

Defining and measuring
'implementation success' in health
service research: a case study of
implementation of the Clinical
Pathway for the Screening,
Assessment and Management of
Anxiety and Depression in Adult
Cancer Patients (ADAPT CP).



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Acknowledgements - the ADAPT Team

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Implementation is hard to achieve

- Many evidence-based interventions not successfully implemented
(Grimshaw, Eccles, & Tetroe, 2004; Grol, 2003)
- 30-40% of patients don't receive care according to current scientific evidence;
- 20-25% receive care that is not needed/potentially harmful
(Grol, 2011)
- Time to uptake is 17 years on average
(Morris et al 2011)
- Fewer interventions are sustained in the longer term
(Gould, Moralejo, Drey, & Chudleigh, 2010)



Health services research and implementation

Health services research primarily focuses on developing and testing the efficacy and effectiveness of interventions to improve patient care and outcomes.

Clinical pathways used to inform patient management and care, provide evidence-based recommendations to guide best practice. Demonstrated success in:

- Change in patient management
- Improved patient outcomes

(Rotter et al Cochrane Database Syst Rev, 2010)

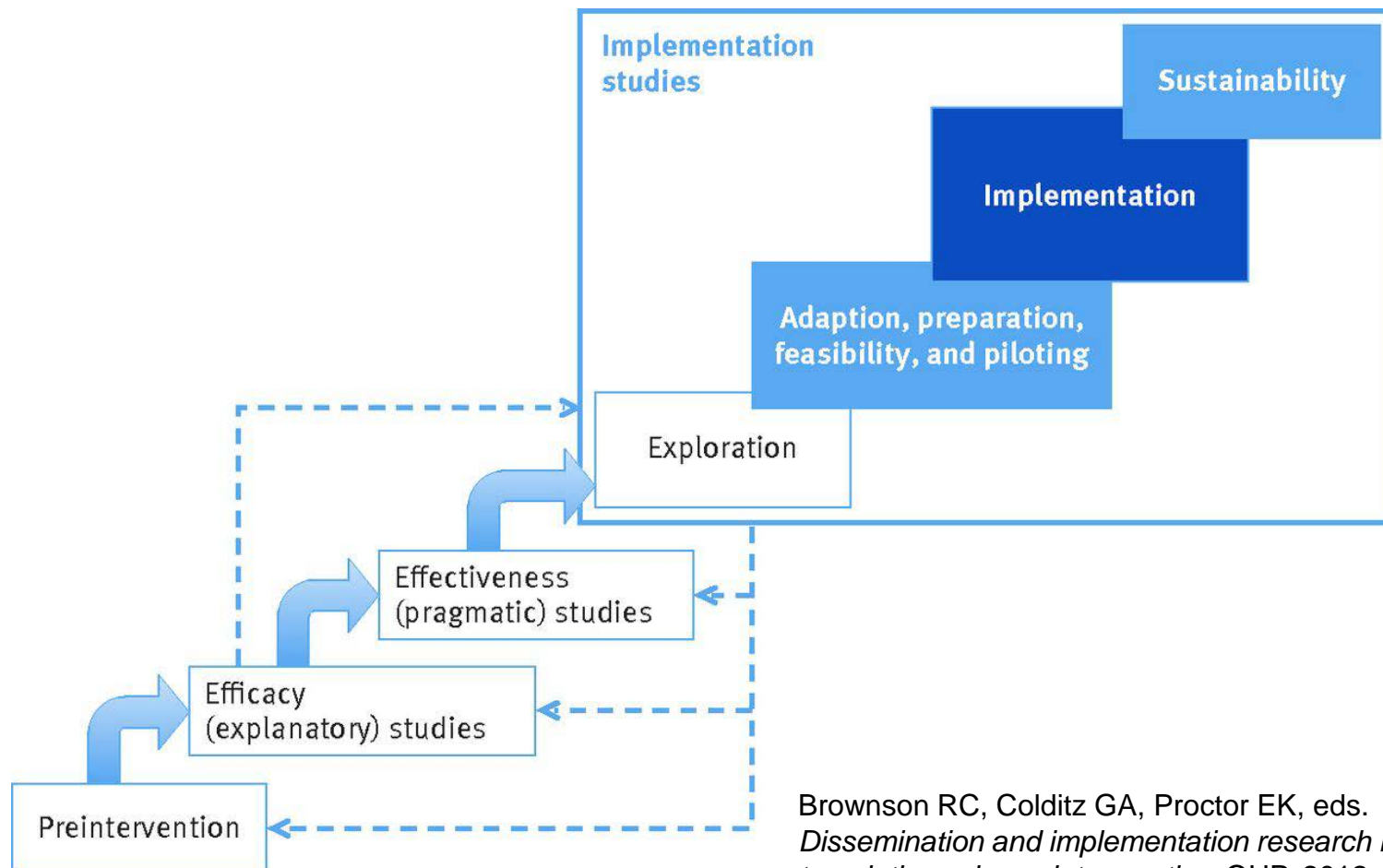
(Mitchell et al, Lancet Oncology, 2011)

