THE IMPLEMENTATION CAFÉ

brewing ideas for research impact

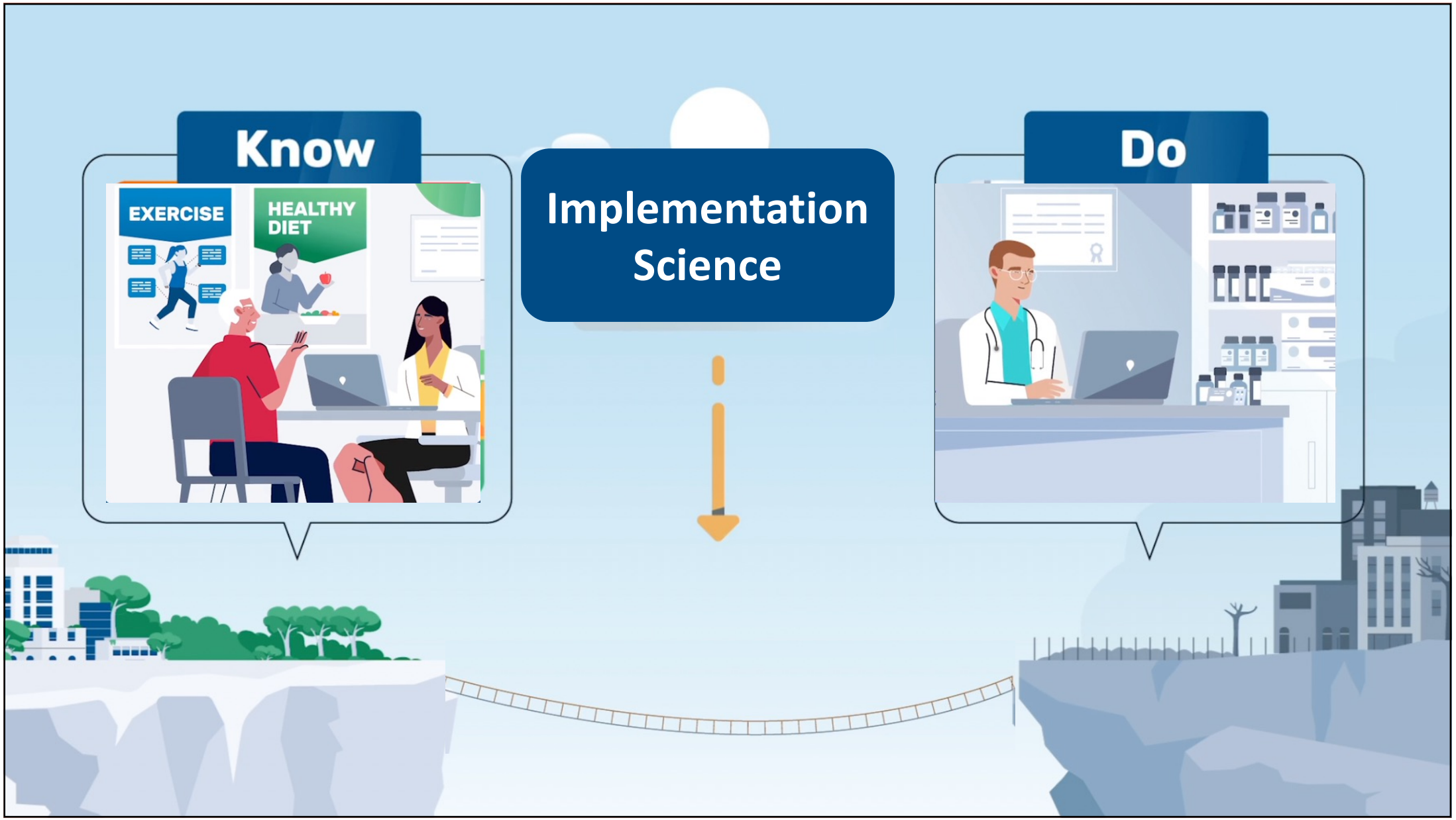
Journal Club #1: IMPLEMENTATION SCIENCE IN HEALTHCARE & MEDICINE

