NATIONAL CENTRE OF
IMPLEMENTATION SCIENCE

2022
IN REVIEW




CONTENTS

A NOTE FROM OUR DIRECTOR, LUKE WOLFENDEN

I am excited to share these highlights from the NCOIS for 2022.

This year our research team has made significant strides in identifying effective interventions for chronic disease prevention, as well as pinpointing gaps and barriers in their implementation. We have established the evidence base for early childhood education and care and schools, while our national surveys are shedding light on what is being implemented on the ground across Australia.

We have also provided valuable insights about the evidence for implementation strategies for chronic disease prevention in schools and contributed new knowledge to inform the scale up and sustainment of physical activity policies. Our research findings are informing decisions on where best to invest to support the implementation of effective interventions to improve children's health in Australia.

This year we also welcomed new PhD candidates, ECRS and continued to deliver learning opportunities through training, workshops and webinars where we connected with new and diverse audiences.

We are also grateful to our centre partners for their valuable contribution in 2022. Your engagement, expertise, and collaboration have helped us achieve significant milestones, and we are sincerely thankful for your ongoing commitment to supporting our centre's objectives.

Looking ahead, we are excited about what is yet to come and are very much looking forward to continuing our work in 2023 and beyond.

Professor Luke Wolfenden
NCOIS Director

ACKNOWLEDGEMENT OF COUNTRY

NCOIS acknowledges the traditional custodians of the lands on which we live and work. We pay our respects to Elders past, present and emerging.

IMPLEMENTATION GAPS AND PRIORITIES

Our research aims to improve the health of children and young people by ensuring effective chronic disease prevention interventions targeting nutrition, physical activity, obesity, tobacco and alcohol are routinely implemented.

This research stream is identifying which prevention programs, policies and practices targeting risk factors for chronic disease are effective in schools, early childhood education and care (ECEC), sporting clubs and workplaces. In schools and ECEC we are also looking at which of these effective programs and practices are not being routinely implemented, and which should be prioritised for implementation into settings in which children eat, play and learn.

Our Approach in the Early Childhood Education and Care (ECEC) setting.

This research seeks to identify implementation priorities for ECEC-based nutrition interventions (policies, programs and practices) via a five-step evidence-informed process.

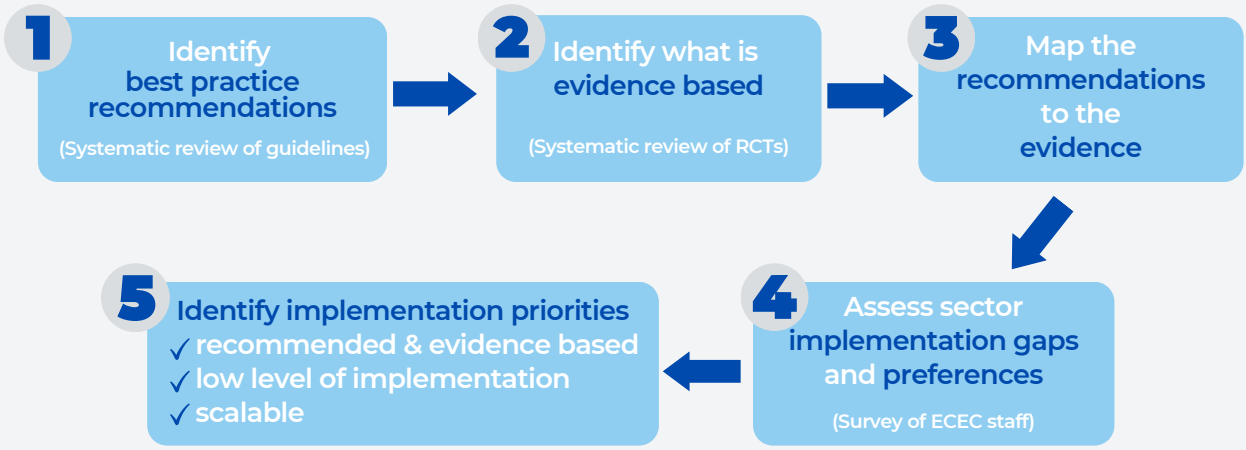


Figure 1. Our five-step evidence-informed process to identify the priorities for nutrition interventions in the ECEC setting.

SYSTEMATIC REVIEWS

In 2022 we continued to build the evidence base for what chronic disease prevention programs, policies and practices are effective in ECEC and Schools.

This research is providing the most up-to-date and comprehensive evidence of what works and what doesn't to address obesity and improve physical activity and nutrition for children.

