University of Nottingham
UK | CHINA | MALAYSIA

Implementation

Stephen Timmons, Professor of Health Services Management, Nottingham University Business School

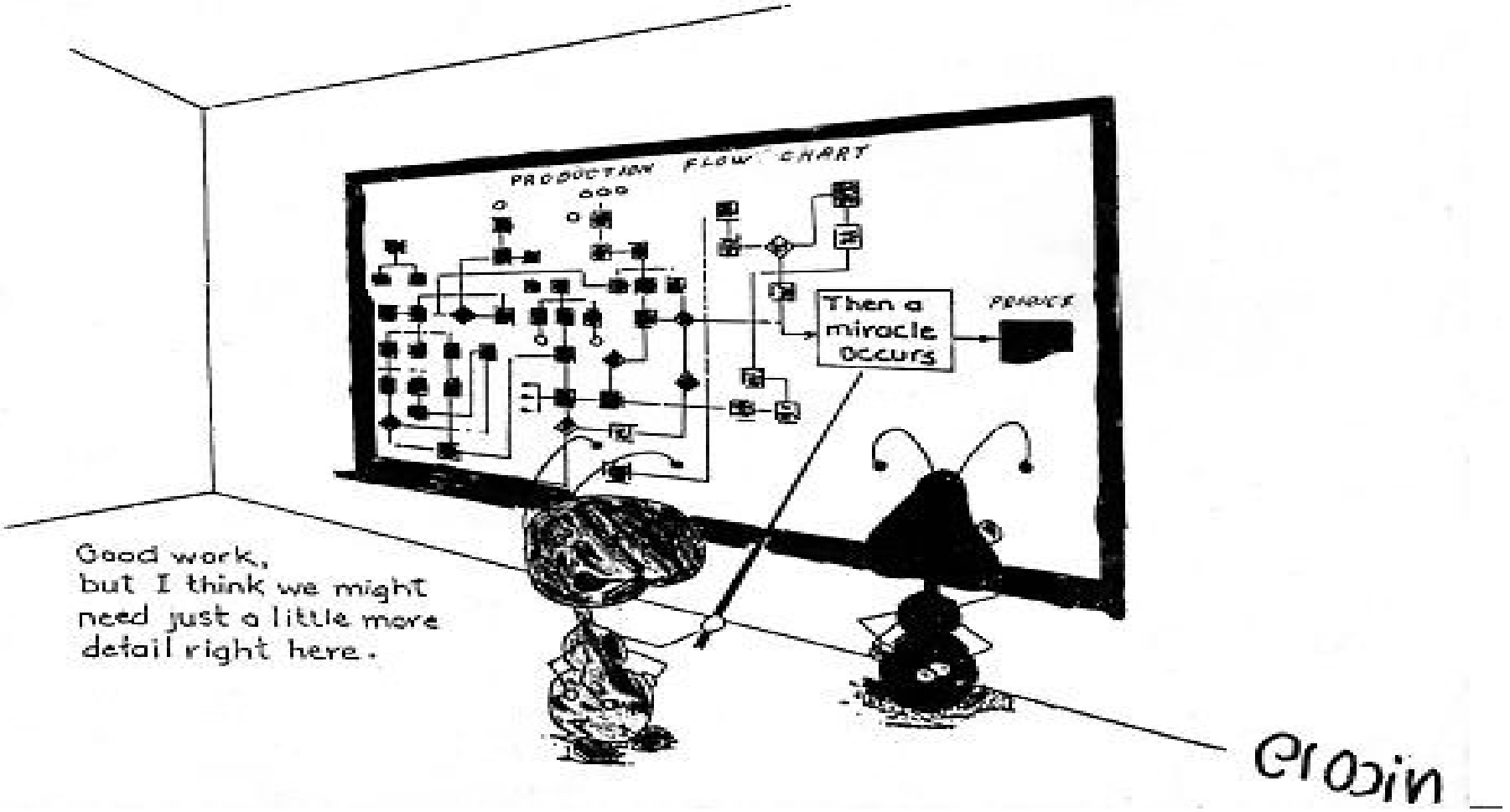
University of Nottingham
UK | CHINA | MALAYSIA