Supported by

Nutrition & Health Innovation Research Institute
STRATEGIC RESEARCH INSTITUTE

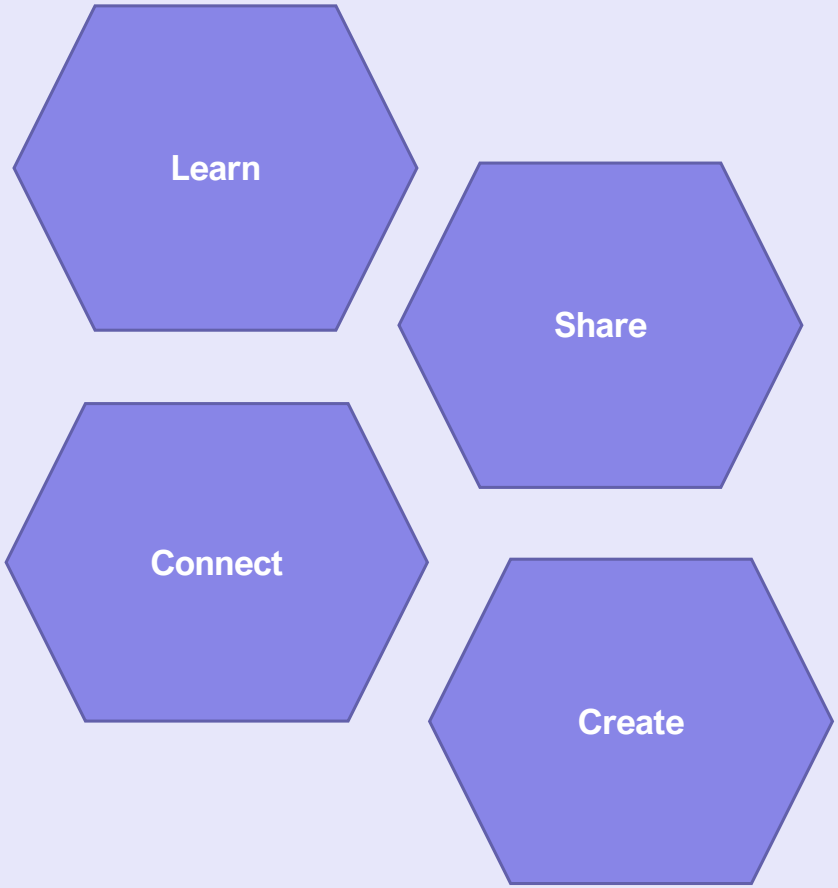
Acknowledgment of Country

Edith Cowan University acknowledges and respects the Noongar people, who are the traditional custodians of the land upon which its campuses stand and its programs operate. In particular, ECU pays its respects to the Noongar Elders, past and present, and embraces their culture, wisdom and knowledge.


Know
EXERCISE
HEALTHY DIET
Implementation Science
Do

Healthy Foods
FRESH
SALADS

A space for learning



What would you like to know?

What would you like to do?

Who would you like to hear from?

Complete our survey!