(Ski et al., Journ. Of Clinical Nursing, 2012)

BUT they are not always successfully implemented and rarely lead to the desired real world practice change

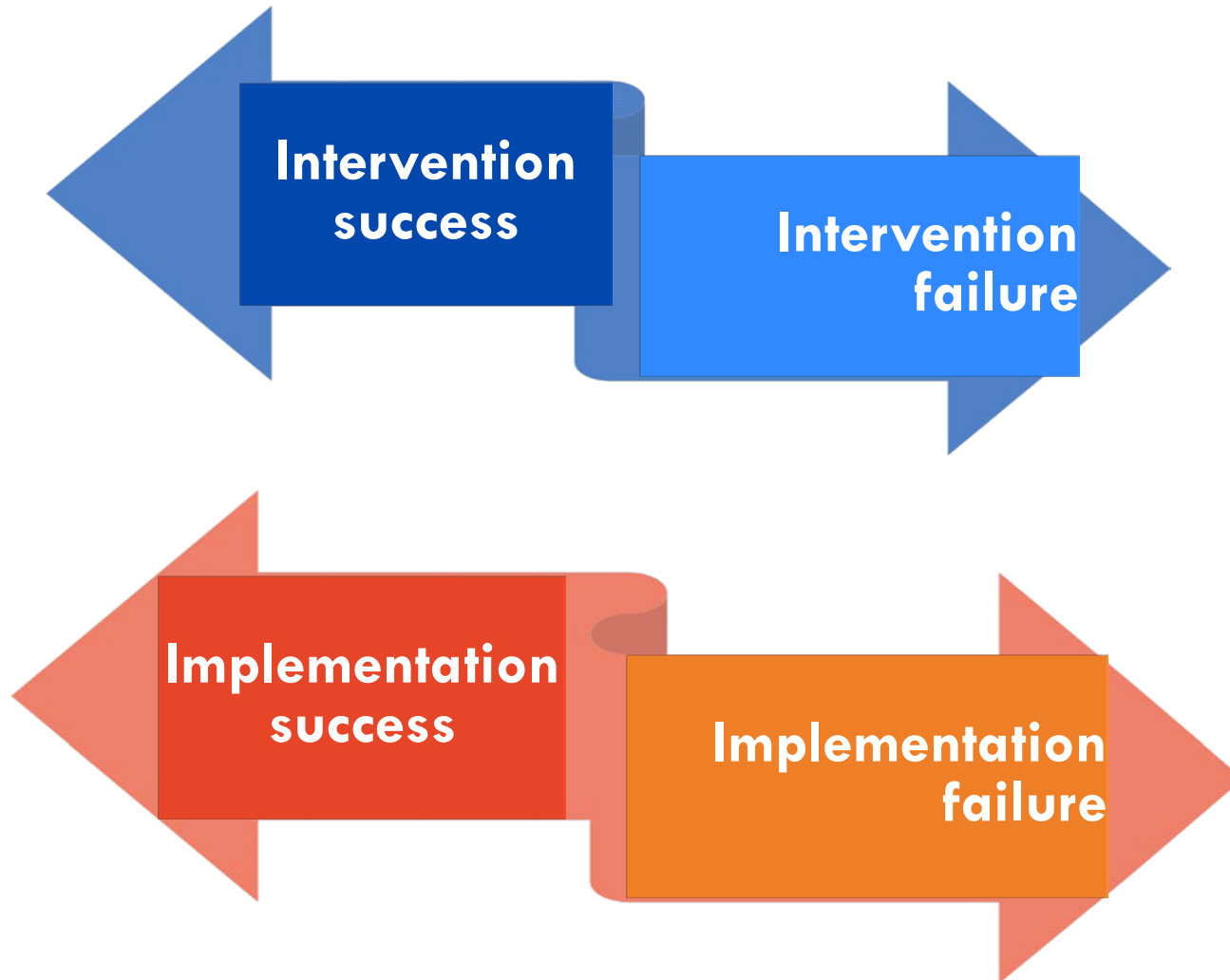
(Grimshaw, Eccles, & Tetroe, 2004; Grol, 2003)

Standards for Reporting in Implementation studies



Brownson RC, Colditz GA, Proctor EK, eds. *Dissemination and implementation research in health: translating science into practice*. OUP, 2012

Standards for Reporting in Implementation studies



Pinnock et al. Standards for Reporting Implementation Studies
(StaRI) Statement *BMJ* 2017; 356 :i6795

Definitions

Implementation strategy: Methods or techniques used to enhance the adoption, implementation, and sustainability of an under-utilised intervention

Implementation outcome: Process or quality measure to assess the impact of the implementation strategy

Curran, Bauer, Mittman, Pyne, Stetler. *Med Care*. 2012 Mar; 50(3): 217–226.