Thanks

- To the British Council
- We’re excited about this opportunity
- Two BC HELINKS workshops in Sao Paulo have led to:
  - Externally funded research projects
  - Papers in international, high-quality journals
  - Exchange visits (staff and students)
  - Joint supervision of PhD students

University of Nottingham
UK | CHINA | MALAYSIA

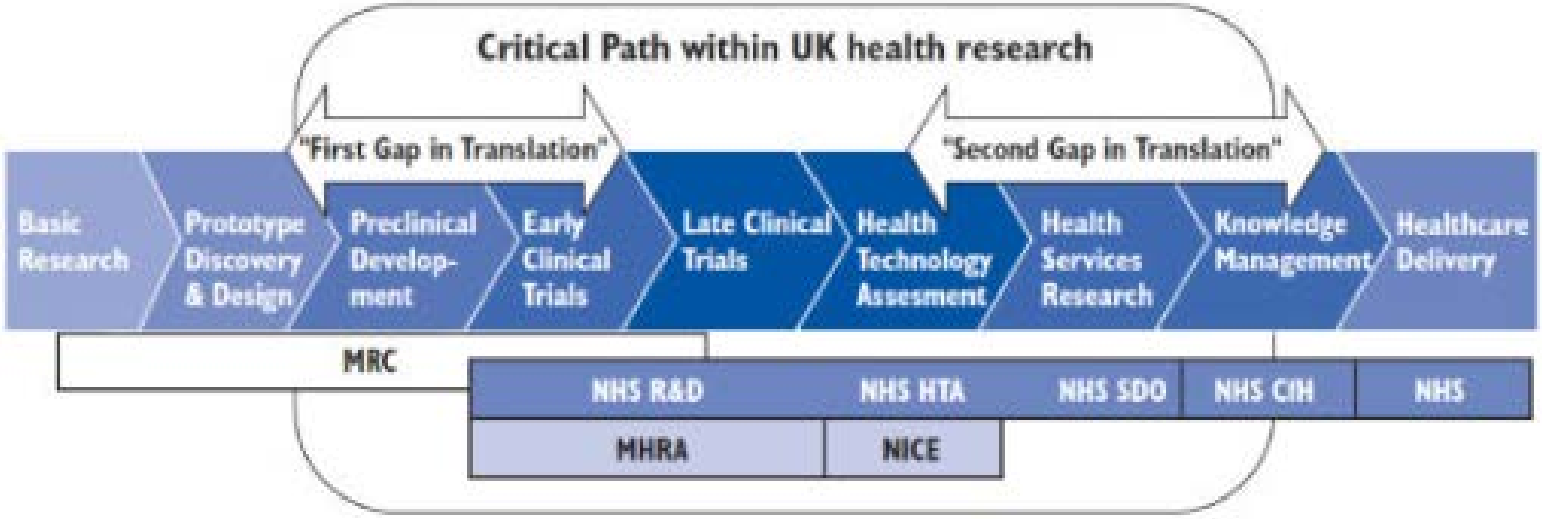
The gap between evidence & practice



The ‘Second Translation’ Gap

- Considerable public resources are invested in health research
- Yet, getting research into routine frontline practice is very difficult
- It can take between 15-20yrs* for new clinical research to become routine clinical practice