Who we are

THE IMPLEMENTATION CAFÉ

brewing ideas for research impact

Dr Mary Kennedy

Dr Eddie Phillips

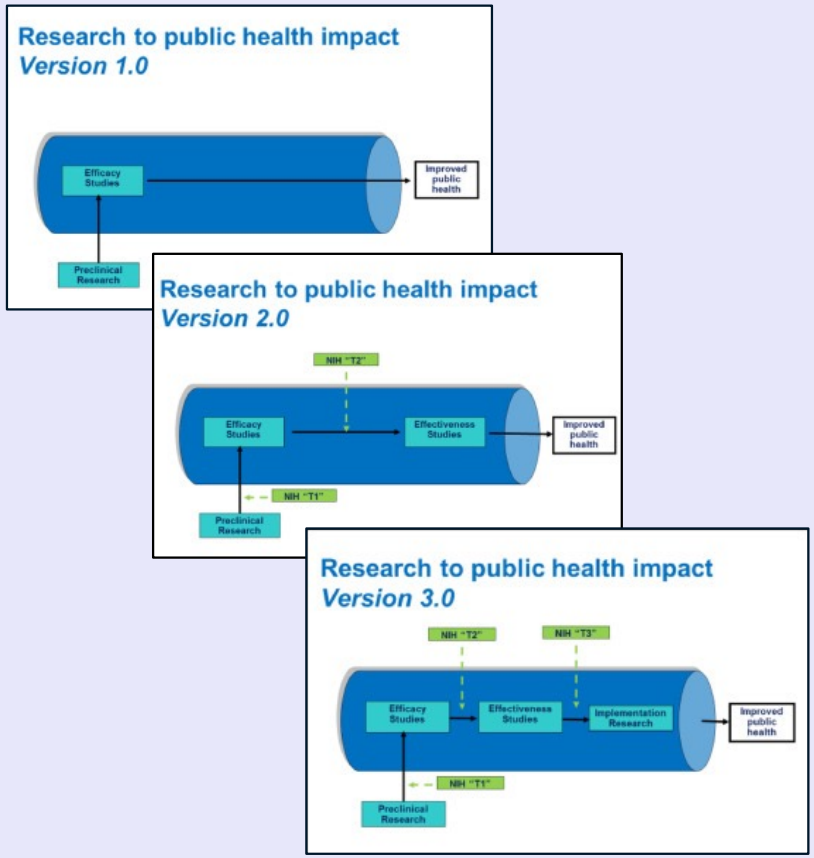
Dr Annie de Leo

Dr Lauren Fortington

Prof Sara Bayes

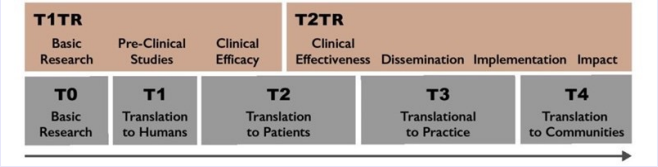
Implementation **Science**

Implementation science: What is it and why should I care? - ScienceDirect



Relatively new discipline

- **Recognition that developing good evidence for health care was not in itself, any guarantee that it would be taken up by health care professionals**
- **Addresses the 'second translation gap'**



'The scientific study of methods to promote the uptake of research findings and other evidence-based interventions , programs and innovations into routine practice'

It has its own (OA) journals

- **Implementation Science (est. 2006)**
- **Implementation Science Communications (est. 2020)**

Implementation Science and Implementation Science Communications: a refreshed description of the journals' scope and expectations | Implementation Science | Full Text (biomedcentral.com)

Implementation **Research**

AUSTRALIA ECU EDITH COWAN UNIVERSITY

'Studies that focus on implementation *objects*[1] and the *structures*[2] that enable their implementation'

[1]For example, clinical or public health interventions, guidelines, medical technologies (medicines, devices), healthcare delivery models (e.g., structured diabetes care)

[2]Factors in the practice context that may help or hinder implementation

improving people's health

strengthening health service delivery

empowering communities and beneficiaries

informing policy design and implementation

In a nutshell…

- The intervention/practice/innovation is **THE THING**
- *Effectiveness* research looks at whether **THE THING** works
- *Implementation* research looks at how best to help people/places **DO THE THING**
- Implementation strategies are the stuff we do to try to help people/places **DO THE THING**
- Main implementation outcomes are **HOW MUCH** and **HOW WELL** they **DO THE THING**

Theories
Models
Frameworks

Theories, Models and Frameworks (TMF)

T-CaST (2018)

Ten recommendations for using implementation frameworks in research and practice (diva-portal.org)

