



UNIVERSITY OF  
BIRMINGHAM

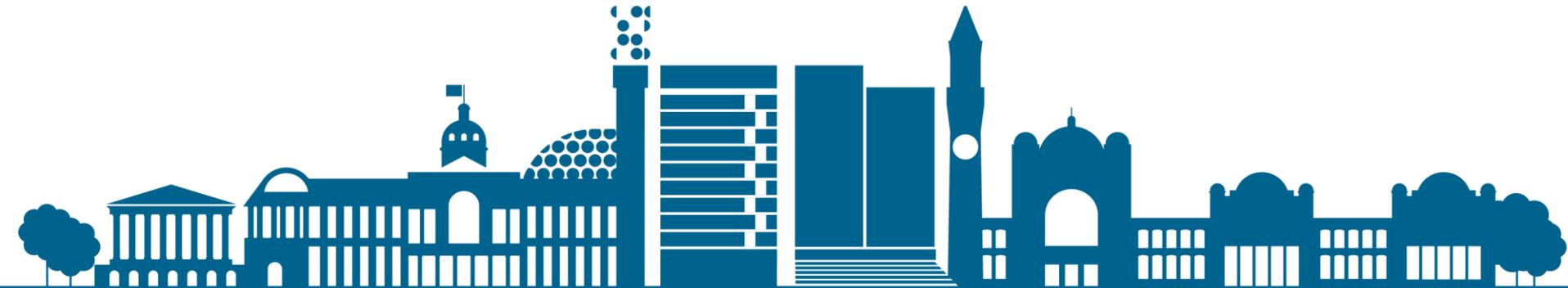


# (Qualitative) Process Tracing in Health and Social Care Research

**Hareth Al-Janabi & Igor Shagalov**

Health Economics Unit, University of Birmingham

Talk for GOLTC, 5<sup>th</sup> November 2025



# Overview

- What is process tracing?
- How has it been used in health research?
- Our experience using it in the WISE project
- Reflections



# What is process tracing?

- “...a research method[ology] used for tracing causal mechanisms using detailed, within-case, empirical analysis of how a causal mechanism operated in real world cases” Beach 2019, p.1
  - Theory-building
  - Theory-testing
  - Outcome explaining
- Value of process tracing:
  - To investigate how and why questions;
  - To describe social, political (& economic) phenomena;
  - To evaluate alternative theories

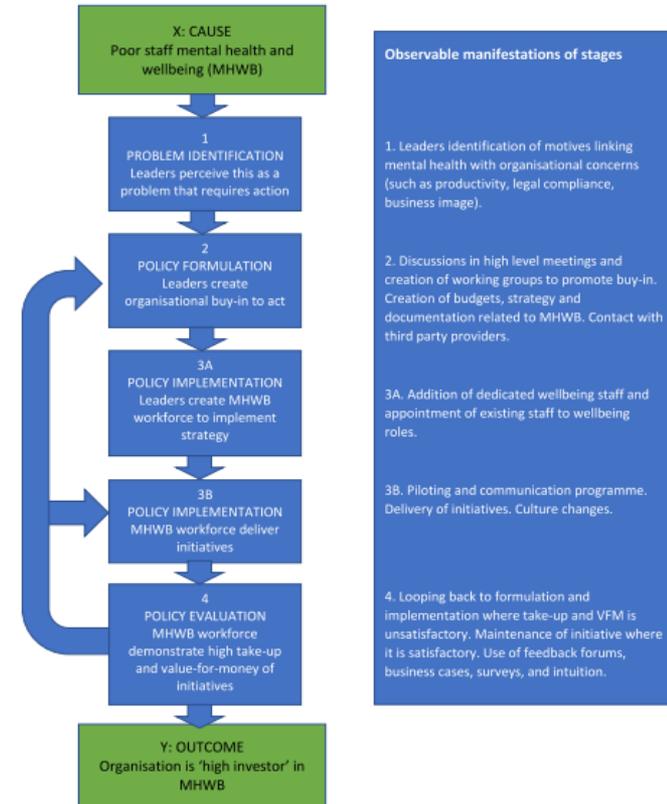


Fig. 3. Workplace MHWB investment policy stages heuristic.



