems to improve research translation and the use of evidence for health decision making. He leads Cochrane's development of new evidence systems, including co-leading Project Transform, a major Cochrane project that is developing new software systems, artificial intelligence and citizen science to improve the production of systematic reviews.

Role in the Centre for Research Excellence:
CIH and Executive Sponsor of Stream 3.2.



CHRISTOPHER DORAN
Professor

Professor Christopher Doran is Professor of Health Economics in the School of Health, Medical and Applied Sciences, Central Queensland University (CQU). He holds adjunct Professorial appointments at the University of Newcastle and Edith Cowan University.

Research Interests:

Professor Doran's key area of research is mental health, with a particular focus on substance use and suicide prevention. He collaborates extensively with academics, clinicians and policy makers in building capacity in the knowledge, use and translation of health economics. Over the period 2013-17, Professor Doran has a total of 65 peer-reviewed publications (average of 13 per year); produced 26 reports; and has 14 manuscripts which are currently being reviewed.

Role in the Centre for Research Excellence:
CIH and Executive Sponsor of Stream 4.1.



HOPIN LEE
Doctor

Dr Hopin Lee is a National Health and Medical Research Council Early Career Fellow with the University of Oxford and the School of Medicine and Public Health, University of Newcastle and an Honorary Clinical Scientist with Neuroscience Research Australia.

Research Interests:

Dr Hopin's research is focused in understanding the mechanisms of complex interventions, mostly in rehabilitation. He is also applying this work to find efficient ways of implementing research findings in the prevention and management of chronic diseases. He has expertise in new methods of mediation analyses and is currently funded to apply such methods to examine mechanisms in trials of implementation science. Hopin is also interested in using online technologies as a source of data, and as a tool for delivering public health interventions. Hopin has published in general medical and discipline-specific journals.

Role in the Centre for Research Excellence:
CIJ and Executive Sponsor of Stream 4.4.

Our Team: Associate Investigators



JOHN ATTIA (AIA)
Professor

Professor John Attia (AIA) is the Director of the Clinical Research Design, IT and Statistical Support Unit (CRaDITSS) at the Hunter Medical Research Institute (HMRI). Prof Attia is also a clinician and research epidemiologist with expertise in research methods related to population and health service research. Prof Attia has particular expertise in mechanistic evaluation, and RCTs, and has been co-leading a series on statistical methods for the Medical Journal of Australia.



ANDREW SEARLES (AIF)
Associate Professor

Associate Professor Andrew Searles is the Associate Director of the Health Research Economics Unit of HMRI. A/Prof Searles has experience as a health economists on an industry and academic level. His research focus is on economic health evaluations and developing a framework to measure research translation and research impact.



ANDREW MILAT (AIB)
Doctor

Dr Andrew Milat is Director of Evidence and Evaluation at the NSW Ministry of Health, and is an adjunct Associate Professor within the Sydney Medical School at the University of Sydney. A/Prof Milat has over 20 years' experience in the design, implementation and evaluation of health policies and programs at a national and international level.



SARAH LAMB (AIG)
Professor

Professor Sarah (Sallie) Lamb is the Director of the Centre for Statistics in Medicine within the Medical Sciences Division at the University of Oxford; a theme lead for the Oxford Centre for Applied Health Care Research and Leadership. She has over 200 manuscripts in peer reviewed journals including in the last 5 years publications in the New England Journal of Medicine, BMJ, JAMA and the Lancet.



ANDREW BAILEY (AIC)
Doctor

Dr Andrew Bailey is the District Manager of Health Promotion for the Mid North Coast Local Health District. Dr Bailey's role as a director involves overseeing the delivery of health promotion programs for chronic disease prevention throughout the Mid North Coast community.



CARA LEWIS (AIH)
Doctor

Dr Cara Lewis – is a clinical psychologist and an implementation researcher. She is an Associate Investigator at the Kaiser Permanente Washington Health Research Institute, President of the Society for Implementation Research Collaboration (SIRC), co-director of the SIRC conference series, a member of the steering committee for the Social Needs Network for Evaluation and Translation.



NICOLE EVANS (AID)

Nicole Evans is the District Director of Health Promotion and Population Health Improvement for Central Coast Local Health District. Ms Evans is responsible for overseeing the delivery of health promotion programs for chronic disease prevention throughout the Central Coast community.



NICOLE NATHAN (AII)
Doctor

Dr Nicole Nathan is a NHMRC Translating Research Into Practice Fellow, HNE Clinical Research Fellow and Winston Churchill Fellow. Dr Nathan is also a Health Service Manager and a Health and Physical Education teacher with over a decade experience leading the implementation of one of Australia's largest population-wide child obesity prevention services and research trials in community settings.