We published a **review looking at the strategies that are effective at improving the physical activity levels of children in ECEC**. The review also looked at whether strategies recommended in ECEC guidelines are effective. We found that physical activity strategies delivered in ECEC are generally effective in improving children's physical activity levels. We also identified credible evidence to support some strategies recommended in guidelines, such as providing regular physical activity opportunities, creating active environments, and training educators. **Read more here**.

At the end of 2022 we also published our **systematic review and meta-analysis of randomised controlled trials on childhood obesity prevention interventions for school-aged children, differentiated by setting**. The review includes 195 studies published up to June 2021. The meta-analysis found that school-based interventions had a very small positive impact on child weight. No overall significant positive effects were found for after-school, community-based or home-based programs and there was insufficient data on the effects of interventions in health care settings. **Read more here**.

NATIONAL SURVEYS

In 2022 we completed the National survey in ECEC settings to better understand implementation gaps for preventing chronic disease. This research is mapping what is happening on the ground in Australia for the first time and tell us which evidence-based strategies are being routinely implemented.

To help identify what is a good 'fit' for implementation on the ground, we also asked ECEC staff what interventions are able to be implemented within their existing resources and infrastructure.

In 2022 we began to analyse and share our findings with policy makers and practitioners. This information aims to inform decisions about where to invest to support implementation of effective and recommended nutrition and physical activity programs in ECEC to improve child health.

After some covid-related set backs, our National Survey of Schools commenced. **See more here.** This important national survey will collect information about prevention programs implemented in Australian primary schools which target student healthy eating, physical activity, tobacco and alcohol use. The survey also asks about the acceptability of the programs, and any barriers that school's experience when implementing these programs.

The results will be used to identify which programs should be prioritised for implementation in Australian primary schools and what support schools need to implement them.

IDENTIFYING IMPLEMENTATION BARRIERS

Having a comprehensive understanding of barriers (and facilitators) is a fundamental building block to inform implementation strategy development. Research in this stream looks to understand what stops the evidence from being put into practice.

SYSTEMATIC REVIEW

In 2022 we published a **review focusing on identifying barriers to the implementation of chronic disease prevention strategies in Family Day Care (FDC)**.

In order to benefit the children attending FDCs, existing obesity prevention strategies need to be implemented. Knowing what encourages, and what hinders, implementation will help us to design strategies that address the unique circumstances found in FDC settings.

To ensure we captured a wide range of barriers and enablers, we used the Theoretical Domains Framework (TDF) to describe factors that influence the behaviour of FDC providers.


NATIONAL CENTRE OF IMPLEMENTATION SCIENCE

Plain Language Summary
April 2022

Factors influencing implementation of obesity prevention programs in family day care centres.

KEY MESSAGES

- Despite their existence, few healthy eating and physical activity strategies are being implemented in family day care (FDC) services.
- This is often due to a lack of resources (equipment, space, time, etc.) and pressure from parents, children and peers.
- FDC providers are better able to implement strategies when there is strong support from families, alignment with existing resources and routines, and alignment with carers' skills and professional scope of practice.

What is this review about?

We wanted to explore the enablers (things that encourage) and barriers (things that hinder) the implementation of obesity prevention strategies in FDC services.

Why is this review important?

This review fills a gap in knowledge. It is the first systematic review to assess barriers and enablers to the implementation of healthy eating, physical activity and obesity prevention strategies in FDCs.

Existing research focuses on centre-based childcare (pre-schools, long day care, etc.) and cannot always be translated to the unique organisational structure of FDC settings. Compared to centre-based childcare, FDCs provide care for fewer children over a greater age range; operate out of the individual carer's home rather than in purpose-built facilities; and include more variable hours of operation.

In order to benefit the children attending FDCs, existing obesity prevention strategies need to be implemented. Knowing what encourages and what hinders implementation will help us to design strategies that address the unique circumstances found in FDC settings.

Figure 3. Snapshot of the plain language summary for the Family Day care review

Our systematic review included studies of barriers and enablers using qualitative methods (e.g., interviews, focus groups), quantitative methods (e.g., surveys) and mixed methods (e.g., surveys and interviews).

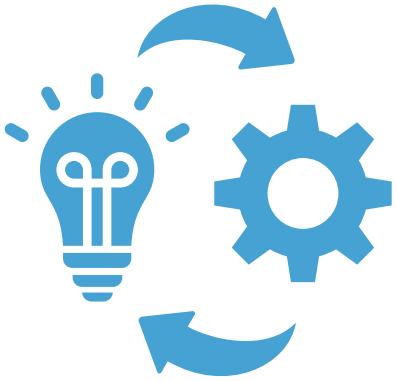
We found that few healthy eating and physical activity strategies are being implemented in FDC. This is often due to a lack of resources (equipment, space, time, etc.) and pressure from parents, children and peers. We also found that FDC providers are better able to implement strategies when there is strong support from families, alignment with existing resources and routines, and alignment with carers' skills and professional scope of practice. **Read more about this review.**

NATIONAL SURVEYS

In 2022 we progressed our national surveys to find out from those working within these settings what the barriers to implementation are. Our ECEC survey was completed and analysis commenced. The results are to be released in 2023 and will provide information about what makes service providers more or less likely to accept and implement the evidence based-recommended strategies.