* Can be much more .. or less



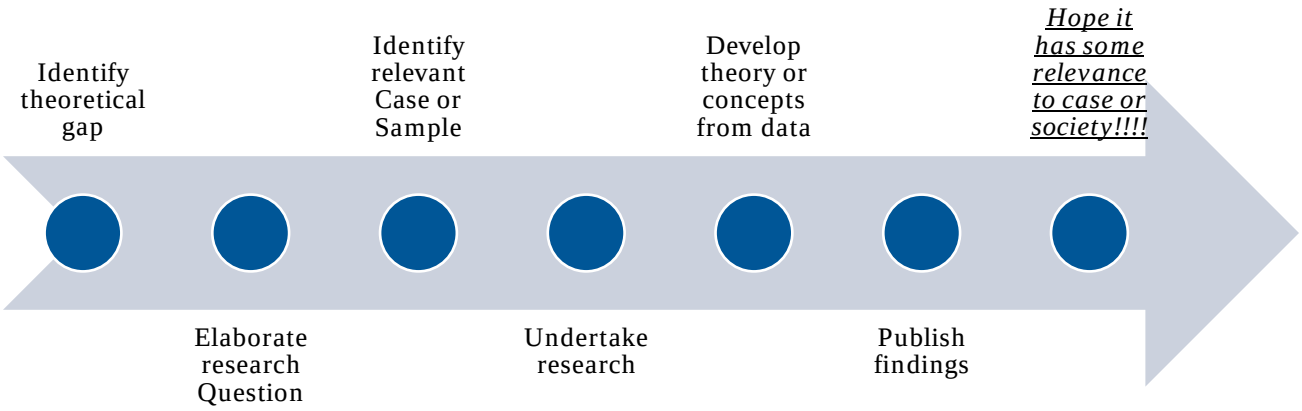
Why so slow ?

- Healthcare is conservative, but for a good reason: lives could depend on it
- Every new treatment/programme/technology needs to be safe and effective
- How clinicians work (practice, process & culture) has evolved over time into very complex systems
- Changing one small thing can have unexpected and sometimes catastrophic consequences

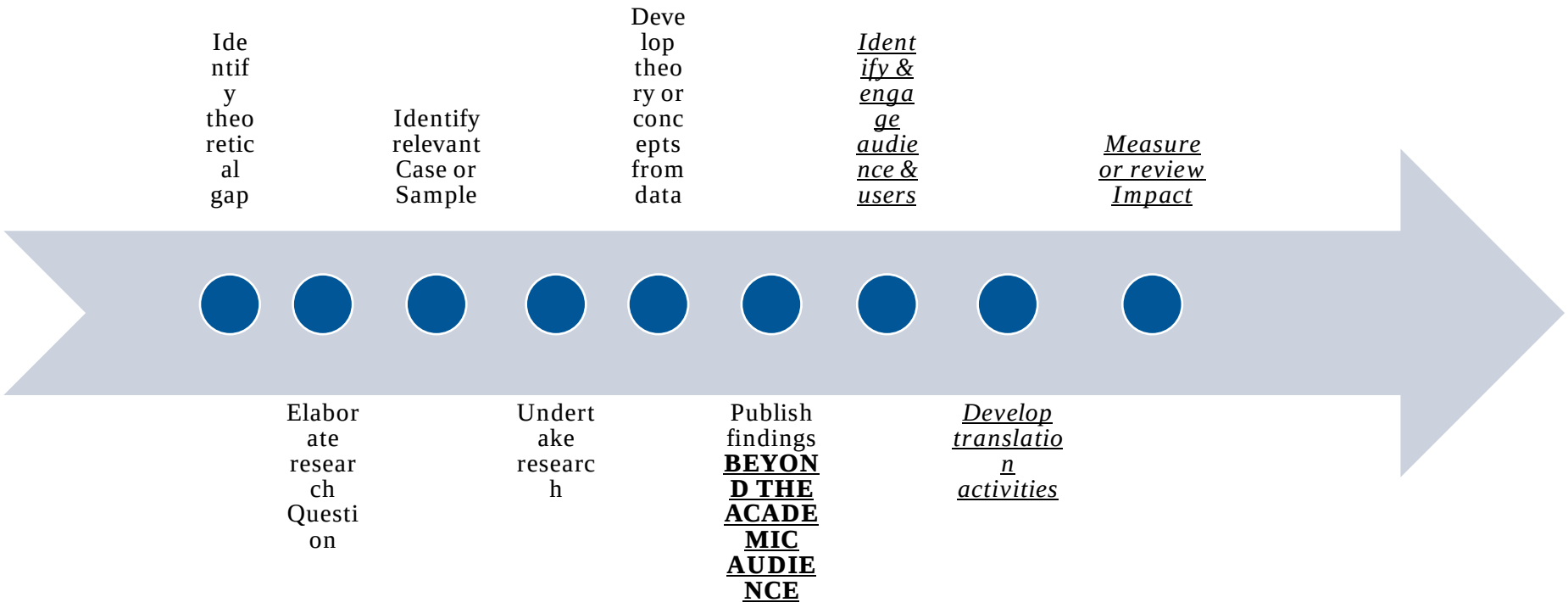
Why so slow ?