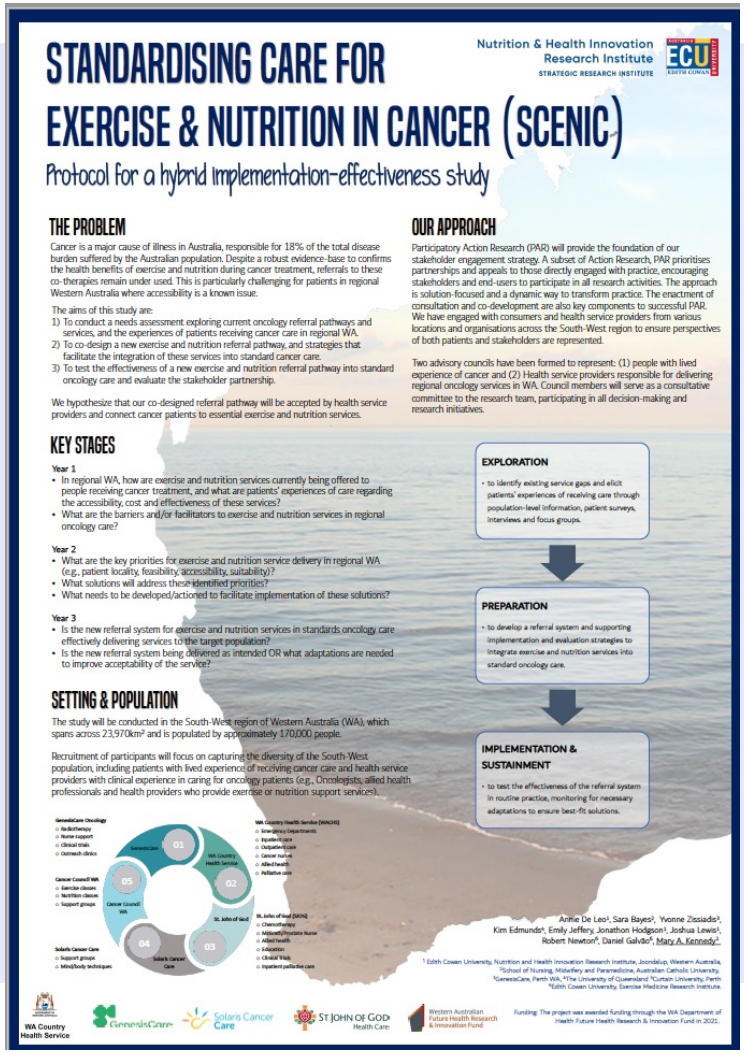
Planning and evaluation

- Exploration, Preparation, Implementation, Sustainment (EPIS) Framework
- Reach, Effectiveness, Adoption, Implementation, and Maintenance (RE-AIM) **Example**
- Theoretical Domains Framework (TDF) / Capability, Opportunity, Motivation, Behaviour (COM-B) **Example**

Context assessment

- Practical Implementation Sustainability Model (PRISM)
- Consolidated Framework for Implementation Research (CFIR)

EXAMPLE FRAMEWORKS



STANDARDISING CARE FOR
EXERCISE & NUTRITION IN CANCER (SCENIC)

Protocol for a hybrid implementation-effectiveness study

Nutrition & Health Innovation Research Institute
STRATEGIC RESEARCH INSTITUTE

THE PROBLEM

Cancer is a major cause of illness in Australia, responsible for 18% of the total disease burden suffered by the Australian population. Despite a robust evidence-base to confirms the health benefits of exercise and nutrition during cancer treatment, referrals to these co-therapies remain under used. This is particularly challenging for patients in regional Western Australia where accessibility is a known issue.

The aims of this study are:
1) To conduct a needs assessment exploring current oncology referral pathways and services, and the experiences of patients receiving cancer care in regional WA.
2) To co-design a new exercise and nutrition referral pathway, and strategies that facilitate the integration of these services into standard cancer care.
3) To test the effectiveness of a new exercise and nutrition referral pathway into standard oncology care and evaluate the stakeholder partnership.