In 2022 we received the 'green light' to commence our survey of implementation barriers and facilitators in schools. We are also excited to commence a national survey that will examine how barriers to implementation change over time within the ECEC setting. We look forward to sharing results from these surveys as they become available.

IMPLEMENTATION STRATEGIES



Research in this stream aims to synthesise, in a timely way, evidence about effective implementation strategies for chronic disease prevention programs in community settings.

In 2022 we published **a Cochrane review update looking at strategies to support the implementation of school policies and practices to prevent chronic disease**. We also progressed work on the protocol to convert this review to living mode. This approach will enable the review to be continually updated, incorporating relevant new evidence as it becomes available. **Read more about this review.**

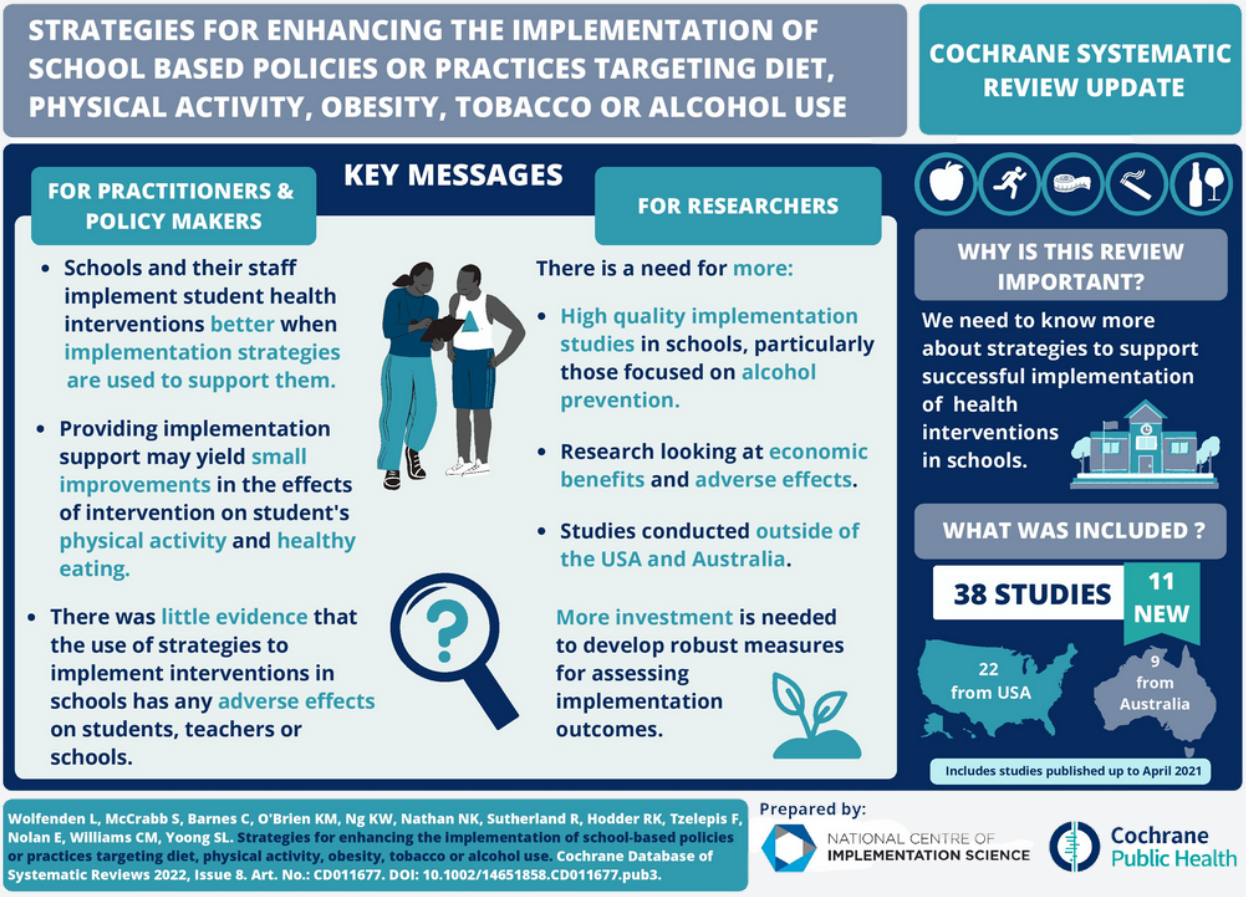


Figure 4. Summary of the Cochrane systematic review update.