- Researchers want to solve interesting and real-world problems
- But they are not often encouraged to seek applications for their work
- Researchers performance is measured principally by:
  - Scientific papers (quality and quantity)
  - Funding grants (quantity and prestige)
  - Other ‘esteem’ indicators

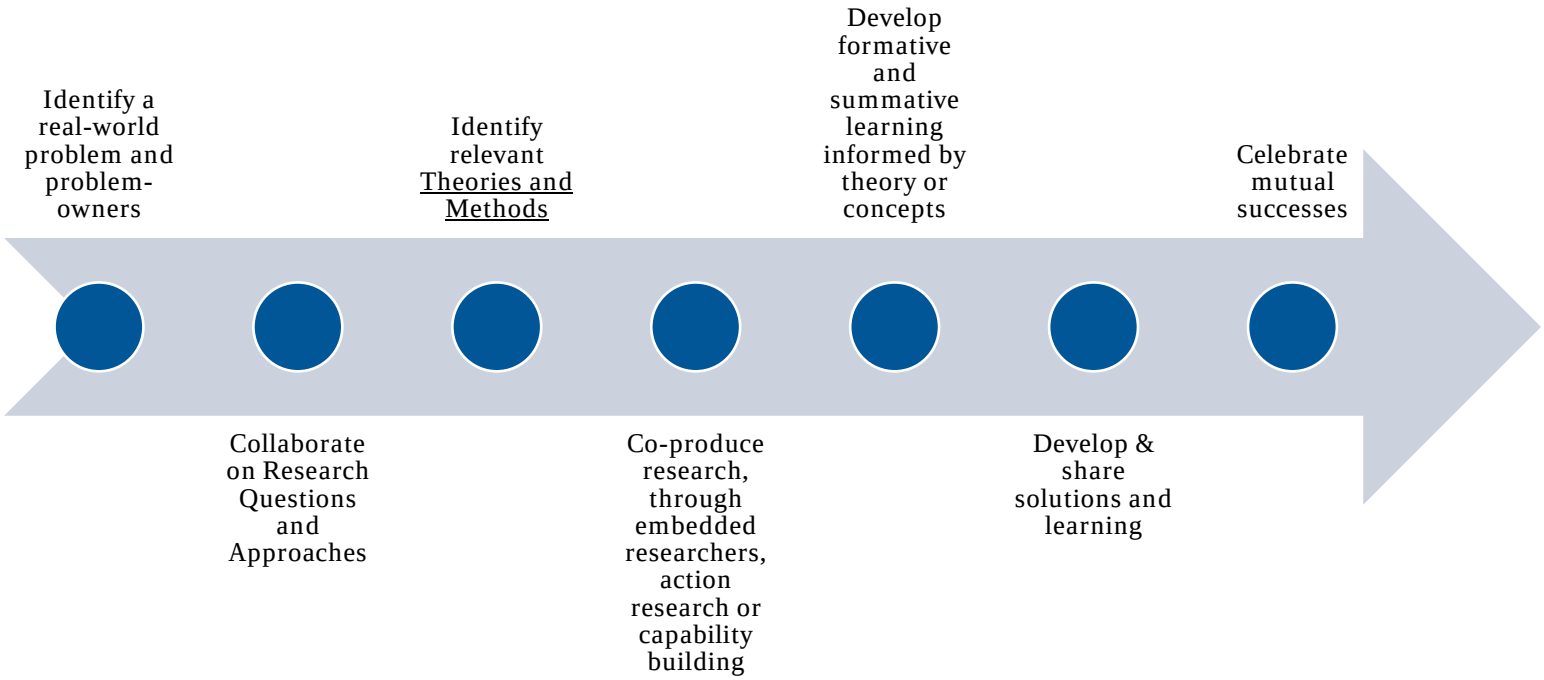
A typical approach to research



A new approach? – Diffusion/translation



A co-production approach



The problem of implementation

"The lack of routine uptake of research findings is strategically important for the development of healthcare because it clearly places an invisible ceiling on the potential for research to enhance health. Further, it is scientifically important because it identifies the behaviour of healthcare professionals and healthcare organisations as key sources of variance requiring improved empirical and theoretical understanding before effective uptake can be reliably achieved."

BMC Implementation Science

University of Nottingham
UK | CHINA | MALAYSIA

How to get from where we are now to co-production

1) Study the problem: Implementation Science
2) Policy: emphasis on impact
3) Infrastructure: NHS National Institute for Health Research has established (regional) Applied Research Collaboratives (ARC) and Academic Health Sciences Networks (AHSN)
4) Roles: knowledge brokers, researcher-in-residence, clinical academics

- I will discuss these initiatives at the level of policy, and with a focus on universities
- Professor Sue Haines will discuss initiatives in the hospital, which are ‘bottom-up’

Studying the problem - Implementation Science

"Implementation research is the scientific study of methods to promote the systematic uptake of proven clinical treatments, practices, organisational, and management interventions into routine practice, and hence to improve health. In this context, it includes the study of influences on patient, healthcare professional, and organisational behaviour in either healthcare or population settings."

BMC Implementation Science

University of Nottingham
UK | CHINA | MALAYSIA

Implementation research

- "***scientific study***" – it is a discipline in its own right
- "***uptake of proven clinical treatments***" - it is not directly concerned with the basic science, except where it is co-produced
- "***routine practice***" – it is about changing what normally happens in the social world
- "***improve healthcare***" – it is about making a difference