JAMES THOMAS (AIE)
Professor

Professor James Thomas is a Professor of Social Research and Policy in the Department of Childhood, Families, and Health at the Institute of Education. He is also the Director of the Evidence for Policy and Practice Information and Co-ordinating Centres (EPPI-Centre) Reviews Facility for the Department of Health, England. decisions.



DAVID CHAMBERS (AIJ)
Doctor

Dr David Chambers is Deputy Director for Implementation Science in the Division of Cancer Control and Population Sciences at the National Cancer Institute in the United States. Dr Chambers' current role involves coordinating implementation of scientific evidence across the entire cancer control continuum; including overseeing the development of initiatives to progress dissemination and implementation.

Our Team: Stream Leads, Researchers and Support Staff

Stream Leads

Dr Rebecca Hodder (Stream 1 & 2 Schools and Sports)
Dr Kate O'Brien (Stream 1 & 2 Schools and Sports)
Dr Jacklyn Jackson (Stream 1 & 2 Childcare)
Ms Penny Reeves (Stream 4.3)
Dr Nicole Nathan (Stream 4.1)
Dr Hopin Lee (Stream 4.4)

Researchers & Support Staff

Dr Hannah Brown	Dr Alix Hall
Dr Alecia Leonard	Ass/Prof Kenny Lawson
Dr Rebecca Muddle	Ms Cassandra Lane
Dr Sasha Lorien	Ms Mary Shefi D'Silva
Ms Susan Abrahams	

Meet our Team



Dr Jacklyn Jackson

An accredited Practising Dietitian and full-time PhD candidate (Nutrition and Dietetics) at the University of Newcastle, Jacklyn is extremely interested in understanding how dietary and lifestyle factors can improve the health of the community. She has a key interest in the practical applications of Public Health Nutrition. Jackie is working on Stream 1 & 2 – Childcare.



Ms Penny Reeves

Penny completed a Bachelor of Economics (Hons) at the University of Newcastle, followed by a Graduate Diploma in Health Economics from the University of Tromso, Norway. Her goal is to increase awareness of the value health economics brings to health and medical research. Health technology assessment is crucial for ensuring the optimal efficiency and effectiveness of our healthcare system and embedding health economics in evaluations of programs, models of care and new technologies will help achieve that. Penny is working on Stream 4.3.

Our Partners

Heart Foundation

The Heart Foundation is a key partner, providing advice and translation for our projects, with a focus on heart health and heart disease prevention.



Partner Summary

(as outlined on the Heart Foundation website)

The Heart Foundation is the national leader in research into the causes, treatment and prevention of heart disease and related disorders. We believe evidence-based prevention and treatment is the most effective way to help all Australians have better heart health. Our research funding portfolio is designed to support and develop excellent heart research in Australia. A key part of managing this portfolio is identifying gaps in the evidence and determining how we can best support researchers and build the research capacity to address these gaps. We also regularly review our funding scheme to ensure it caters to the needs and opportunities of Australian heart research. (source: www.heartfoundation.org.au)

ACHPER

The Australian Council for Health, Physical Education and Recreation Inc. (ACHPER) collaborates with a focus on physical education.



Partner Summary

(as outlined on the ACHPER website)

ACHPER is the leading professional association representing teachers and other professionals working in the fields of health and physical education. We are a member based, not-for-profit organisation with a significant profile. The purpose of ACHPER is to promote active and healthy living for all Australians through education and professional practice. ACHPER also provides programs and services that support continuing development of knowledge, skills and professional practice, focussing primarily on health education, physical education and recreation. Through this, the association will serve members and other stakeholders who value lifelong physical activity and health. (source: www.achper.org.au)

Cancer Council

The Cancer Council is a key partner, providing advice and translation for our projects, with a focus on cancer prevention.



Partner Summary

(as outlined on the Cancer Council website)

We [the Cancer Council] fund more cancer research than any other non-government organisation in Australia. In 2017, thanks to the support of our community, we directed almost \$60 million into world-class research across Australia along with our research partners. Research can help reduce the impact of cancer in many ways, so Cancer Council invests in every stage of the cancer journey to maximise the outcomes and value of our funding. We never forget our responsibility - to those who support us and those who need us - to make the most difference with every dollar invested. That's why we fund some of Australia's brightest research minds to help bring us closer to a cancer free future, faster. (source: www.cancercouncil.org.au)

ELACCA

The Early Learning and Care Council of Australia is a collaborating partner with a focus on early childhood.



