

Process evaluation: setting some co-ordinates for implementation research

Dr. Christopher R Burton

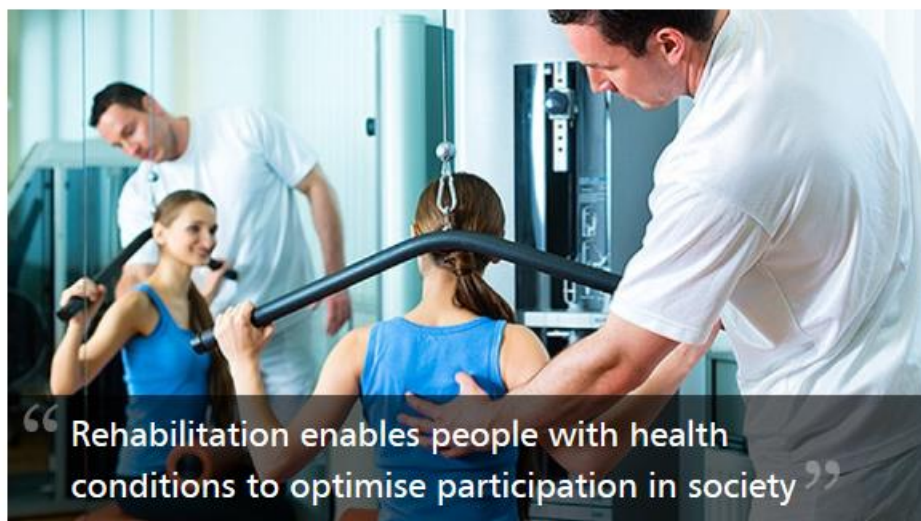
Health Foundation Improvement Science Fellow

Implement@Bangor, School of Healthcare Sciences

Process evaluation?



- Evaluation of the processes that comprise implementation research
 - Which processes?
 - Characteristics of these processes?
 - When, and how these should be studied?
 - How should findings be integrated with other (e.g. outcome) evaluation?



“Rehabilitation enables people with health conditions to optimise participation in society”

The Society for Research in Rehabilitation

The Society of Research in Rehabilitation (SRR) is the major multidisciplinary rehabilitation research society in the UK. Its aim is to advance education and research into all aspects of the rehabilitation of people with disability and to disseminate the useful results of such research for the public benefit.

The Society aims to be inspiring and educational, whilst providing excellent opportunities for networking, for junior and established researchers.

The SRR runs two conferences a year, with topic specific research symposia, free scientific presentations and 'research in progress' posters.



Next meeting

Hosted by Prof Sarah Tyson, University of Manchester (3rd February 2015) ABSTRACT DEADLINE 3rd November 2014

Latest news

Marie Curie Funding deadline 11th Sept 2014

The current round of Marie Curie Funding is open and has a deadline of 11th September - these fellowships are a good way of ... [\[read more\]](#)

Moving to an Electronic Newsletter from June 2014

After voting at the last AGM 4.2.14, a unanimous decision was taken to move to an electronic quarterly Newsletter [\[read more\]](#)

Rehabilitation Research: Time for a Rethink?

SRR Winter 2015 meeting will be hosted by Sarah Tyson University of Manchester [\[read more\]](#)

Verna Wright Prize

The best oral presentation and the best poster presentation during the year (over two meetings) by a paid up associate member is eligible for the Verna Wright Prize. **More details**

Become a member

Associate Membership is open to anyone with an interest in rehabilitation research. If you are interested in becoming a member, please **click here** for full details

Rehabilitation



RECENT TRIALS

- PD REHAB - £1.5M trial of physiotherapy and occupational therapy in Parkinson's Disease
- OTCH trial - £1.9M trial of occupational therapy for residents with stroke in UK care homes
- 'Getting out of the house' - £1.1M trial of an outdoor mobility intervention in stroke rehabilitation
- ICONS - £1.6M trial of systematic voiding programme for post-stroke urinary incontinence
- TRACS – £1.5M trial of caregiver support after stroke rehabilitation