We hypothesize that our co-designed referral pathway will be accepted by health service providers and connect cancer patients to essential exercise and nutrition services.

OUR APPROACH

Participatory Action Research (PAR) will provide the foundation of our stakeholder engagement strategy. A subset of Action Research, PAR prioritises partnerships and appeals to those directly engaged with practice, encouraging stakeholders and end-users to participate in all research activities. The approach is solution-focused and a dynamic way to transform practice. The enactment of consultation and co-development are also key components to successful PAR. We have engaged with consumers and health service providers from various locations and organisations across the South-West region to ensure perspectives of both patients and stakeholders are represented.

Two advisory councils have been formed to represent: (1) people with lived experience of cancer and (2) Health service providers responsible for delivering regional oncology services in WA. Council members will serve as a consultative committee to the research team, participating in all decision-making and research initiatives.

KEY STAGES

Year 1
- In regional WA, how are exercise and nutrition services currently being offered to people receiving cancer treatment, and what are patients' experiences of care regarding the accessibility, cost and effectiveness of these services?
- What are the barriers and/or facilitators to exercise and nutrition services in regional oncology care?

Year 2
- What are the key priorities for exercise and nutrition service delivery in regional WA (e.g., patient locality, feasibility, accessibility, suitability)?
- What solutions will address these identified priorities?
- What needs to be developed/actioned to facilitate implementation of these solutions?

Year 3
- Is the new referral system for exercise and nutrition services in standards oncology care effectively delivering services to the target population?
- Is the new referral system being delivered as intended OR what adaptations are needed to improve acceptability of the service?

EXPLORATION
- to identify existing service gaps and elicit patients' experiences of receiving care through population-level information, patient surveys, interviews and focus groups.

PREPARATION
- to develop a referral system and supporting implementation and evaluation strategies to integrate exercise and nutrition services into standard oncology care.

IMPLEMENTATION & SUSTAINMENT
- to test the effectiveness of the referral system in routine practice, monitoring for necessary adaptations to ensure best-fit solutions.

SETTING & POPULATION

The study will be conducted in the South-West region of Western Australia (WA), which spans across 23,970km² and is populated by approximately 170,000 people.

Recruitment of participants will focus on capturing the diversity of the South-West population, including patients with lived experience of receiving cancer care and health service providers with clinical experience in caring for oncology patients (e.g., Oncologists, allied health professionals and health providers who provide exercise or nutrition support services).

Annie De Leo[1], Sara Bayes[2], Yvonne Zissiadis[3], Kim Edmunds[4], Emily Jeffery, Jonathon Hodgson[1], Joshua Lewis[1], Robert Newton[4], Daniel Galvão[4], Mary A. Kennedy[5].

[1] Edith Cowan University, Nutrition and Health Innovation Research Institute, Joondalup, Western Australia, [2]School of Nursing, Midwifery and Paramedicine, Australian Catholic University, [3]GenesisCare, Perth WA, [4]The University of Queensland [5]Curtain University, Perth [6]Edith Cowan University, Exercise Medicine Research Institute.

Funding: The project was awarded funding through the WA Department of Health Future Health Research & Innovation Fund in 2021.

De Leo *et al. Implementation Science Communications* (2021) 2:7
https://doi.org/10.1186/s43058-020-00100-x

Implementation Science Communications

SHORT REPORT Open Access

Exploring the usability of the COM-B model and Theoretical Domains Framework (TDF) to define the helpers of and hindrances to evidence-based practice in midwifery

Annemarie De Leo[1*], Sara Bayes[1], Dianne Bloxsome[2] and Janice Butt[1]

Emergency medicine journal. 2020;37:617-622 Original research

OPEN ACCESS

Integrating and maintaining automated external defibrillators and emergency planning in community sport settings: a qualitative case study

Lauren V Fortington [1], Sheree Bekker [2], Caroline F Finch [1]