Partner Summary

(as outlined on the ELACCA website)

Our purpose is to promote the value of quality early learning and care as an integral part of Australia's education system; advocate the right of children and their families to access quality early learning and care, particularly for children facing disadvantages; and promote greater public investment in quality early learning and care to improve affordability and access and further Australia's future economic prosperity. (source: www.elacca.org.au)

Alcohol and Drug Foundation (ADF)



The Alcohol and Drug Foundation is a key partner, providing advice and translation collaboration for our projects, with a focus on primary prevention, addressing the causes of alcohol and drug use.

Partner Summary

(as outlined on the ADF website)

[The Alcohol and Drug Foundation's] purpose is to prevent and minimise the harm caused by alcohol and other drugs in Australia. We work in partnership with others to support and create evidence-based policies and practice that prevent and minimise the harm caused by alcohol and other drugs. We co-design our evidence-based programs with communities and support them to build capacity to create change. We build strong alliances that help deliver positive outcomes and strengthen our collective impact. Our approach is reflected in our organisational culture of collaboration and innovation. Supported by the latest evidence, we advocate for change in policy and practice within government, society and business. We work to reduce the misinformation and stigma about alcohol and other drugs. (source: www.adf.org.au)

Local Health Districts



NSW Ministry of Health and local health districts have partnered with NCOIS, providing advice, support and translation collaboration.

Partner Summary

NSW Health's plans, programs and policies and sets priorities across the system for the delivery of [their mission] 'the right care, in the right place, at the right time'.

Three Local health districts are currently partnering NCOIS, including:

- Hunter New England
- Mid-North Coast
- Central Coast

Our Partners

Partner Universities and Institutes

NCOIS foundation projects will function as a research collaboration between The University of Newcastle, The University of Sydney, Deakin University, Queensland University of Technology and the University of Ottawa.

Components of research projects will occur across all partner universities and institutes as follows:

- University of Newcastle (Streams 1,2,3,4)
- University of Sydney (Streams 1, 3, 4)
- The Ottawa Hospital Research Institute, Canada (Stream 3)
- Monash University (Streams 3, 4)
- Central Queensland University (Stream 4)

Other Groups

Collaboration and partnership with groups in the field is an integral part of achieving NCOIS objectives. NCOIS will build on existing relationships and to forge new partnerships with key organisations to facilitate research, capacity building and knowledge translation.

Key relationships for NCOIS include:

- World Health Organisation
- Lancet Commission
- International networks or associations for implementation scientists
- International capacity building for improved implementation
- The Australian Prevention Partnership Centre
- NHMRC Centres for Research Excellence
- Centre for Innovation in Regional Health, NSW Regional Health Partners

Research Update: Stream 1

‘FINDING THE GAPS’ (Schools)

Research projects for Stream 1 are underway. As part of planning, Stream 1 has been split into ‘Community Setting’ groups – which include, at present, ‘Schools’, ‘Sports’ and ‘Childcare’, which will allow specific teams to focus on these areas. Updates and publications are listed below.



Q1: WHAT ARE THE EVIDENCE-PRACTICE GAPS IN SCHOOL COMMUNITY SETTING CDP?

To maximise the likelihood of public health improvement, governments should invest in programs that address an identified ‘evidence – practice’ gap. That is, investment should be reserved for initiatives with strong evidence of effect and which are not already routinely implemented. Most research to date, however, has focussed on describing the effects of interventions (evidence assessment), and not the extent of their implementation in practice (practice gap assessment). We will undertake a program of work to identify international and Australian practice gaps in School community settings.

RESEARCH PROJECTS:

Study 1.1 (Schools): Review of School community settings CDP practice gaps *internationally*.

Study 1.2 (Schools): School community settings CDP practice gaps in *Australia*.

RESEARCH UPDATE: Delphi Study planning has begun, as initial related reviews progress. ‘Systematic review’ (international prevalence) and ‘Prioritisation of effective school-based interventions’ are in planning stages.

PUBLICATION UPDATE: See over page.

CONTACTS: Executive Sponsor: Bauman (CIC) **Stream Leads:** Hodder and O’Brien

Publications: Stream 1

‘FINDING THE GAPS’ (Schools)

Research publications produced by National Centre of Implementation Science investigators are listed below. This report lists publications that are part of our foundation projects, as a Centre of Research Excellence and also select publications related to our work.

Publications released

Hodder RK, Wolfenden L, O’Brien K, Barnes C, Brown A, Stacey F (2019). Effectiveness of obesity prevention approaches targeting children aged 5-12 delivered in primary schools: a rapid evidence review brokered by the Sax Institute. Prepared for the NSW Ministry of Health: Sydney.