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NO EFFECT

Potential explanations

- Stroke rehabilitation may not work!
- Under theorised interventions – also in the case with interventions that appear to work, limiting generalisability
- Lack of sufficient dose (PD Rehab mean intervention time was 4 hours)
- Inattention to context (OTCH therapists and care home improvement)
- Inattention to therapist effect
- Rehabilitation may be a ‘model case’ of a complex intervention

Complexity



- Some dimensions of complexity
 - Number of and interactions between components within the experimental and control interventions
 - Number and difficulty of behaviours required by those delivering or receiving the intervention
 - Number of groups or organisational levels targeted by the intervention
 - Number and variability of outcomes
 - Degree of flexibility or tailoring of the intervention permitted

Medical Research Council (2008)

Complex intervention



“A complex intervention combines different components in a *whole that is more than the sum of its parts.*”

Oakley et al. (2006)

Process evaluation?

- Provide insight into why a complex intervention fails unexpectedly or has unanticipated consequences, or why a successful intervention works and how it can be optimised
- Assess fidelity and quality of implementation, clarify causal mechanisms and identify contextual factors associated with variation in outcomes’.

Medical Research Council (2008)

Process evaluation components



- Context – organisational / social environment; culture
- Reach – proportion of intended group that participate
- Dose delivered – number of intended intervention components provided
- Dose received – degree to which participants actively engage
- Fidelity – degree to which intervention delivered as planned (*more than quantitative indicator of adherence?*)
- Recruitment – processes to attract and recruit participants

Steckler & Linnan (2002)



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Key questions

...for implementation science



- Process evaluation components?
- Conceptualisation of fidelity?
- Theories of change associated with the implementation intervention, AND its implementation within an evaluation study?
- Context as mediating backdrop or intervention backbone – and epistemological challenges within the context of experiments
- Threats to evaluation internal validity?
- Time and learning?
- Reporting and scaling-up learning about implementation and impact from process evaluation studies?