OPTIMISING IMPLEMENTATION

Research in this stream aims to provide information about the best models to support schools' implementation of physical activity policies. **Read our 1 page research overview.**

WHAT IS PACE?

The **P**hysically **A**ctive **C**hildren in **E**ducation (PACE) program supports teachers to embed more physical activity throughout the school-day through **active lessons**, **energisers** (short in-class activity breaks), **physical education** and **school sport**.

What sets PACE apart?

It supports schools to **sustain** the program in the **long-term.**

In 2022 we published a **mixed methods study looking at factors to inform the scale up of the Physically Active Children in Education (PACE) program.** In prior studies, the multi-component PACE intervention was proven to be effective in assisting schools to implement mandatory physical activity policies. This new study looked at delivery dose, fidelity, adoption and acceptability of both PACE and an adapted version of PACE with less in-person external support. The study also explored implementation barriers and facilitators using qualitative methods. Our researchers found that school executive support and in-school champions' interest were the most influential factors supporting implementation, regardless of the level of in-person external support offered. **Read more about this study.**

We also looked at **whether the PACE program is cost-effective way to improve implementation of a mandatory school physical activity policy.** This study, published in 2022, is one of few that have examined the costs and cost-effectiveness of public health implementation interventions in schools. Our researchers looked at the investment required to support schools to implement a mandatory physical activity policy. We found that PACE is a cost-effective approach for the health service provider to support schools to implement a physical activity policy mandate. The study also identified where the program could be adapted to reduce costs for future scale-up. **Read more.**

An additional study explored whether a **modified version of PACE could be as effective as the original intervention** in increasing physical activity levels among primary school children. The modified intervention, called Adapted PACE, was designed to reduce face-to-face contact. The study found that Adapted PACE was highly likely to be just as effective as the original PACE intervention in increasing the number of scheduled minutes of physical activity implemented by teachers. The modified intervention was also found to be more cost-efficient than the original PACE intervention. **Read more about this study.**

In 2022, the PACE Phase-II Optimisation comparative effectiveness study finally got underway. While the study design has been amended due to disruptions caused by COVID, school recruitment, intervention delivery and data collection were able to finally commence.

The PACE program of research was also recognised in 2022 by the Hunter Medical Research Institute (Winner Research Team Excellence) and at the 24th Annual NSW Health Awards in the category of Keeping People Healthy.

SCALING UP

Research in this stream focuses on identifying how best to implement, at scale, a school based nutrition program called SWAPIT. SWAP IT is an app-based program that helps parents change what they pack in their children's lunchboxes. SWAP IT works as part of the SkoolBag App that many schools already use to deliver information to parents and carers.

In 2022 we published a **review looking at the effectiveness of scaled-up public health nutrition interventions** that were previously proven to be effective in randomized controlled trials. We found that while these interventions were effective under optimal research conditions, their effectiveness was reduced by about 50% when implemented at scale in real-world settings. The study also identified that adaptations were made to these interventions during the scale-up process, and further research is needed to identify effective scale-up strategies that can help retain the original effectiveness of the interventions.
Read more about the review.

Special Article

A systematic review of adaptations and effectiveness of scaled-up nutrition interventions

Rachel L. Sutherland, Jacklyn K. Jackson, Cassandra Lane, Sam McCrabb, Nicole K. Nathan, Sze Lin Yoong, Melanie Lum, Judith Byaruhanga, Matthew McLaughlin, Alison Brown, Andrew J. Milat, Adrian E. Bauman, and Luke Wolfenden

Context: *Public health nutrition interventions shown to be effective under optimal research conditions need to be scaled up and implemented in real-world settings.* ***Objectives:*** *The primary aim for this review was to assess the effectiveness of scaled-up public health nutrition interventions with proven efficacy, as examined in a randomized controlled trial. Secondary objectives were to: 1) determine if the effect size of scaled-up interventions were comparable to the prescale effect, and; 2) identify any adaptations made during the scale-up process.* ***Data sources:*** *Six electronic databases were searched and field experts contacted.* ***Study selection:*** *An intervention was considered scaled up if it was delivered on a larger scale than a preceding randomized controlled trial ("prescale") in which a significant intervention effect ($P \leq 0.05$) was reported on a measure of nutrition.* ***Data extraction:*** *Two reviewers independently performed screening and data extraction. Effect size differences between prescale and scaled-up interventions were quantified. Adaptations to scale-up studies were coded according to the Adaptome model.* ***Results:*** *Ten scaled-up nutrition interventions were identified. The effect size difference between prescale trials and scaled-up studies ranged from −32.2% to 222% (median, 50%). All studies made adaptations between prescale to scaled-up interventions.* ***Conclusion:*** *The effects of nutrition interventions implemented at scale typically were half that achieved in prior efficacy trials. Identifying effective scale-up strategies and methods to support retainment of the original prescale effect size is urgently needed to inform public health policy.* ***Systematic Review Registration:*** *PROSPERO registration no.CRD42020149267.*