Upcoming Publications



Paper focus	Proposed journal (s)	Lead Author
Effectiveness of obesity interventions in primary schools (Review of reviews)	n/a - Evidence check published by the Sax Institute	Rebecca Hodder
Effectiveness of interventions promoting healthy behaviour (including nutrition, physical activity, tobacco and alcohol) in sporting organisations (Cochrane systematic review update)	Cochrane	Erik von Elm
Effectiveness of obesity interventions in children (Cochrane systematic review update)	TBA	Rebecca Hodder
Effectiveness of school-based tobacco and alcohol interventions (Review of reviews)	TBA	Rebecca Hodder

Research Update: Stream 1

‘FINDING THE GAPS’ (Sports)



Q1: WHAT ARE THE EVIDENCE-PRACTICE GAPS IN SPORT GROUP COMMUNITY SETTING CDP?

To maximise the likelihood of public health improvement, governments should invest in programs that address an identified ‘evidence – practice’ gap. That is, investment should be reserved for initiatives with strong evidence of effect and which are not already routinely implemented. Most research to date, however, has focussed on describing the effects of interventions (evidence assessment), and not the extent of their implementation in practice (practice gap assessment). We will undertake a program of work to identify international and Australian practice gaps in Sport Group community settings.

RESEARCH PROJECTS:

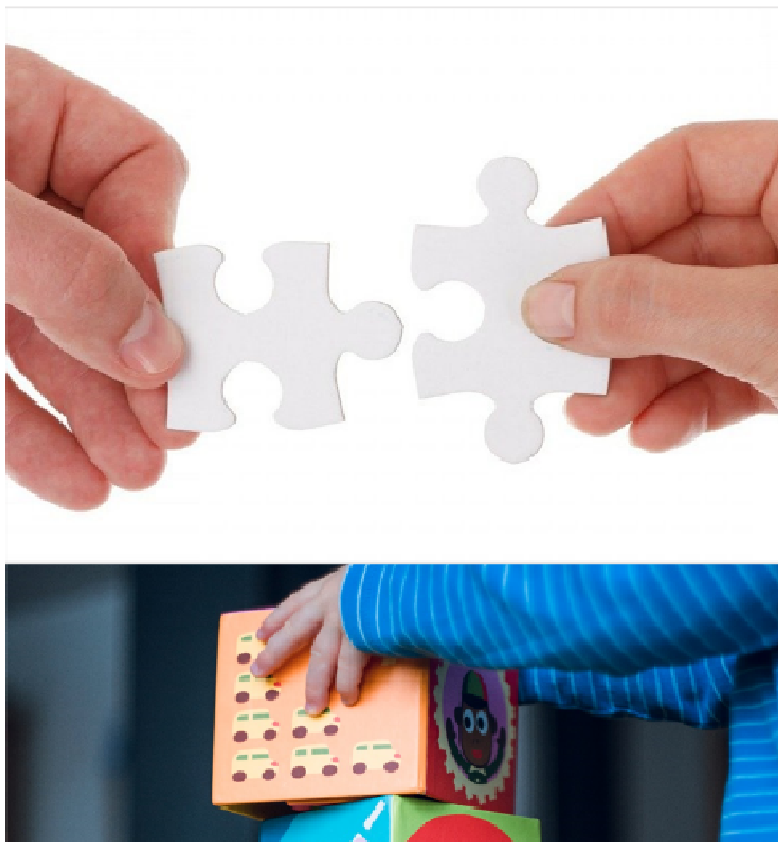
[Study 1.1 \(Sports\)](#): Review of Sport Group community settings CDP practice gaps *internationally*.

[Study 1.2 \(Sports\)](#): Sport Group community settings CDP practice gaps in *Australia*.

RESEARCH UPDATE: TBA

PUBLICATION UPDATE: TBA

CONTACTS: Executive Sponsor: Bauman (CIC) Stream Leads: Hodder and O’Brien



Q1: WHAT ARE THE EVIDENCE-PRACTICE GAPS IN CHILDCARE COMMUNITY SETTING CDP?

To maximise the likelihood of public health improvement, governments should invest in programs that address an identified ‘evidence – practice’ gap. That is, investment should be reserved for initiatives with strong evidence of effect and which are not already routinely implemented. Most research to date, however, has focussed on describing the effects of interventions (evidence assessment), and not the extent of their implementation in practice (practice gap assessment). We will undertake a program of work to identify international and Australian practice gaps in Childcare community settings.

RESEARCH PROJECTS:

Study 1.1: (Childcare): Review of Childcare community settings CDP practice gaps *internationally*.

Study 1.2: (Childcare): Childcare community setting CDP practice gaps in *Australia*.

RESEARCH UPDATE: ‘Systematic review’ (international prevalence) is underway. The Systematic Review will be conducted using Cochrane (gold standard) methodology. Planning is underway for the ‘Delphi Study’ and an advisory group is in development for project support.

PUBLICATION UPDATE: See over page.