Models, Frameworks and Theories

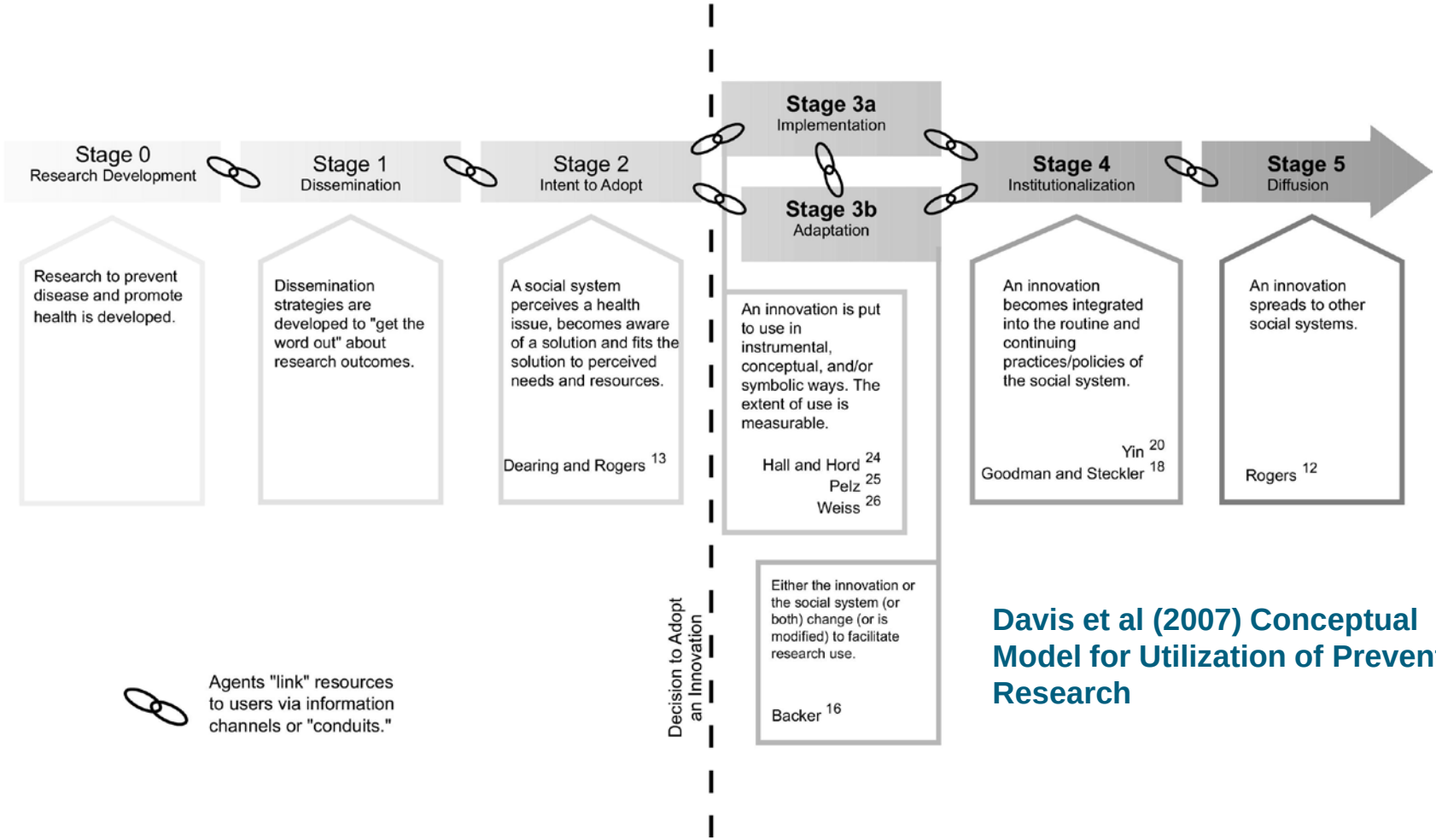
Models – Step by step guide to process of implementation

Frameworks – Outlines and structures determinants of implementation success. Often types of barriers and facilitators that may be encountered.

Implementation Theories – Identifies key variables and relationships between such variables and the likely success of implementation

Nilson (2016)