Models and approaches to fidelity evaluation

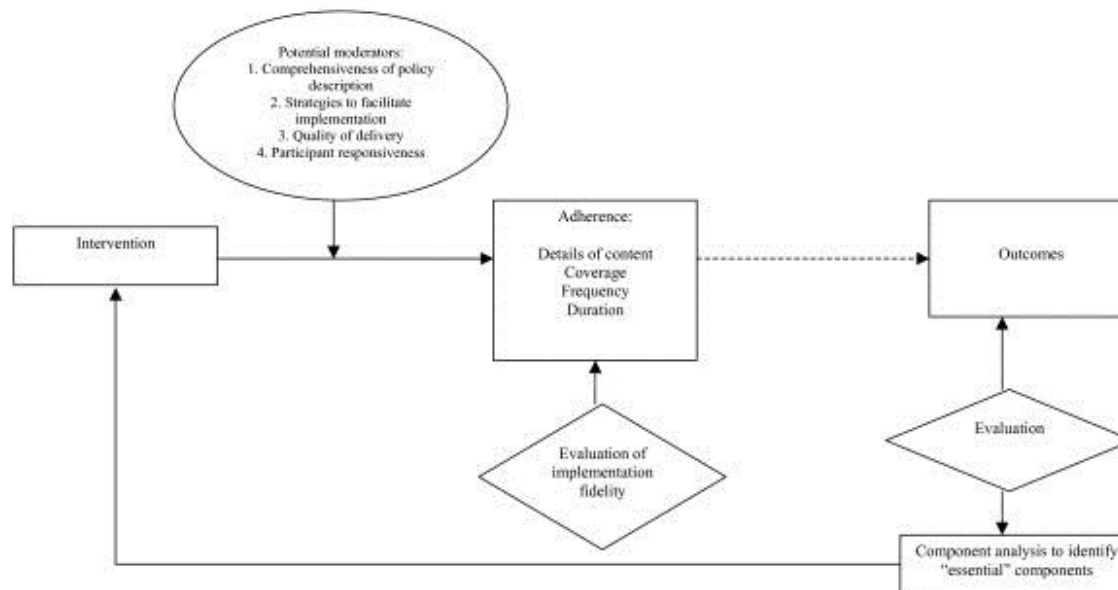
Professor Jo Rycroft Malone

Dr. Christopher R Burton

School of Healthcare Sciences

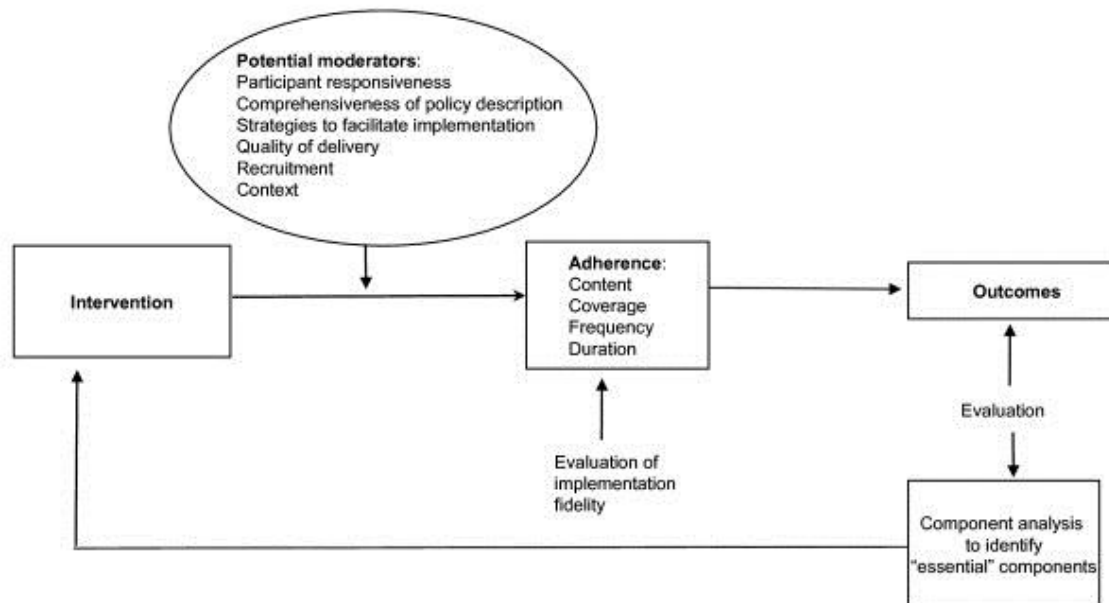
Carroll, Patterson, Wood *et al.* (2007)

- Critical review of existing conceptualisations of implementation fidelity and developed a new conceptual framework for understanding and measuring the process



Hasson (2010)

- Modified prior to evaluation across three intervention studies:





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OTCH Trial

OTCH

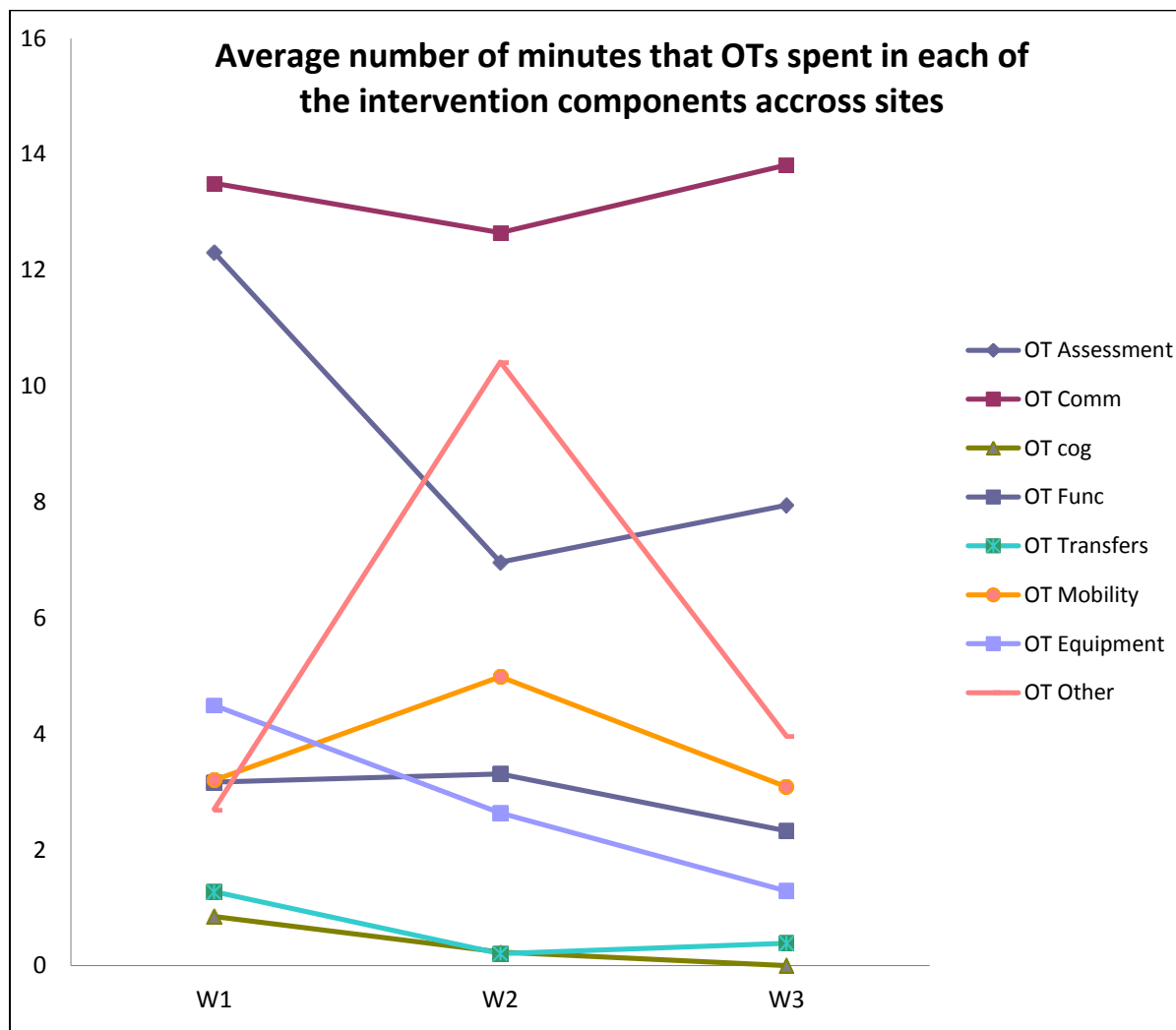


- NIHR HTA trial of Occupational Therapy for Residents (n=1042) with Stroke in Care Homes (n=223)
- Cluster randomised trial
- Functional / environmental focused intervention (3 months duration)
- Delivered by multiple therapists on sites across the UK