Affiliation: R.L. Sutherland, J.K. Jackson, C. Lane, S. McCrabb, N.K. Nathan, S.L. Yoong, M. Lum, J. Byaruhanga, M. McLaughlin, A. Brown, A.E. Bauman, and L. Wolfenden are with the School of Medicine and Public Health, Faculty of Health and Medicine, University of Newcastle, Callaghan, New South Wales, Australia. R.L. Sutherland, J.K. Jackson, C. Lane, S. McCrabb, N.K. Nathan, S.L. Yoong, M. Lum, J. Byaruhanga, M. McLaughlin, A. Brown, and L. Wolfenden are with the Hunter Medical Research Institute, New Lambton Heights, New South Wales, Australia. R.L. Sutherland, C. Lane, N.K. Nathan, S.L. Yoong, M. Lum, J. Byaruhanga, M. McLaughlin, A. Brown, and L. Wolfenden are with the Hunter New England Population Health Unit, Hunter New England Local Health District, Wallsend, New South Wales, Australia. S.L. Yoong is with the School of Health Sciences, Swinburne University of Technology, Hawthorn, Victoria, Australia. A.J. Milat and A.E. Bauman are with the School of Public Health, University of Sydney, Sydney, New South Wales, Australia

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Key words: adaptation, public health nutrition, scale-up, systematic review

https://doi.org/10.1093/nutrit/nuab096

Figure 5. The published systematic review in *Nutrition Reviews*.

In 2022 our researchers commenced the SWAP IT scale up trial in Hunter New England with 165 eligible primary schools randomised to either intervention or wait-list control. Program scale up in Central Coast and Mid North Coast Local Health Districts also started and a community of practice to share lessons learnt from the scale up was established. The planning for National dissemination is also progressing with five Jurisdictions across Australia agreeing to collaborate on a funding application to scale-up SWAP IT nationally.

This program of research was also recognised at the 2022 24th Annual NSW Health Awards, as a joint winner of the award for Health Research and Innovation.

SUSTAINING IMPLEMENTATION

Research in this stream aims to create evidence that policy makers, practitioners and other stakeholders can use to ensure their interventions are made to last, and that health benefits endure in the long term.

In 2022 we published **a study looking at factors to support sustainment of weekly physical activity in schools.** Our researchers used a thorough and proven measure to look at the factors that are related to schools continuing to deliver weekly physical activity once initial support is withdrawn. They also asked teachers which strategies they think are most useful (and are therefore most likely to keep using) to support their ongoing delivery of physical activity programs. **Read the plain language summary here.**

Figure 6. Summary of Sustaining Implementation - a handout prepared for the International Congress on Obesity workshop led by NCOIS in 2022.

NCOIS researchers with co-authors also published a paper **examining the challenges of sustaining public health prevention programs at a population level.** The study involved interviews with population health experts working in Australian government and non-government agencies to identify key factors and mechanisms that contribute to the sustainment of population prevention programs. The research found four main barriers to the sustainment of these programs: short-term political and funding cycles, competing interests, silo thinking within health service delivery, and the fit of the program to population needs. The study suggests that long-range planning and resourcing, flexible program design and management, leadership and partnerships, evidence generation, and system support structures can help to overcome these barriers and ensure the sustainability of population health prevention programs. **Read the full paper here.**

This year we also commenced our National longitudinal study of barriers and facilitators of sustained program implementation in Australian Schools. Planning for a trial to assess the effectiveness of sustainability support strategies provided to schools to sustain their long-term implementation of physical activity across the school week also commenced. 2022 saw the formation of a trial advisory group, trial registration completed and ethical approval granted.

METHODS & GUIDANCE

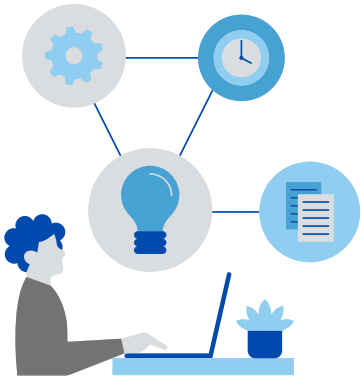
In 2022, our researchers were also active in producing guidance to inform methods in sustainability science.