# Process tracing as a case study methodology

- *“The essence of a case study ... is that it tries to illuminate a decision, or set of decisions: why were they taken, how were they implemented, and with what result.”* (Yin, p. 14)
  - Useful when context and phenomena are hard to separate
- Case studies can be concrete (organisations, projects, individuals) or less concrete (decisions, communities, relationships)
- Enables nesting of a variety of methods to illuminate wider phenomena
- *“...case studies like experiments are generalisable to theoretical propositions and not to populations”* (Yin p.10)
  - Selecting cases – typical cases (X,Y present) & deviant cases, using replication rather than sampling logic



# Case for using process tracing in health

**'Health' as a complex system**



**Importance of individual cases**



**The limits of quant methods**



**Need for evidence-based decisions**



# How do organisations invest in mental health?



Problem-solving (rational) model?

Research input on  
cost-effectiveness  
analysis



# WISE (Wellbeing Investment in Schools and Employers) project

- 4 year Wellcome Trust Funded project (2021-2025)
- Different strands to process tracing research
  - How has process tracing been applied in health?
  - How do schools invest in mental health/wellbeing?
  - How do workplaces invest in mental health/wellbeing?



# The systematic review

- Searched applied literature ‘health’ and ‘process tracing’:
  - Where applied?
  - How applied? (Range of methods, good practice)
- Two step data extraction
  - All PT studies
  - Those with methods detail

Social Science & Medicine 366 (2025) 117539

Contents lists available at ScienceDirect

**Social Science & Medicine**

journal homepage: [www.elsevier.com/locate/socscimed](http://www.elsevier.com/locate/socscimed)

ELSEVIER

SOCIAL SCIENCE & MEDICINE

Check for updates

## How is process tracing applied in health research? A systematic scoping review

Rebecca Johnson<sup>a,1</sup>, Derek Beach<sup>b</sup>, Hareth Al-Janabi<sup>a,\*</sup>

<sup>a</sup> Health Economics Unit, Institute of Applied Health Research, University of Birmingham, UK  
<sup>b</sup> Department of Political Science, University of Aarhus, UK

---

**ARTICLE INFO**

Handling editor: Richard Smith

**Keywords:**  
Case study  
Healthcare financing  
Health policy  
Mixed methods  
Process tracing  
Qualitative research  
Systematic review

**ABSTRACT**

Complex health system questions often have a case study (such as a country) as the unit of analysis. Process tracing, a method from policy studies, is a flexible approach for causal analysis within case studies, increasingly used in applied health research. The aim of this study was to identify the ways in which process tracing methods have been used in health research, and provide insights for best practice. We conducted a systematic scoping review of applied studies purporting to use process tracing methods in health research contexts. We examined the range of studies and how they conducted and reported process tracing. We found 84 studies published from 2011 to 2023. Studies were categorised into two groups: those with greater methodological description (n = 19 studies) and those with less methodological description (n = 65 studies). A majority of studies were focused on public health and health policy with around half of studies focused on low and middle income countries. Of those 19 studies that provided greater methodological description eight studies featured four areas of good practice: (1) reporting the development of a mechanistic theory and making it explicit; (2) linking empirical material collected to the mechanistic theory; (3) clearly presenting the causal mechanism tracing; and (4) reporting how consideration of counterfactuals or evidence of alternatives within the study were analysed in practice. The review demonstrates the rapid take-up of process tracing to generate theory and evidence to support a better understanding of causal mechanisms in complex health research. To support future studies in conducting and reporting process tracing, we provide emergent recommendations.

Johnson, R., Beach, D., & Al-Janabi, H. (2024). How is process tracing applied in health research? A systematic scoping review. *Social Science & Medicine*, 117539.



# The systematic review

- 84 studies identified
  - 61 studies since 2018
- 52% LMIC
- Focus on public health, health financing, health policy
- Only 19 of 84 provided details of process tracing methods

*“...all studies had an element of tracing and analysing events over time... there was a subgroup of studies in the simple PT group that ...focus almost exclusively on the use of a timeline or historical events to construct an argument as their process tracing...”*

		Studies
Public health and public health policy	Sanitation, Covid-19, vaccination, physical activity promotion, alcohol consumption policy, tobacco control, nutrition, menu labelling, morbidity and mortality outcomes, Ebola	In-depth n=10
		Simple n=40
Healthcare systems and financing	Equity, health insurance, taxation, health system strengthening, universal health coverage	In depth n=4
		Simple n=12
Health policy theory and concepts	Policy influence; Politicised approaches to medical training	In depth n=2
		Simple n=10
Organisation and implementation science	Organisational communication networks	In depth n=2
Environment, agricultural and food safety	Food safety systems management; Worker health and safety policy, governance around nutrition and food security	In depth n=1
		Simple n=3
Health services	Cancer care communication	In depth n=2
Mental health	Stigma and resilience	Simple n=1