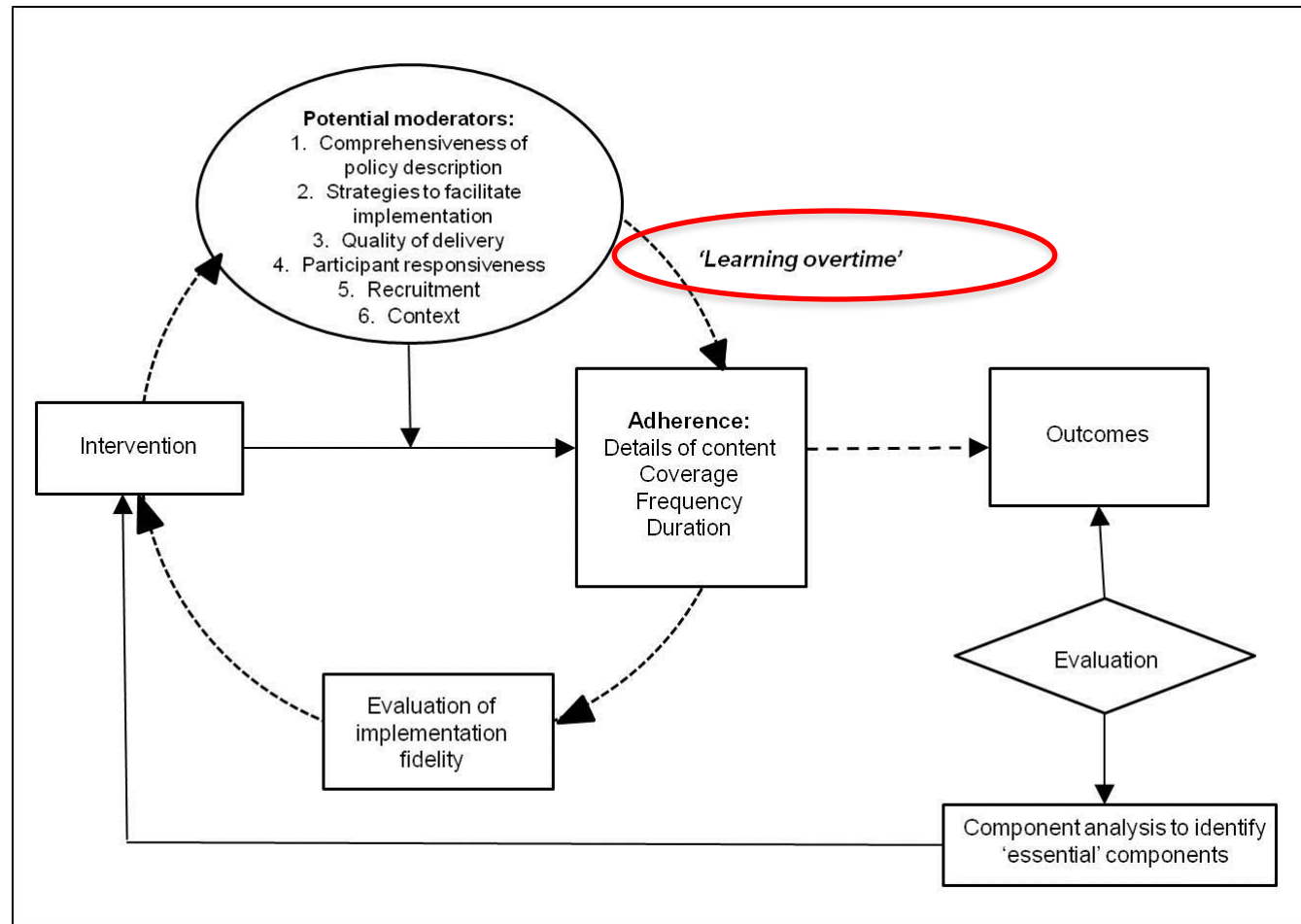
Process evaluation



- Therapist critical incidents (n=20)
- Post-intervention interviews
- Diary of time spent in therapy activities



Masterson, Burton, Rycroft Malone *et al.* (2014)