CONTACTS: Executive Sponsor: Yoong (CIG) **Stream Leads:** Jackson

Publications: Stream 1c

‘FINDING THE GAPS’ (Childcare)

Research publications produced by National Centre of Implementation Science investigators are listed below. This report lists publications that are part our foundation projects, as a Centre of Research Excellence and also select publications related to our work.

Publications released

None as yet.

Upcoming Publications



Paper focus	Proposed journal (s)	Lead Author
Early childhood Education and Care based healthy eating interventions for improving child diet: a systematic review protocol	Cochrane/ Systematic Reviews	Jacklyn Jackson
Early childhood Education and Care based healthy eating interventions for improving child diet: a systematic review	Cochrane	Serene Yoong
CDP policy and practice implementation in Australia childcare centres	Implementation science	TBA

Research Update: Stream 2

‘IDENTIFYING THE BARRIERS TO IMPLEMENTATION’

Research projects for Stream 2 will commence on completion of Stream 1. Stream 2 is expected to split into three ‘Community Setting’ groups – ‘Schools’, ‘Sports’ and ‘Childcare’, which will allow specific teams to focus on these areas.



Q2. WHAT ARE THE BARRIERS TO IMPLEMENTATION OF CDP INTERVENTIONS IN COMMUNITY SETTINGS?

Best-practice approaches for the development of strategies to improve implementation require a comprehensive understanding of implementation barriers (and facilitators). Despite representing the fundamental building blocks for strategy development, most studies to identify implementation barriers in community CDP are uncommon, not guided by theoretical frameworks, and narrow in focus. We will undertake a program of work to identify international and Australian barriers and facilitators to the implementation of the priority community CDP interventions.

RESEARCH PROJECTS:

[Study 2.1](#): Review of implementation barriers for community CDP interventions *internationally*.

[Study 2.2](#): Study of implementation barriers for community CDP interventions in *Australia*.

RESEARCH UPDATE: TBA

PUBLICATION UPDATE: TBA

CONTACTS: Executive Sponsors: Wiggers (CIB), Wolfenden (CIA) **Stream Leads:** TBA

Research Update: Stream 3

‘TESTING IMPLEMENTATION STRATEGIES’

Testing Implementation of prior studies via ‘Living Review’ for Stream 3 will commence once Stream 1 and 2 are complete. A pre-existing, related study will be maintained as a ‘living review’ until 2020 by our Stream leads and will be included in this report, as a related study.



Q3. WHAT IS THE EFFECTIVENESS OF STRATEGIES TO IMPLEMENT COMMUNITY CDP INTERVENTIONS?

In circumstances where the need for evidence is urgent, the existing evidence base is uncertain and new research is emerging, timely synthesis of evidence as soon as it becomes available is particularly important for public health decision making. Such is the case for policy makers and practitioners responsible for the implementation of community CDP interventions. We will establish living reviews of effects of strategies to implement CDP interventions in community settings.

RESEARCH PROJECTS:

Study 3.1: Living reviews of the effects of strategies to implement CDP interventions in community settings.

Study 3.2: Identifying effective behaviour change techniques to facilitate implementation.

RESEARCH UPDATE: A pre-existing Cochrane Heart Group partnership study for interventions for increasing eating of fruit and vegetables in children aged under five years and under was re-published in Nov 2019 and will be maintained as a living review until end of 2020.

PUBLICATION UPDATE: See over page.

CONTACTS: Executive Sponsors: Grimshaw (CIF) Elliot (CIH) **Stream Lead:** Hodder

Publications: Stream 3

'TESTING IMPLEMENTATION STRATEGIES'

Research publications produced by National Centre of Implementation Science investigators are listed below. This report lists publications that are part our foundation projects, as a Centre of Research Excellence and also select publications related to our work.

Publications released

Hodder RK, O'Brien KM, Stacey FG, Tzelepis F, Wyse RJ, Bartlem KM, Sutherland R, James EL, Barnes C, **Wolfenden L**. Interventions for increasing fruit and vegetable consumption in children aged five years and under. *Cochrane Database of Systematic Reviews* 2019, Issue 11. Art. No.: CD008552. DOI: 10.1002/14651858.CD008552.pub6.

Upcoming Publications

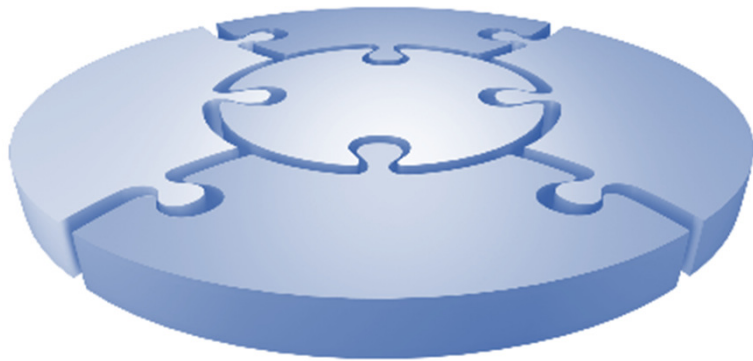


Paper focus	Proposed journal (s)	Lead Author
TBA		

Research Update: Stream 4

‘HOW CAN STRATEGIES TO IMPLEMENT CDP INTERVENTIONS IN COMMUNITY SETTINGS BE OPTIMISED?’