One study aimed to **create a glossary of strategies that can be used to sustain interventions, building on existing compilations such as the Expert Recommendations for Implementing Change (ERIC).** The authors used a two-phase approach to adapt the ERIC glossary and incorporate a focus on sustainment. The authors then applied the Exploration, Preparation, Implementation and Sustainment (EPIS) Framework to identify when each strategy could be best employed across different phases. The sustainment-explicit ERIC glossary can help researchers and practitioners develop, test, or apply strategies to improve the sustainment of evidence-based interventions in real-world settings, but empirical testing is needed to refine or add to the glossary in the future. **Read more.**

We also published a **systematic review looking at the quality, and use, of measures of sustainability (i.e. ongoing delivery of evidence based interventions) and sustainability determinants (i.e. factors that impact on sustainability) in clinical, public health, and community settings.** The review includes 223 studies representing 28 different measures. Overall, the review found that current measures of sustainability and sustainability determinants are of variable quality and have not been widely used in research. For more information, see the **full text article** and the **plain language summary**.

OUR CENTRE'S IMPACT IN 2022

KNOWLEDGE GENERATION



17 publications
(see pages 16-17 for more information)

35 conference presentations

SEE ALL NCOIS PUBLICATIONS ON OUR WEBSITE

INFORMED DECISION MAKING

11 research briefings, consultations & presentations to government departments & agencies

3 research briefings, consultations & presentations to non-government agencies

Research used to inform health system improvements

GRANT FUNDING

20 grants awarded

3 nationally competitive grants

$5.75 million awarded

CAPACITY BUILDING

In 2022 NCOIS continued to building capacity in implementation research and knowledge translation.

TIDIRH

Twenty participants completed the second round of our Training Institute for Dissemination and Implementation Research in Health (TIDIRH), culminating in a face to face workshop in March.

We were thrilled to bring together policy makers, practitioners and researchers from across Australia with National and International implementation experts to support their ability to undertake high-quality dissemination and implementation research.

CERI

In 2022, we took a lead role in delivering a number of capacity building activities with the Collaboration for Enhanced Research Impact (CERI).

Our EMCRS were on the organising committee that planned and delivered the CERI Emerging Leaders Online Symposium that was attended by 120 people from across Australia.

We also delivered two of the Symposium's four workshops including "The art of co-production: exploring approaches and experiences in practice" with Professor Luke Wolfenden and Ms Kate Garvey sharing insights on their experience of co-production in practice. The second workshop "Connecting research evidence to policy decisions", led by Alix Hall with Miranda Cumpston, explored the trials and tribulations of developing policy-relevant and impactful evidence.

The **Collaboration for Enhanced Research Impact (CERI)** is a joint initiative between The Australian Prevention Partnership Centre and NHMRC Centres of Research Excellence (CREs).

CREs work together to find alignment in the policy and practice implications of our work and nurture the next generation of prevention leaders in Australia.

CAPACITY BUILDING

In 2022 we also...

- established the CERI Implementation Science working group.
- supported the 2023 Implementation Science Health Conference Australia through contributing to the event's scientific and organising committees.
- continued to support professional development activities of the NSW Local Health District health promotion research and evaluation network.
- Established the planning group to coordinate the 2023 NSW Health Promotion Symposium.

The snapshot below highlights some more of our capacity building efforts in 2022.

13 PhD candidates

2 PhD completions

15 early-mid career researchers

50% growth since our Centre was established in 2019.

3 workshops delivered by NCOIS researchers

reaching 180 people

ICS 2022 Sustainability Workshop

3 webinars delivered

to 570 participants

10 invited presentations

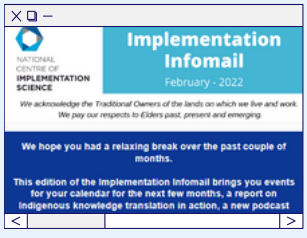
delivered by NCOIS researchers

6 workshops provided

to our researchers & partners to continue to develop knowledge translation skills

10 infomails (e-newsletters) sent.

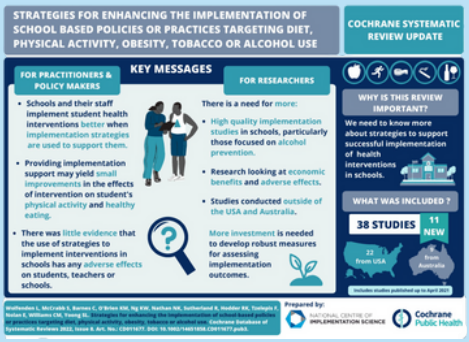
Each reaching over 200 researchers, practitioners & partners.