# How has process tracing been used in health?

- Mix of outcome explaining, theory-building and theory-testing
- ‘Data dominant’ vs. ‘narrative dominant’ studies
- Studies rarely embed all
  - Mechanistic theory
  - Empirics linked to theory
  - Counterfactual thinking
  - Transparency
- Some exemplars

Article Reference	Type of process tracing	Development of mechanistic theory	Empirical material linked to mechanistic theory	Consideration of counterfactual or evidence of alternatives	Features of good practice evidenced in study
McNamara, C. (2015). "Trade liberalization, social policies and health: An empirical case study"	Theory building	Yes Partially	Yes Partially	Yes	Yes
Ridgeway, J. L., et al. (2021). "Tracing the potential of networks to improve community cancer care: an in-depth single case study."	Theory building	Yes Partially	Yes Partially	Yes Partially	No
Shawar, Y. R. and L. G. Crane (2017). "Generating global political priority for urban health: The role of the urban health epistemic community."	Theory building	No	No	No	No
Bamanyaki, P. A. and N. Holvoet (2016). "Integrating theory-based evaluation and process tracing in the evaluation of civil society gender budget initiatives."	Theory building, theory testing	Yes	Yes Partially	No	Yes
Comfort, L. K., et al. (2019). "Organizational Adaptation Under Stress: Tracing Communication Processes in Four California County Health Departments During the H1N1 Threat, April 28, 2009, to March 11, 2011."	Theory building, theory testing	Yes	Yes	No	Yes
te Lintelo, D. J. H. and K. Pittore (2021). "Evaluating Parliamentary Advocacy for Nutrition in Tanzania."	Theory building, theory testing	Yes Partially	yes	Yes	Yes
Alvarado, M., et al. (2021). "Evidence of a health risk 'signalling effect' following the introduction of a sugar-sweetened beverage tax."	Theory testing	Yes	Yes	Yes	Yes
Jagannath, H. P. (2020). "Street-level collaboration: perception, power, and politics on the frontlines of collaboration."	Theory testing	Yes	Yes	Yes Partially	No
Löblová, O. (2018). "When Epistemic Communities Fail: Exploring the Mechanism of Policy Influence."	Theory testing	Yes	Yes Partially	Yes	Yes Partially
Mnich, C. (2019). "Is there Europeanization of physical activity promotion? – A neofunctional approach."	Theory testing	Yes	Yes	No	Yes

# School investment – priority setting challenge

- Priority setting literature
  - Focuses on health
  - Largely normative
- Aim: *Why and how do schools become high investors in mental health and wellbeing?*

Social Science & Medicine 366 (2025) 117665

Contents lists available at ScienceDirect

**Social Science & Medicine**

journal homepage: [www.elsevier.com/locate/socscimed](http://www.elsevier.com/locate/socscimed)

ELSEVIER

SOCIAL SCIENCE MEDICINE

Check for updates

**‘Care as capital’: Developing theory about school investment in mental health and wellbeing**

Rebecca Johnson <sup>a,1</sup>, Camille Allard <sup>a,2</sup>, Colette Soan <sup>b</sup>, Derek Beach <sup>c</sup>, Hareth Al-Janabi <sup>a,\*</sup>

<sup>a</sup> Health Economics Unit, Institute of Applied Health Research, University of Birmingham, UK  
<sup>b</sup> Health Services Management Centre, School of Social Policy, University of Birmingham, UK  
<sup>c</sup> Department of Political Science, University of Aarhus, Denmark

---

**ARTICLE INFO**

Handling editor: Richard Smith

**Keywords:**  
Case study  
Decision-making  
Mental health  
Priority setting  
Process tracing  
Qualitative research  
Resource allocation  
Schools  
Wellbeing