Research projects for Stream 4 will be undertaken to optimise the interventions from prior Streams. Pre-existing, related optimisation projects are currently underway, which will be included in reports as related studies.



Q4: HOW CAN STRATEGIES TO IMPLEMENT CDP INTERVENTIONS IN COMMUNITY SETTINGS BE OPTIMISED?

The establishment of an ‘implementation laboratory’ for the development and testing of CDP interventions in community settings has shown to be an effective mechanism for generating effective evidence-based strategies. Implementation labs provide an infrastructure for ongoing experimentation to rapidly improve, or ‘optimise’, the impact of implementation strategies through ‘radical incrementalism’, a process in which a series of improvements (identified via ongoing experimentation) are enacted one after the other, resulting in cumulative improvements in service implementation. Optimising implementation strategies in this way requires assessment of their effectiveness, cost and causal mechanisms.

Optimisation approach: We will utilise an established implementation laboratory to ‘optimise’ the implementation of a) dietary guidelines in childcare, and b) activity policy in schools through a series of RCTs. A series of sequential randomised trials will be conducted over a number of phases. Each phase will be up to 12 months. Assessment of effectiveness, cost, mechanism of action, and acceptability will be undertaken for each trial to inform implementation strategy tested in subsequent phases and determine the point of ‘optimisation’.

RESEARCH PROJECTS:

Study 4.1: RCTs to optimise implementation of dietary guidelines in childcare.

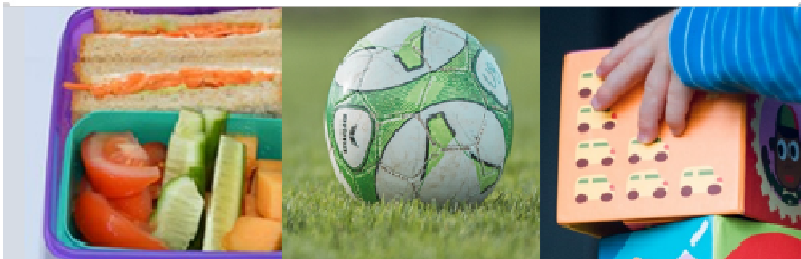
Study 4.2: RCTs to optimise implementation of a mandatory physical activity policy in schools.

Study 4.3: Economic analyses of CRE trials: Two economic analyses are planned for each trial.

Study 4.4: Theoretically grounded mediation analyses of CRE trials

RESEARCH UPDATE: Planning.

CONTACTS: Executive Sponsors: Wolfenden (CIA), Bauman (CIC), Doran (CII), Lee (CIJ) **Stream Leads:** Yoong, Reeves, Nathan, Lee.



Publications: Stream 4

'IDENTIFYING THE BARRIERS TO IMPLEMENTATION'

Research publications produced by National Centre of Implementation Science investigators are listed below. This report lists publications that are part our foundation projects, as a Centre of Research Excellence and also select publications related to our work.

Publications released

None as yet.

Upcoming Publications



Paper focus	Proposed journal (s)	Lead Author
Cost and cost-effectiveness of an implementation intervention to increase physical activity in primary school children	TBA	Cassandra Lane

Events: NCOIS Symposium 2019

NCOIS Events and seminars are regularly hosted, form an integral part of our training program and promote collaboration. We post regular updates about upcoming events, including face-to-face meetings and seminars on our website.



NCOIS Symposium 2019 'Implement to Prevent'

The Implement to Prevent Symposium marks the official launch of the new National Centre for Implementation Science (NCOIS). NCOIS is a new NHMRC Centre for Research Excellence that works to improve the translation of evidence-based chronic disease prevention policies and practices in community settings, including; childcares, schools, sports clubs and workplaces.

A range of speakers presented at the Symposium, including the NCOIS Director and stream leaders, to introduce the NCOIS and its four streams: *Stream 1: Finding The Gaps*, *Stream 2: Identifying The Barriers To Implementation*, *Stream 3: Testing Implementation Strategies*, *Stream 4: Optimising The Implementation Of Interventions*.