KNOWLEDGE TRANSLATION

In 2022 we translated and disseminated our research through our website news, e-newsletter, social media, in plain language summaries, research briefs, presentations and infographics.

Our research was translated into plain language summaries, research briefs, a workshop handout & an infographic. See below for a snapshot of these knowledge products.



This **infographic** was created to promote an updated systematic review published by NCOIS & Cochrane via twitter and the NCOIS website.

The tweet has been viewed over 4,000 times and the website has been viewed by ~220 people since it was published in August.

Three **plain language summaries** have been developed for NCOIS papers.

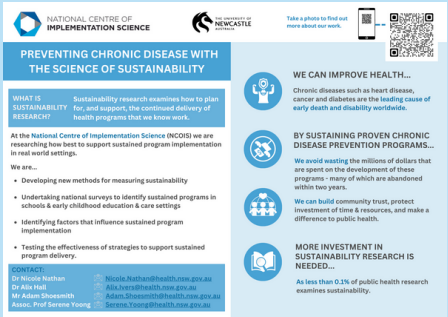
These have been used to promote NCOIS research via twitter, the NCOIS website and direct emails.

Cumulatively, these have been viewed over 80 times on the website, and engaged 109 users on Twitter.

Four **research briefs** have been developed over this period to provide updates to exisiting & potential stakeholders in the school and ECEC settings.

Our research briefs outline project aims & design, key findings & recommendations based on NCOIS research.

Over this period we have provided these research briefs to state health departments in New South Wales, Victoria, South Australia & Western Australia.



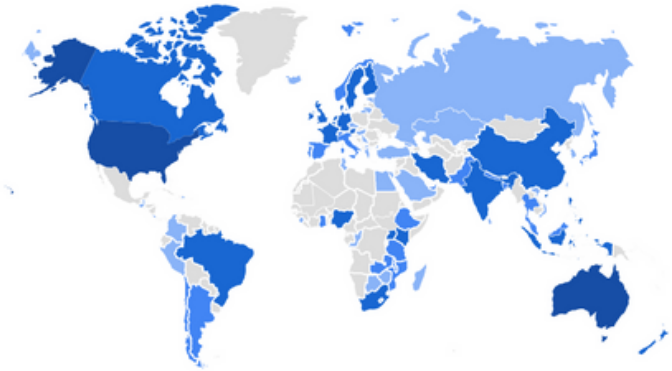
The **handout** provided to participants at the NCOIS Sustainability workshop at the International Congress on Obesity in late 2022 reached 80 people in person, and a further 20 people via the NCOIS website.

WEBSITE & SOCIAL MEDIA (TWITTER)

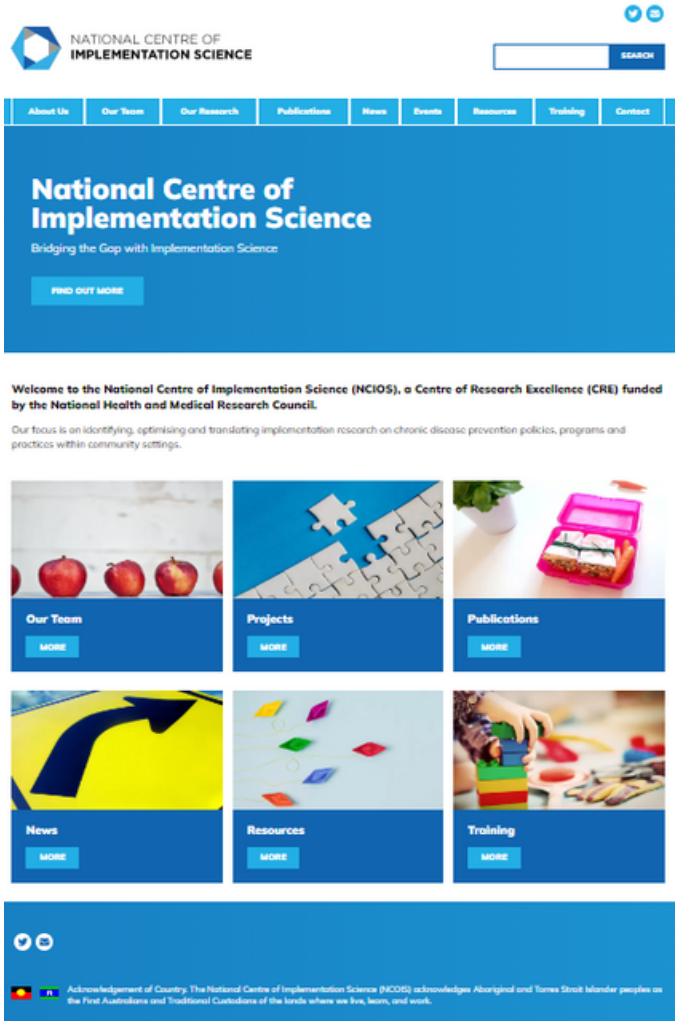
Over the past year, our website has seen 3, 500 NEW users. This is an increase of 52% compared to the 2021 reporting period.