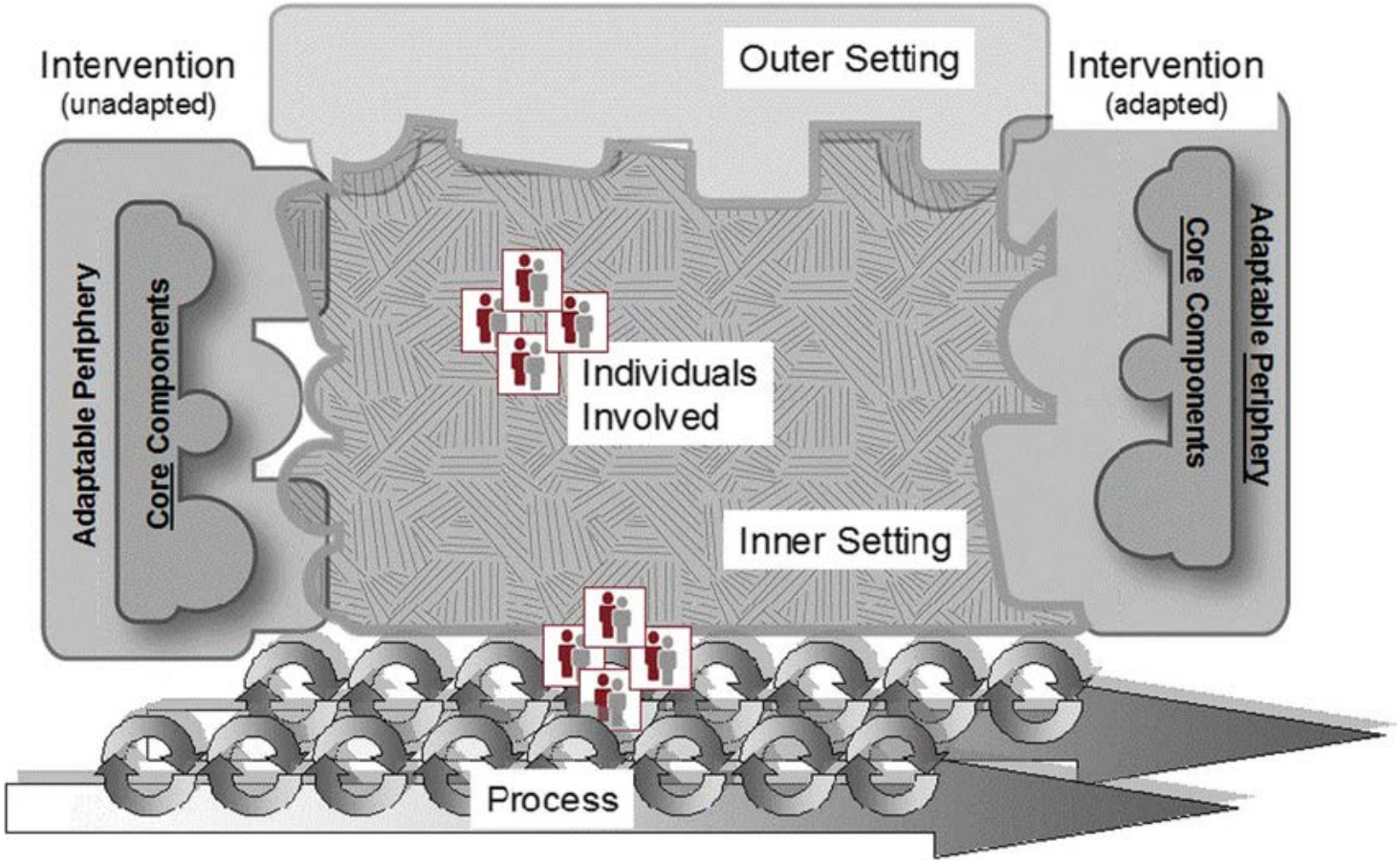
Models



Davis et al (2007) Conceptual Model for Utilization of Prevention Research

University of Nottingham
UK | CHINA | MALAYSIA

Implementation Frameworks



Damschroder's (et al 2012) consolidated framework for implementation research (CFIR)

Damschroder' s framework

The intervention

- Source
- Evidence
- Advantage
- Adaptability
- Trial-ability
- Quality
- Cost

Inner setting

- Structural characteristics
- Networks and communications
- Culture
- Climate or readiness for change

Outer setting

- Need or demand
- Resources
- Peer pressure
- External policies and incentives

Individuals involved:

- Knowledge and skills
- Identification with the intervention or organisation
- Personal attributes

Implementation process

- Planning
- Engaging
- Executing
- Reflecting

Case study: Implementing falls prevention exercise services in the community

- The credits: Dr Elizabeth Orton (Primary Care) & NIHR CLARHC
- The research so far ….
- ProAct 65+ Randomised Controlled Trial
  - Falls Management Intervention (FaME) more effective for falls prevention than OTAGO
  - Falls reduction of 26%
  - 26 week class delivered by trained instructor (not health care professionals)
  - Delivered in community settings (not the NHS)

University of Nottingham
UK | CHINA | MALAYSIA

Case study: Implementing falls prevention exercise services in the community

- Why isn't it being implemented? (as it works)
- What is needed to support implementation?
- The implementation research
- **Ph**ysical activity **I**mplementation **S**tudy **I**n **C**ommunity-dwelling **A**du**I**ts (PhISICAl)
- The 'real' research question –
- Does FaME still work 'in the wild'?