The Symposium also featured presentations from the Centre's partners; Alcohol and Drug Foundation, Cancer Council, Heart Foundation and the Central Coast, Hunter New England and Mid North Coast Local Health Districts. Also presenting on the day, was the Director of the Australian Prevention Partnership Centre and a representative from ACHPER.

'We need to make sure research informs policy and practice,' explains A/Prof Luke Wolfenden, NCOIS Director. 'And this requires working closely with our translation and academic partners.'

The NCOIS Team was pleased to welcome members, partners and investigators to the Implement to Prevent symposium for a successful day of collaboration and idea generation for the implementation of chronic disease prevention strategies within our communities.

Training: TIDIRH Australia 2020

‘TIDIRH Australia 2020 will equip participants with the knowledge and skills required to undertake high quality dissemination and implementation.’



TIDIRH Australia 2020

The National Centre of Implementation Science, at the University of Newcastle, in partnership with The Australian Prevention Partnership Centre, has launched TIDIRH Australia 2020, a training course in implementation science. Developed in collaboration with the successful U.S based TIDIRH, this training will equip participants with the knowledge and skills required to undertake high quality dissemination and implementation (D&I) research relevant to their field. Participants will also learn to identify gaps that need further exploration thus potentially informing practice and influencing policy.

Health research and clinical guidelines tell us that things can be done to improve a person’s health, quality of life and experience of health services. Yet a gap persists between what should happen and what happens in real life. The science of D&I seeks to address this gap by evaluating ways of integrating interventions into real-world settings to improve health and prevent disease.

TIDIRH Australia is comprised of an online course (six webinar sessions with related assignments) between mid-January and May, and a 2-day in-person training to be held on May 19th and 20th 2020, in Newcastle, Australia, culminating with a TIDIRH Australia Symposium May 21st, 2020. The TIDIRH Australia 2020 Symposium on May 21st in Newcastle is a ticketed event, and will be promoted early 2020.

TIDIRH Australia training will be facilitated by leading academics and researchers in theory, methods and evaluation approaches related to D&I. This course will prepare individuals for;

- creating partnerships and multilevel, transdisciplinary research teams;
- research design, methods, and analyses appropriate for D&I investigations; and
- conducting research at different and multiple levels of intervention (e.g., clinical, community, policy).

For a background on the US training institute, see: [“The U.S. training institute for dissemination and implementation research in health.”](#) Implementation Science 2013 8:12.

Training: TIDIRH Australia 2020



The poster for the 2020 TIDIRH Australia Course is divided into three main sections. The top section features logos for TIDIRH Australia, the National Centre of Implementation Science, The Australian Prevention Partnership Centre, and The University of Newcastle. The middle section, on a blue background, announces the '2020 TIDIRH AUSTRALIA COURSE' with the title 'DISSEMINATION & IMPLEMENTATION' in large white letters, followed by the tagline 'BRIDGE THE 'KNOW-DO' GAP'. It lists the course format: 'Online Course: Mid-Jan to May, 2020', 'Face to Face Workshop: May 19-20, 2020', and 'TIDIRH Australia Symposium May 21 2020 (optional)' in Newcastle, Australia. The bottom section, on a white background, asks 'WHO IS THIS COURSE FOR?' and describes it as for 'Early to mid-career health researchers wanting to learn from leading experts in theory, implementation and evaluation approaches to dissemination and implementation.' It includes a 'HOW TO APPLY' section with the URL <https://tidirhaustralia.com.au> and a grey box stating 'APPLICATIONS CLOSE NOVEMBER 24 2019'.

2020 TIDIRH AUSTRALIA COURSE

DISSEMINATION & IMPLEMENTATION

BRIDGE THE 'KNOW-DO' GAP

Online Course: Mid-Jan to May, 2020
Face to Face Workshop: May 19-20, 2020
TIDIRH Australia Symposium May 21 2020 (optional)
Newcastle, Australia

WHO IS THIS COURSE FOR?

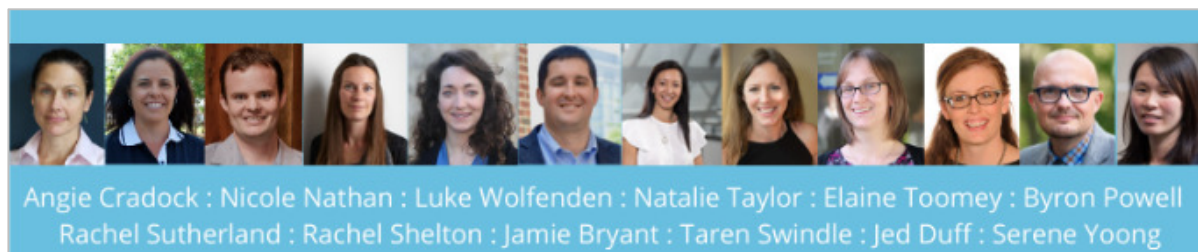
Early to mid-career health researchers wanting to learn from leading experts in theory, implementation and evaluation approaches to dissemination and implementation.