EXAMPLE FRAMEWORK: EPIS

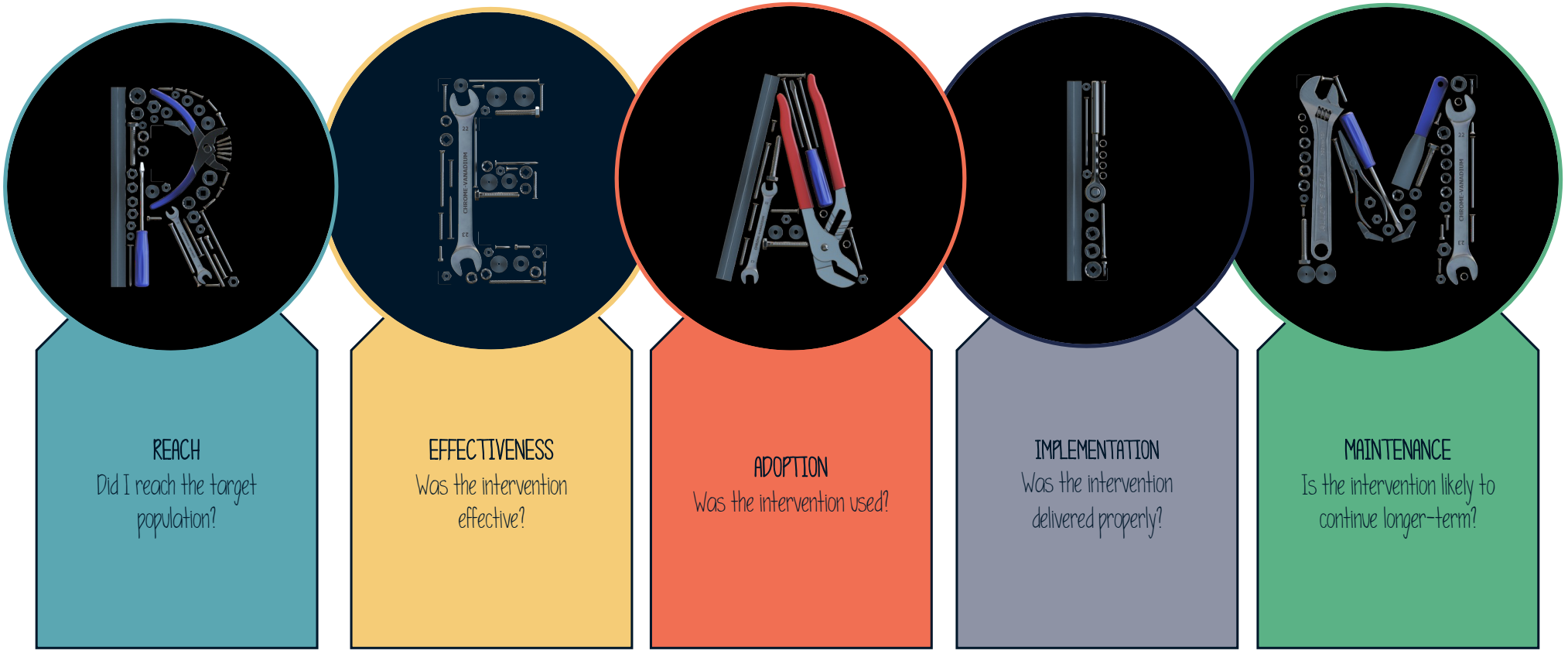
	EXPLORE	PREPARE	IMPLEMENT	SUSTAIN
Questions to be answered	What is and is not working and why?	What is needed for pathway integration?	How do you embed the process into standard practice?	How do we promote the continued use?
Approach	**Conduct Needs Assessment** Surveys, Interviews, Observations, Clinical & Resource Audits	**Create Implementation Strategy** Co-develop model of care for integration	**Test the Strategy** Put strategies in place, monitor, and iteratively redesign	**Support Ongoing Progress** Provide resources to enhance success & promote dissemination

Adapted from:

Aarons GA, Hulburt M, Horwitz SM. Advancing a conceptual model of evidence-based practice implementation in public service sectors. *Adm Policy Ment Health.* 2011;38(1):4-23

Lane-Fall, MB et al. Handoffs and transitions in critical care (HATRICC): protocol for a mixed-methods study of operating room to intensive care unit handoffs. *BMC Surgery.* 2014;14(1), 1-11

EXAMPLE FRAMEWORK: RE-AIM



REACH
Did I reach the target population?