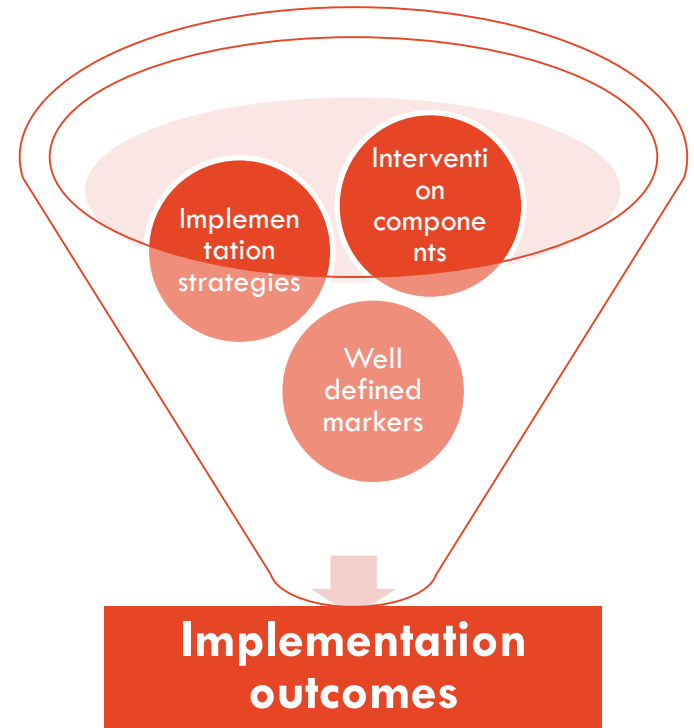
Outcomes in implementation research

IMPLEMENTATION OUTCOMES	SERVICE OUTCOMES	CLIENT OUTCOMES
Acceptability Adoption Appropriateness Feasibility Fidelity Implementation cost Penetration Sustainability	Efficiency Safety Effectiveness Equity Patient centredness Timeliness	Satisfaction Function Symptomatology

Fig 1. Proctor, E., et al (2010). Outcomes for implementation research: conceptual distinctions, measurement challenges, and research agenda. *Administration and policy in mental health*, 38(2), 65-76.

Measuring success – case study ADAPT Cluster RCT

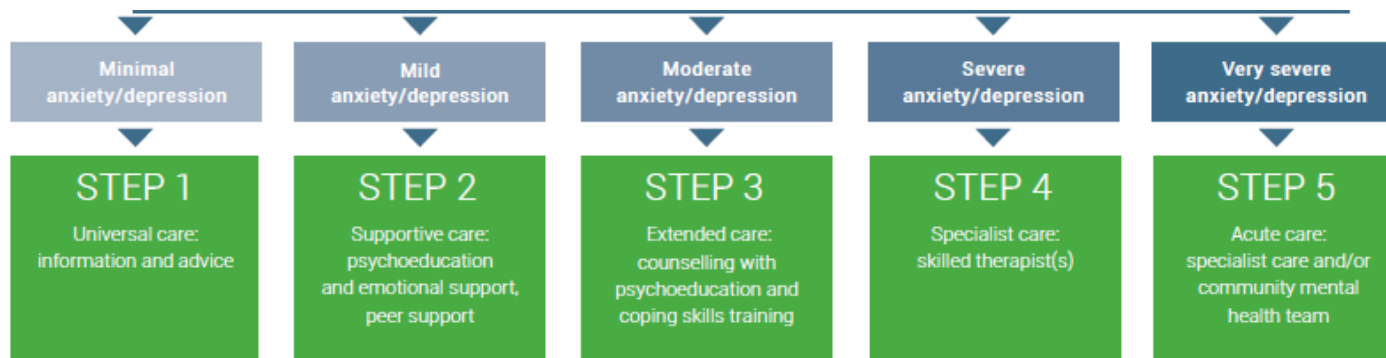
The **aim** was to develop a method to **enable comparison** of the effectiveness of **implementation strategies** and **intervention components** that influence adherence to the Australian Clinical Pathway for the Screening, Assessment and Management of Anxiety and Depression in Adult Cancer Patients.



Evaluation of **implementation strategies**, requires clear and well-defined markers of success should be selected and operationalised prior to embarking on implementation.

