From embryonic ideas to funded projects

Maria Pufulete

Associate Professor in Applied Health Resarch

NIHR | National Institute for Health and Care Research

The NIHR is funded by the Department of Health and Social Care to improve the health and wealth of the nation through research.

Working in partnership with the NHS, universities, local government, other research funders, patients and the public - we fund, enable and deliver world-leading health and social care research that improves people's health and wellbeing and promotes economic growth.

NIHR | National Institute for Health and Care Research

British Heart Foundation

JOINTLY FUNDED BY

UKRI

Medical Research Council

NIHR | National Institute for Health and Care Research

AI in congenital heart disease

Idea	Funder
Project	Team
Funder	Ideas: Refine
Team	Project: Co-design
Apply	Apply

Example: Prehab research ~£5m

PPI

2014 EBI Research for Health £25K

2017 HTA commissioned call Inspiratory Muscle Training £1.8m

2025 NIHR Fit4HeartOp PGFAR £2.8m

2015 NIHR Themed call unsuccessful

2020 NIHR PDG Prehab in cardiac surgery £250k

2026 NIHR PDG CARE Study £250k

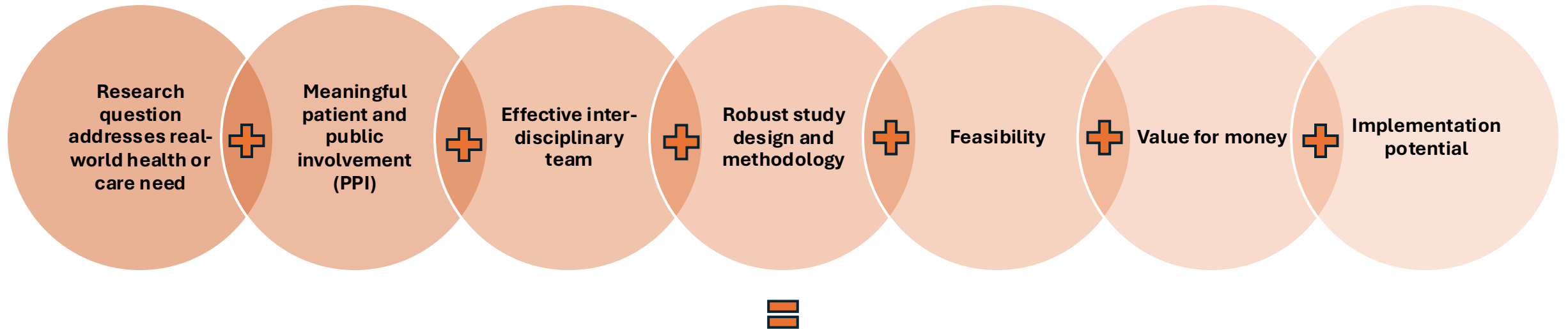**Interdisciplinary team**

Expertise

New research ideas

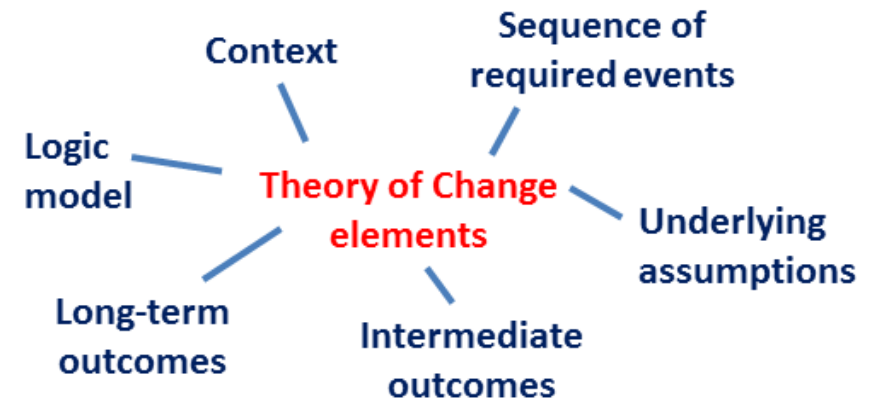Improving perioperative care in adult heart surgery (CARE Study)

Can we improve perioperative care in congenital heart surgery?

- NIHR Programme Development Grant Nov 2025

- **Does it work?**
  - Randomised /non randomised studies / systematic reviews
- **How does it work?**
  - Mechanistic studies / logic models / theory of change
- **Do people use it? Is it acceptable?**
  - Qualitative studies
- **How many people use it? Why do they use it? How can we make it better?**
  - Mixed-methods studies
- **Is it feasible? Can we implement it in practice?**
  - Feasibility of implementation
- **Is it cost effective?**
  - Health economic studies

AI in congenital heart disease (CHD)

- What is the funder funding?
  - 100 AI projects
  - 86 AI technologies
  - £123m

- Funded projects in CHD

Artificial Intelligence to Improve Antenatal Detection of *Congenital* Heart Disease

Career Development Award

Award ID: **NIHR301448**
Lead Investigator: **Dr Thomas Day**
Contracting Organisation: **King's College London**
End Date: **April 2024** (Completed)

... *Artificial Intelligence* (AI) can help us identify heart conditions in babies, before birth.
Background... form of *artificial intelligence* that has been shown to achieve human expert-level performance in some...

Next steps .....

- Find out who is doing what
- Network
- Put together team
- Business case
- PPI
- Co-design research
- Seed corn funding