EFFECTIVENESS
Was the intervention effective?

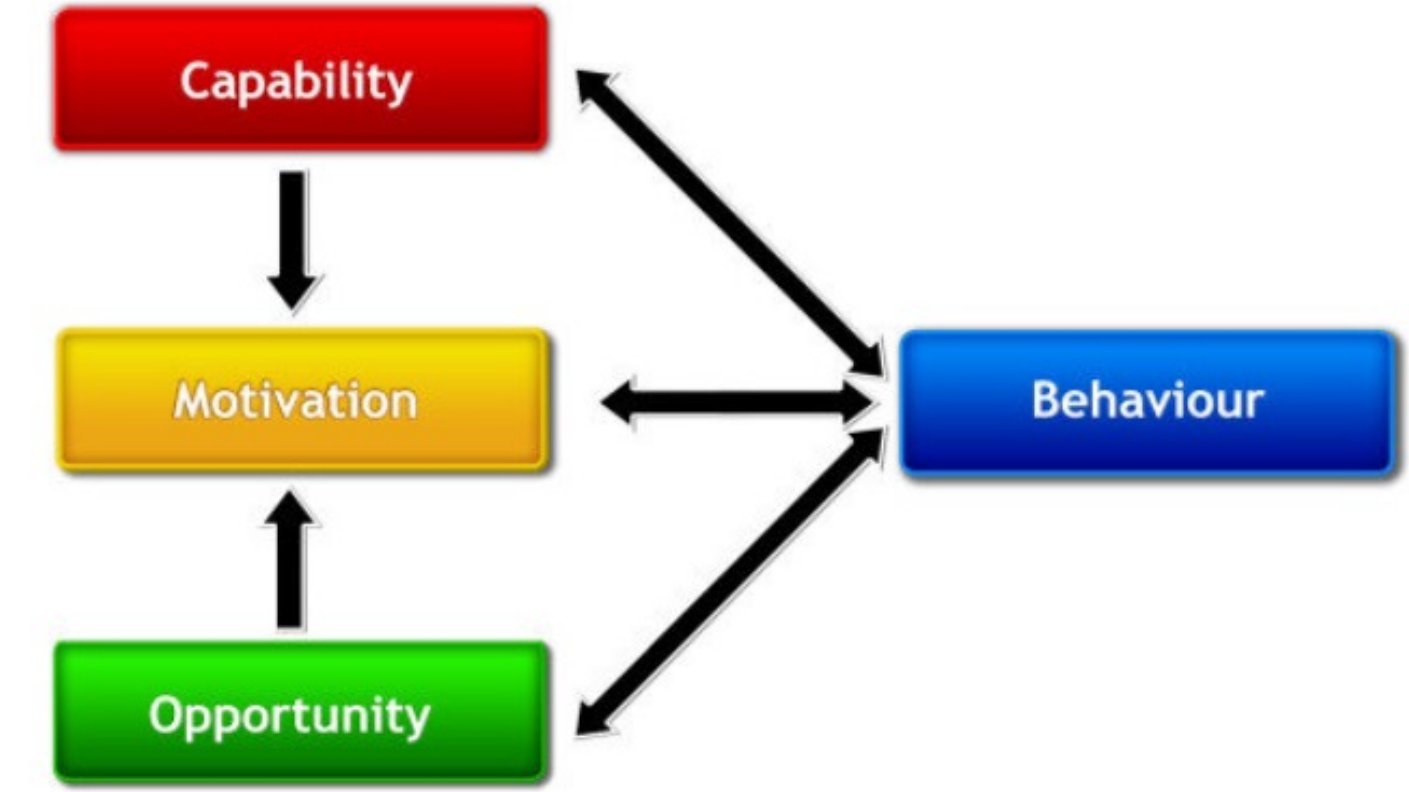
ADOPTION
Was the intervention used?