The Australian Clinical Pathway for the Identification and Management of Anxiety and Depression in Adult Cancer Patients

- Uses best available evidence to recommend **clear treatment pathways** (screening, referral and management, timing and staff responsibilities)
- Recommends care based on symptom severity, using a **stepped-care model**
- More intensive interventions reserved for patients who require specialist mental health treatment



- **Tailored** to reflect local referral networks, resources and preferences

Implementing the ADAPT Clinical Pathway



The Challenge: How can the ADAPT Clinical Pathway be incorporated into routine clinical practice?



< 6% of oncology studies aim to close gap between evidence and clinical practice

Bryant et al. Implement Sci 9:5908-9, 2014

The **ADAPT Program** (5 year CINSW Translational Program Grant) aims to:

- Facilitate the integration of the ADAPT Clinical Pathway into routine care
- Develop and evaluate strategies to promote uptake of ADAPT in Australian health context

How we do measure success?

ADAPT Resources vs Strategies

Intervention Resources	Implementation Strategies	
ADAPT Portal (online screening, triage and referral management)	Awareness Campaigns	Roadshow Poster Campaigns Emails Newsletters
Patient information	Champions	Clinical, Administrative, Management
Health Professional Education (eviQ)	Education	Portal Training + user guides Clinical Pathway Training Health Professional Training
iCanADAPT online therapy program	Academic Detailing and Support	Portal tailoring and local referral network and pathway mapping Face to face & email communication ☎️ 🖱️ ADAPT Support Service
	Reporting	Automated report generation
	Technology	ADAPT Portal



Cluster RCT Aim and Main Outcomes

Aim: to compare the **effectiveness** of different **implementation strategies** to **facilitate adherence** to the Clinical Pathway for the Screening, Assessment and Management of Anxiety and Depression in Adult Cancer Patients.

- **Adherence** to the anxiety and depression clinical pathway recommendations (*primary outcome*)
- **Implementation strategy outcomes** (*secondary outcome*)
- **Costs** of intervention resources and implementation strategies (*secondary outcome*)
- **Prevalence of anxiety and depression** (*secondary outcome*)
- **Patterns of referral** (*secondary outcome*)

Trial design

12 Sites identified,
Governance
authorisation,
Contracts, Consent.

6-8 Engagement Meetings: Commitment, roles, individualise pathway

Baseline staff survey and interviews (T0)

*ADAPT PORTAL GO LIVE

* Randomisation
revealed to ADAPT
team only

12 months ADAPT SUPPORT
Patients offered screening and referral
as part of standard care

Implementation
Strategy 1

Implementation
Strategy 2

Midpoint (6m) staff survey and interviews (T1)
Endpoint (12m) staff survey and interviews (T2)

Quantitative Data:
Pathway adherence via Portal data and medical records
Strategy adherence via ADAPT team contact logs



Defining Success

Theoretically grounded and informed by:

- Proctor et al Implementation Outcomes framework
- Standards for Reporting Implementation Studies (STaRI) guidelines.

Success defined both in terms of the implementation and the intervention

- Clearly defined and measurable criteria, with respect to
 - the ADAPT Clinical Pathway
 - intervention components
 - implementation strategies
 - or a combination of the three

Mapping implementation outcomes to measures

Identify clearly defined and measurable criteria for each implementation outcome:

Acceptability, Adoption, Appropriateness, Feasibility, Fidelity
Implementation cost, Penetration, Sustainability

Specify time points of data collection (outcomes may shift over time to identify 'leading' and 'lagging' indicators of success)



Mapping the ADAPT Cluster RCT outcomes

Outcome	Proctor Definition	Definition as applied to the intervention components or implementation strategy	Timing	Source
Acceptability	The perception among implementation stakeholders that innovation is agreeable, palatable, satisfactory.	Cancer staff perceptions of ADAPT CP, intervention components and implementation strategies as agreeable, palatable, or satisfactory.	T0 T1 T2	<i>Staff questionnaire</i>
Feasibility	The extent to which an innovation, can be successfully used or carried out within a given agency or setting.	Whether implementation of ADAPT CP, intervention components and implementation strategies is considered feasible for services, given different needs and resources, allowing for tailoring.	T0 T1 T2	<i>Contact log Implementation Checklist Observational Diary Site Profile Staff questionnaire Staff interviews</i>
Fidelity	The degree to which an intervention was implemented as it was prescribed in the original protocol or as it was intended.	The degree to which services receive the implementation strategies as planned within their randomization.	T1 T2	<i>Contact log Implementation Checklist Observational Diary ADAPT Portal data</i>



Discussion and Conclusions

Defining and operationalizing success in a real-world implementation creates challenges and complexities.

This study required **clear differentiation** between the three concepts underlying the implementation, the **ADAPT CP, intervention components** and **implementation strategies**.

Clarity of how outcomes are defined and measured, based on a strong theoretical framework **is crucial to meaningful measurement and outcomes** allowing generalisation to wider implementation research.

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