Role of theory

Professor Jo Rycroft Malone

Dr. Christopher R Burton

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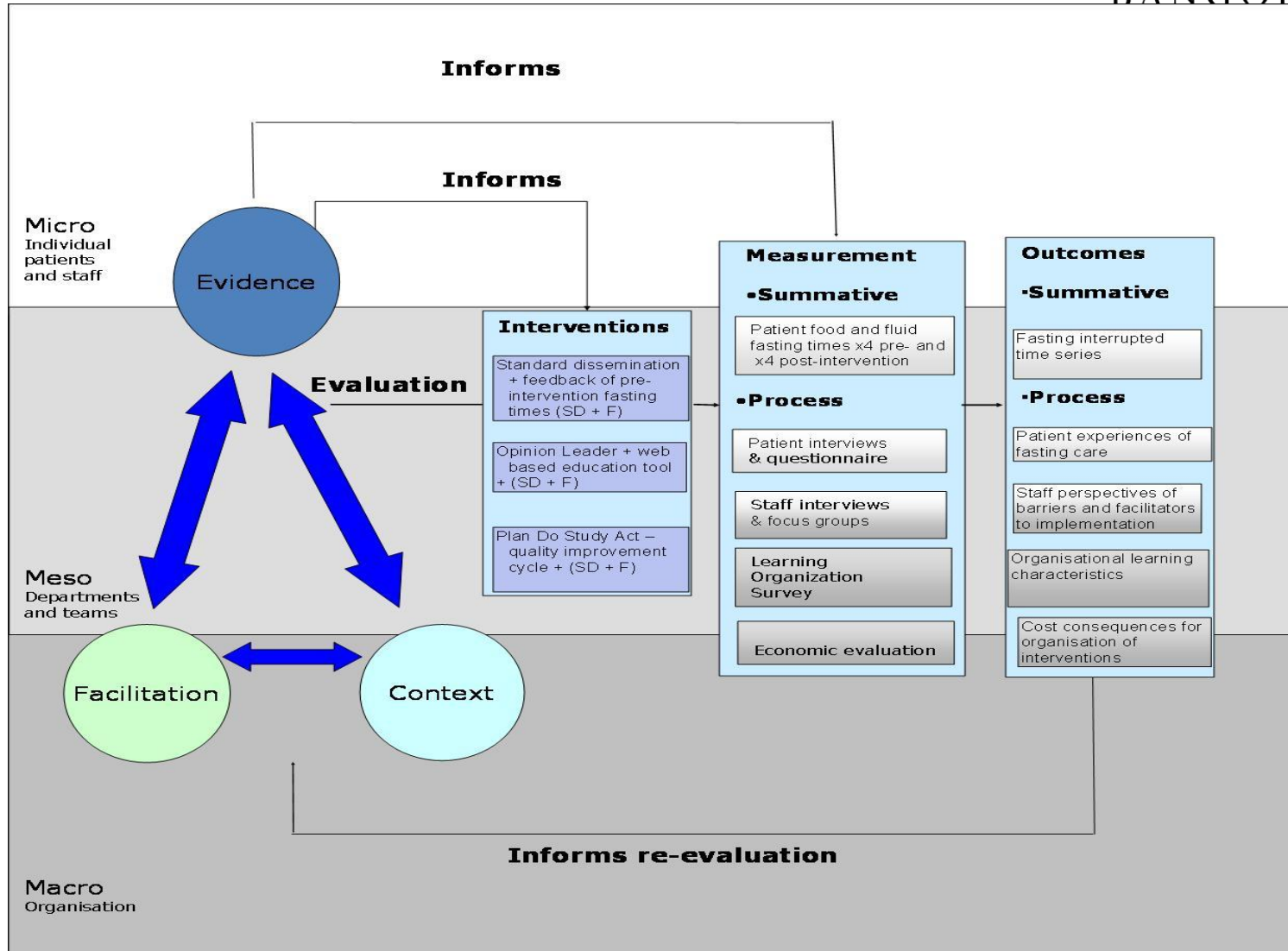
Role of theory

- Theory informed process evaluation:
 - Theory testing
 - Theory building
- Theories associated with
 - Implementation intervention (e.g. audit and feedback)
 - Its implementation (e.g. behaviour and system changes associated with accessing the audit and feedback intervention)