IMPLEMENTATION
Was the intervention delivered properly?

MAINTENANCE
Is the intervention likely to continue longer-term?

Fortington LV, Bekker S and Finch CF. Integrating and maintaining automated external defibrillators and emergency planning in community sport settings: a qualitative case study. *Emergency Medicine Journal.* 2020;37:617-622.

EXAMPLE FRAMEWORK: COM-B



The COM-B system - a framework for understanding behaviour.

De Leo, A., Bayes, S., Bloxsome, D. *et al.* Exploring the usability of the COM-B model and Theoretical Domains Framework (TDF) to define the helpers of and hindrances to evidence-based practice in midwifery. *Implement Sci Commun* **2**, 7 (2021)

WHERE ARE WE HEADING?

Taylor, N., McKay, S., Long, J.C. *et al.* Aligning intuition and theory: a novel approach to identifying the determinants of behaviours necessary to support implementation of evidence into practice. *Implementation Sci* **18**, 29 (2023).

https://doi.org/10.1186/s13012-023-01284-1

Taylor *et al. Implementation Science* (2023) 18:29
https://doi.org/10.1186/s13012-023-01284-1

Implementation Science

METHODOLOGY Open Access

Aligning intuition and theory: a novel approach to identifying the determinants of behaviours necessary to support implementation of evidence into practice

Natalie Taylor[1*], Skye McKay[1], Janet C. Long[2], Clara Gaff[3], Kathryn North[4], Jeffrey Braithwaite[2], Jill J. Francis[5] and Stephanie Best[2,6,7,8]

Abstract

Background Disentangling the interplay between experience-based intuition and theory-informed implementation is crucial for identifying the direct contribution theory can make for generating behaviour changes needed for successful evidence translation. In the context of 'clinicogenomics', a complex and rapidly evolving field demanding swift practice change, we aimed to (a) describe a combined clinician intuition- and theory-driven method for identifying determinants of and strategies for implementing clinicogenomics, and (b) articulate a structured approach to standardise hypothesised behavioural pathways and make potential underlying theory explicit.

Methods Interview data from 16 non-genetic medical specialists using genomics in practice identified three target behaviour areas across the testing process: (1) identifying patients, (2) test ordering and reporting, (3) communicating results. The Theoretical Domains Framework (TDF) was used to group barriers and facilitators to performing these actions. Barriers were grouped by distinct TDF domains, with 'overarching' TDF themes identified for overlapping barriers. Clinician intuitively-derived implementation strategies were matched with corresponding barriers, and retrospectively coded against behaviour change techniques (BCTs). Where no intuitive strategies were provided, theory-driven strategies were generated. An algorithm was developed and applied to articulate how implementation strategies address barriers to influence behaviour change.

Results Across all target behaviour areas, 32 identified barriers were coded across seven distinct TDF domains and eight overarching TDF themes. Within the 29 intuitive strategies, 21 BCTs were represented and used on 49 occasions to address 23 barriers. On 10 (20%) of these occasions, existing empirical links were found between BCTs and corresponding distinct TDF-coded barriers. Twenty additional theory-driven implementation strategies (using 19 BCTs on 31 occasions) were developed to address nine remaining barriers.

Conclusion Clinicians naturally generate their own solutions when implementing clinical interventions, and in this clinicogenomics example these intuitive strategies aligned with theoretical recommendations 20% of the time. We have matched intuitive strategies with theory-driven BCTs to make potential underlying theory explicit through proposed structured hypothesised causal pathways. Transparency and efficiency are enhanced, providing a novel method to identify determinants of implementation. Operationalising this approach to support the design

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