The majority of our users are from Australia (29%), with smaller numbers of users accessing our website in the USA (15%), UK (3%), India (2%) and Canada (2%).

Other than directly accessing our website, most users access the NCOIS site via search engines (45%) and links from twitter (10%).



Above left: A map highlighting all of the countries of origin of visitors to the NCOIS website in 2022.



Above right: The NCOIS website had a makeover in 2022.

Our Twitter following has increased by 50% to 1200 followers.

Over the year, we gained 82, 300 impressions of our tweets.

Our top tweet (pictured right) in 2022 promoted the publication of NCOIS' and Cochrane's updated systematic review exploring strategies that help schools implement policies and practices to prevent chronicdisease.

This tweet gained 4,000 impressions & 190 engagements (link clicks, media views, retweets, & likes).

AWARDS

NSW HEALTH

2022 NSW Health Awards

Keeping People Healthy
Winner: Physically Active Children in Education (PACE) Team (led by Dr Nicole Nathan)

Health Research & Innovation
Joint winner: SWAP-IT team (led by Dr Rachel Sutherland)

HUNTER MEDICAL RESEARCH INSTITUTE

HMRI Foundation Research Team Excellence Award 2022
Winner: Physically Active Children in Education (PACE) Team (led by Dr Nicole Nathan)
https://hmri.org.au/news-article/2022-hmri-award-winners-announced

HUNTER NEW ENGLAND HEALTH

2022 Health Excellence Awards
High Value Health Care Award - Keeping People Healthy Category
Finalist: Physically Active Children in Education (PACE) Team (led by Dr Nicole Nathan)

High Value Health Care Award - Health Research & Innovation Category
Finalist: SWAP-IT team (led by Dr Rachel Sutherland)
2022 HNE Health Excellence Awards finalists | HNE Health (nsw.gov.au)

AUSTRALIAN SOCIETY FOR MEDICAL RESEARCH

30th Australian Society for Medical Research (ASMR) NSW Annual Scientific Meeting

Best PhD Oral Presentation Award 2022
Winner: Adam Shoesmith for presentation "Multi-strategy intervention increases school implementation of a mandatory physical activity policy but does it sustain it?"

UNIVERSITY OF NEWCASTLE

Career development award
Winner: Courtney Barnes

Three minute thesis - School of Medicine and Public Health people's choice award
Winner: Adam Shoesmith

INTERNATIONAL SOCIETY FOR BEHAVIOURAL NUTRITION AND PHYSICAL ACTIVITY

2022 Annual Meeting

Best Oral presentation-PhD Category
Winner: Adam Shoesmith

Best In-Person presentation - Implementation & Scalability Special Interest Group.
Winner: Cassandra Lane

PAPERS

1. Lum M, Wolfenden L, Jones J, Grady A, Christian H, Reilly K, Yoong SL (2022). **Interventions to Improve Child Physical Activity in the Early Childhood Education and Care Setting: An Umbrella Review.** International Journal of Environmental Research and Public Health, 19(4), 1963. https://doi.org/10.3390/ijerph19041963

2. Hodder RK, O'Brien KM, Lorien S, Wolfenden L, Moore TH, Hall A, Yoong SL, Summerbell C (2022). **Interventions to prevent obesity in school-aged children 6-18 years: An update of a Cochrane systematic review and meta-analysis including studies from 2015-2021.** EClinicalMedicine. https://doi.org/10.1016/j.eclinm.2022.101635

3. Grady A, Jackson JK, Lum M, Delaney T, Jones J, Kerr J, Falkiner M, Yoong S (2022). **Barriers and facilitators to the implementation of healthy eating, physical activity and obesity prevention policies, practices or programs in family daycare: A mixed method systematic review.** Preventive Medicine, 154, 107011. https://doi.org/10.1016/j.ypmed.2022.107011

4. Wolfenden L, McCrabb S, Barnes C, O'Brien KM, Ng KW, Nathan NK, Sutherland R, Hodder RK, Tzelepis F, Nolan E, Williams CM (2022). **Strategies for enhancing the implementation of school-based policies or practices targeting diet, physical activity, obesity, tobacco or alcohol use.** Cochrane Database of Systematic Reviews, 4, CD011677. https://doi.org/10.1002/14651858.CD011677.pub3

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