Theoretical framework



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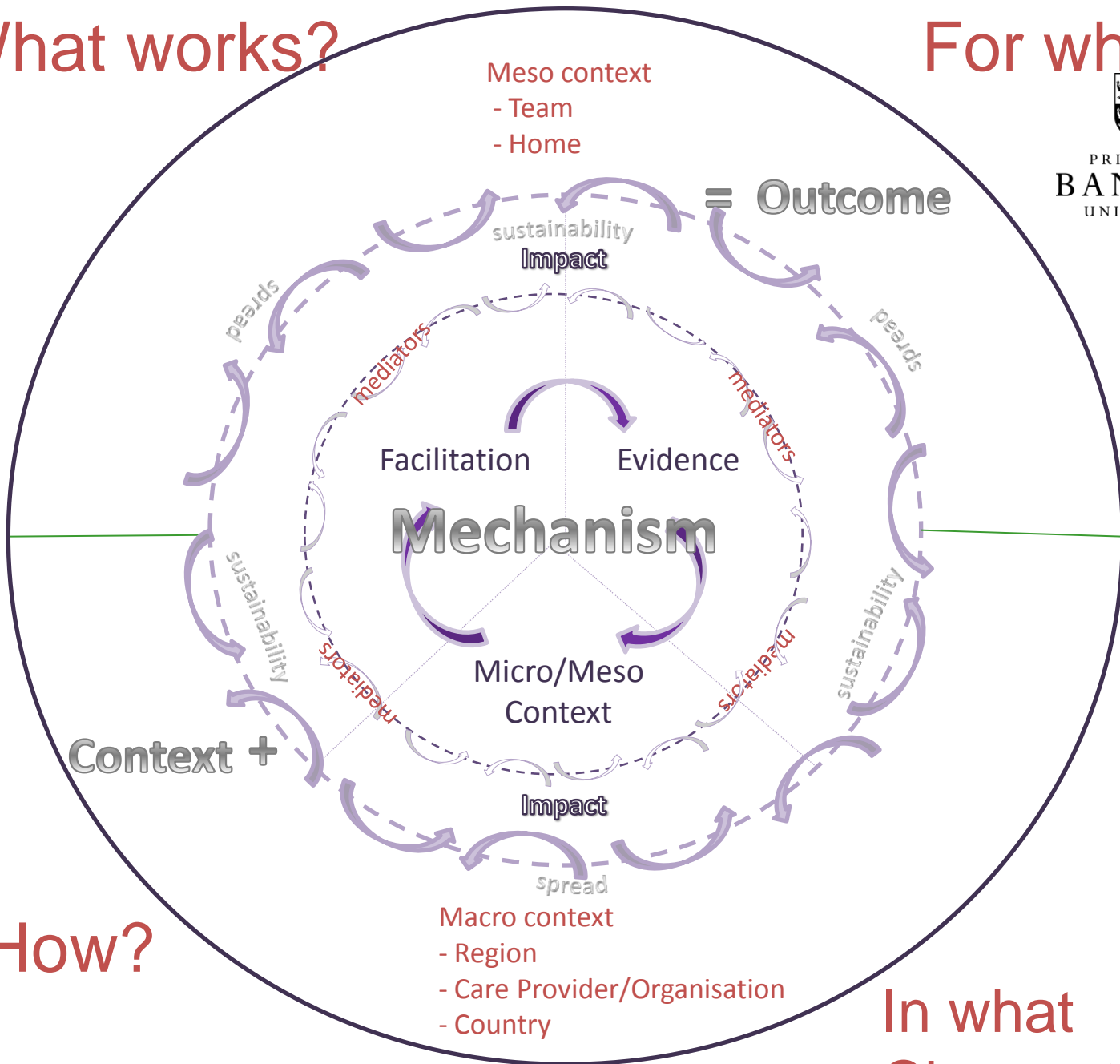


What works?

For whom?



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How?

In what Circumstances?

OTCH theory of change



- ***Balancing work*** (varied according to nature of prior experience)
 - professional ‘beliefs’ : research intervention
 - protocol : individual residents
 - freedom : professional community
- ***Building rapport*** (varied according to positive cycle of reinforcement)
 - Care home staff and conducive conditions
- ***Re-engineering*** the environment (varied according to resource availability, local policy and resourcefulness)
 - Scaling up change
- ***Learning*** over time

Attending to context

Professor Jo Rycroft Malone

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What are the issues?

- Defining context
 - Backdrop to an evaluation
 - Integral component of implementation intervention
 - As a mediator of intervention implementation
- Epistemological basis
 - Equipoise
 - Contingent conditions enabling effects and impacts of interventions to occur (or not)

Examples

- FIRE
 - Facilitators within and across nursing home sites started with very different challenges – and therefore very different starting points at ‘base line’
- OTCH
 - Therapists spent considerable amounts of time attending to indirect issues / problems before the ‘intervention proper’ could commence

Implications

- Depends on your worldview
- ‘Go with the flow’
- Select based on quality
- Work towards minimum standard before implementing the intervention – run-in period
- Context rich method for a post-hoc understanding and analysis