HOW TO APPLY

Visit <https://tidirhaustralia.com.au> for more details.

APPLICATIONS CLOSE NOVEMBER 24 2019

‘TIDIRH Australia 2020 is a first for Australian Implementation Science, featuring a line up of twelve re-owned implementation science experts, including five international guests.’



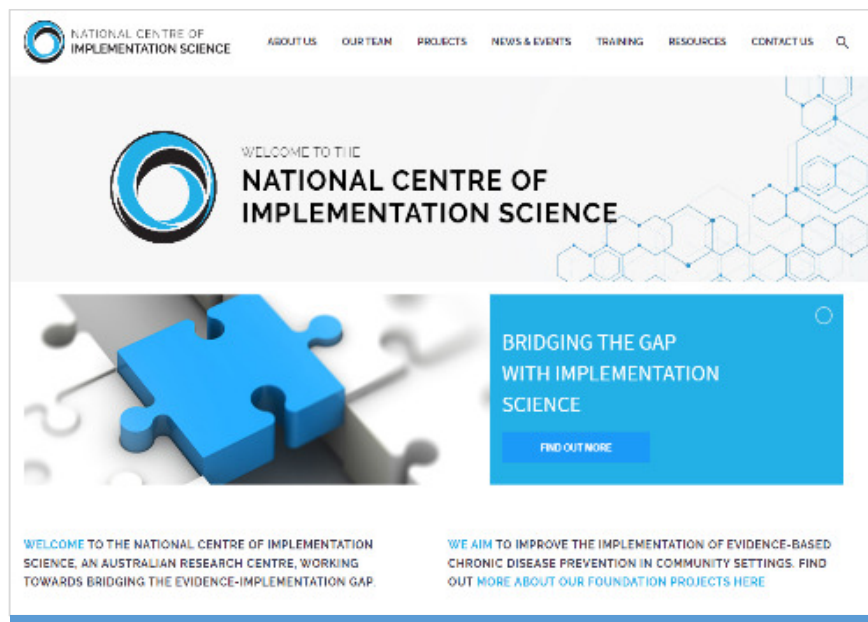
Looking forward to ...

TIDIRH Australia 2020 – Face-to-face sessions

TIDIRH 2020 Australia Face-to-face sessions* will take place at Fort Scratchley on Thursday, May 21st, 2020 in Newcastle. A full line up of national and international facilitators will be running small groups. And networking opportunities will also be available.

*Face-to-face sessions may be converted to video conference sessions – TBA in 2020.

Online Content: Website, Twitter and Resources



Online Content

We officially launched our website at the 2019 Implement to Prevent Symposium on 3 December, 2019. www.ncois.org.au. Our website will provide a useful portal for research collaboration and a resource bank for educator resources. If you are interested in hearing more about our activities, please sign up for our newsletter on our website.

Topics Include: News • Events • Articles • Publications

Additional content: will be available as research projects progress, including evidence-practice gap map and resources.



You can also follow us on Twitter [@ncoisaustralia](https://twitter.com/ncoisaustralia)

Publications

Research Publications produced by National Centre of Implementation Science investigators are highlighted below. This report lists only publications that are directly relevant our work as a Centre of Research Excellence. Chief Investigators are indicated in bold, staff and Associate Investigators are underlined.

Hodder RK, **Wolfenden L**, O'Brien K, Barnes C, Brown A, Stacey F (2019). Effectiveness of obesity prevention approaches targeting children aged 5-12 delivered in primary schools: a rapid evidence review brokered by the Sax Institute. Prepared for the NSW Ministry of Health: Sydney.

Hodder RK, O'Brien KM, Stacey FG, Tzelepis F, Wyse RJ, Bartlem KM, Sutherland R, James EL, Barnes C, **Wolfenden L**. Interventions for increasing fruit and vegetable consumption in children aged five years and under. *Cochrane Database of Systematic Reviews* 2019, Issue 11. Art. No.: CD008552. DOI: 10.1002/14651858.CD008552.pub6.

Our Contacts

Would you like to find out more about the National Centre of Implementation Science? We would be pleased to hear from you. The best way to contact us is via email or website enquiry and we will get back to you.

Email enquiries: admin@ncois.org

Our website ncois.org.au is the best source of information on the National Centre of Implementation Science and is regularly updated with news and upcoming events. If you would like to receive updates on events, useful resources and research please join our mailing list, at the bottom of our homepage, and follow us on Twitter: [@ncoisaustralia](https://twitter.com/ncoisaustralia).

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Our Key Partners