Case study: Implementing falls prevention exercise services in the community

- What did we do ?
- We provided the money, to local authority leisure services, Derby County FC, and the Derbyshire Fire Service.
- They hired the staff to run the FaME classes (we paid for their training)
- We studied the process:
  - Interviews with trainers, participants, managers, commissioners, GPs
  - Community of Practice with trainers
  - Observation of classes
  - Outcome measures to see if FaME was getting the same results (but not the main focus)

Case study: Implementing falls prevention exercise services in the community

Case study: Implementing falls prevention exercise services in the community

- What did we learn ?
  - Need to give trainers some discretion in how they run the FaME class, but also support them (benefit of CoP)
  - Need a QA process
- Further rollout needs (local) evidence
  - Promote the programme
  - Hear real stories
- Different organisations need different stories –
  - Video of participant interviews
  - Cost-effectiveness data
  - ‘Scientific’ (RCT) evidence

Case study: Implementing falls prevention exercise services in the community

- FaME Implementation Toolkit.
- A comprehensive resource for commissioners and service providers to help them implement FaME
  - Evidence briefings for commissioners and elected members (of LAs)
  - Needs assessment tool
  - Sample business case
  - Example service specification
  - Training and workforce considerations
  - Example promotional material
  - GP letters
  - Example case studies of participants
- http://www.arc-em.nihr.ac.uk/clahrcs-store/falls-management-exercise-fame-implementation-toolkit

Wider reflections on implementation science

- Draws across a huge range of academic disciplines and paradigms, distilling the relevant nuggets of insight

- In doing so, potential risk of ignoring underlying assumptions and differing knowledge-claims
  - (some bits of) Psychology: attitude/behaviour change
  - (some bits of) Sociology: routinization or institutionalisation of new practices

- Potential of ‘flattening’ (often critical) social science insights to the dominant rational-bureaucratic view of organizations.

- Getting change to happen in organizations is involves issues of culture as well as conflict of interests

University of Nottingham
UK | CHINA | MALAYSIA

Policy: emphasis on impact

- UK Universities are assessed every 7 years (roughly) on the quality of their research
- In the last exercise (2013) and the current on (2021), “Impact” counts for 25% of the overall score
- Impact is defined as “an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia”
- Universities get extra public funding for good scores
- Health care is a great area to develop and demonstrate impact

Infrastructure for Implementation - ARCs

- National Institute for Health Research (NIHR)- part of the NHS
- Very broad portfolio of health care research
- Applied Research Collaboratives (ARCs)
  - Consortium of universities and NHS hospitals
  - Funding from collaborating institutions and NIHR
  - Regionally based (provincial)
  - Focus on implementation research – like Phisical (earlier example)
  - Interventions that have been shown to work, but we need to understand how to get them to spread

Infrastructure for Implementation- AHSNs

- NHS England (not NIHR)
- Academic Health Sciences Networks (AHSNs)
- Also collaborative : NHS, industry and universities
- AHSNs don’t do research
- “identify and spread health innovation at pace and scale”
- Much greater role for industry, especially small local businesses
- Role in spreading innovation in patient safety, and medicines optimisation

Roles in Implementation

- Not just about infrastructure, it needs people
- Knowledge brokers
  - Could be a full-time or a part-time role, in a university or in the NHS
  - Boundary spanners or bridge builders
    1. Relate to people with a broad range of backgrounds
    2. understand different ways of thinking
    3. understand the different contexts in which information can be used and shared
    4. be able to critically analyze evidence (Lomas, BMJ 2007)

Roles in Implementation

- Researcher-in-residence
- An academic researcher who works for, and within, a health service organisation
- Does research, helps clinicians to do research, implements research
- Clinical academics
- Traditionally doctors, but now nurses, midwives, physiotherapist etc.
- Clinical role in a hospital
- Part of their time is to do research, help other clinicians to do research, implement research

Implementation is cost-effective

- Better care for patients
- Fewer errors
- Not wasting money on ineffective or outdated treatments
- Implementation work is not free, but is a good investment for health care systems

University of Nottingham
UK | CHINA | MALAYSIA

Thank you for listening

- Let’s keep the conversation going :

- stephen.timmons@nottingham.ac.uk