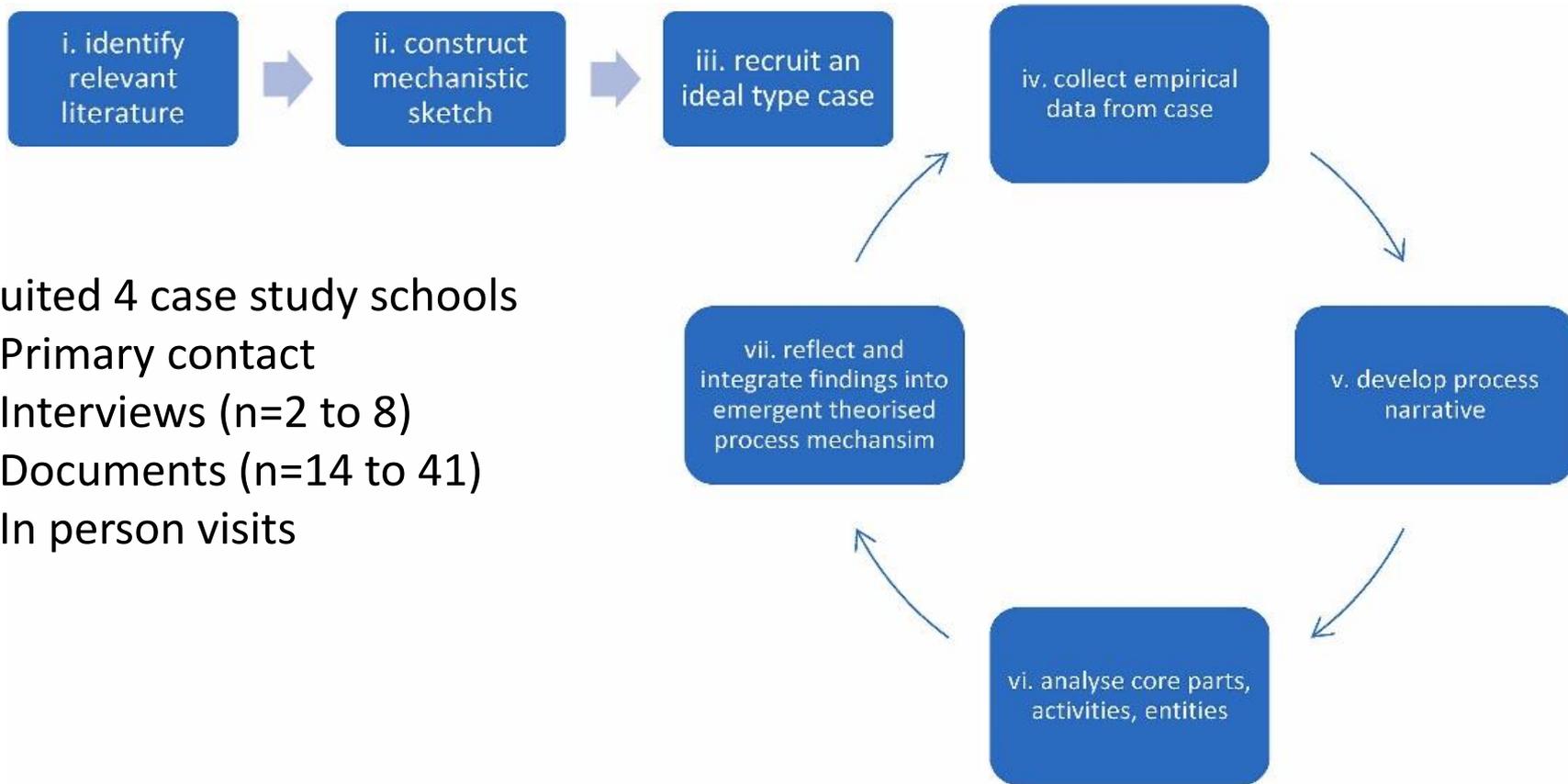
**ABSTRACT**

Recent years have seen an emphasis on delivering mental health and wellbeing support in school settings. However, the process by which schools meet this resource allocation challenge is largely undocumented. Our study used theory-building process tracing to develop a mechanistic understanding of the process of mental health investment in schools. We conducted in-depth case study work with four school sites in England, comprising 29 interviews and the retrieval and analysis of 95 documents. The empirical work was used to develop process theories to explain how and why high-investing schools allocated resources to wellbeing and mental health. Our work suggested high mental health investment was catalysed by either a perceived need or a change in ethos. The decision-making process then proceeded with some elements that aligned with conventional rational choice models (such as the comparison of alternatives) but also some important differences. Notably schools reacted to tradeoffs by seeking alternative, often informal, sources of funding and support for initiatives. In doing this they could develop ‘care capital’ and enter a virtuous cycle of network building and investment. While this theory requires further exploration in other settings, it may be useful for researchers and policy-makers seeking to better understand how to support schools in allocating resources for mental health and wellbeing. In particular, it suggests that schools may benefit from support in how to harness external resources for mental health and wellbeing equitably and efficiently, alongside making best use of their internal resources.

Johnson, R., Allard, C., Soan, C., Beach, D., & Al-Janabi, H. (2025). ‘Care as capital’: Developing theory about school investment in mental health and wellbeing. *Social Science & Medicine*, 366, 117665.



# The process of process tracing



- Recruited 4 case study schools
  - Primary contact
  - Interviews (n=2 to 8)
  - Documents (n=14 to 41)
  - In person visits



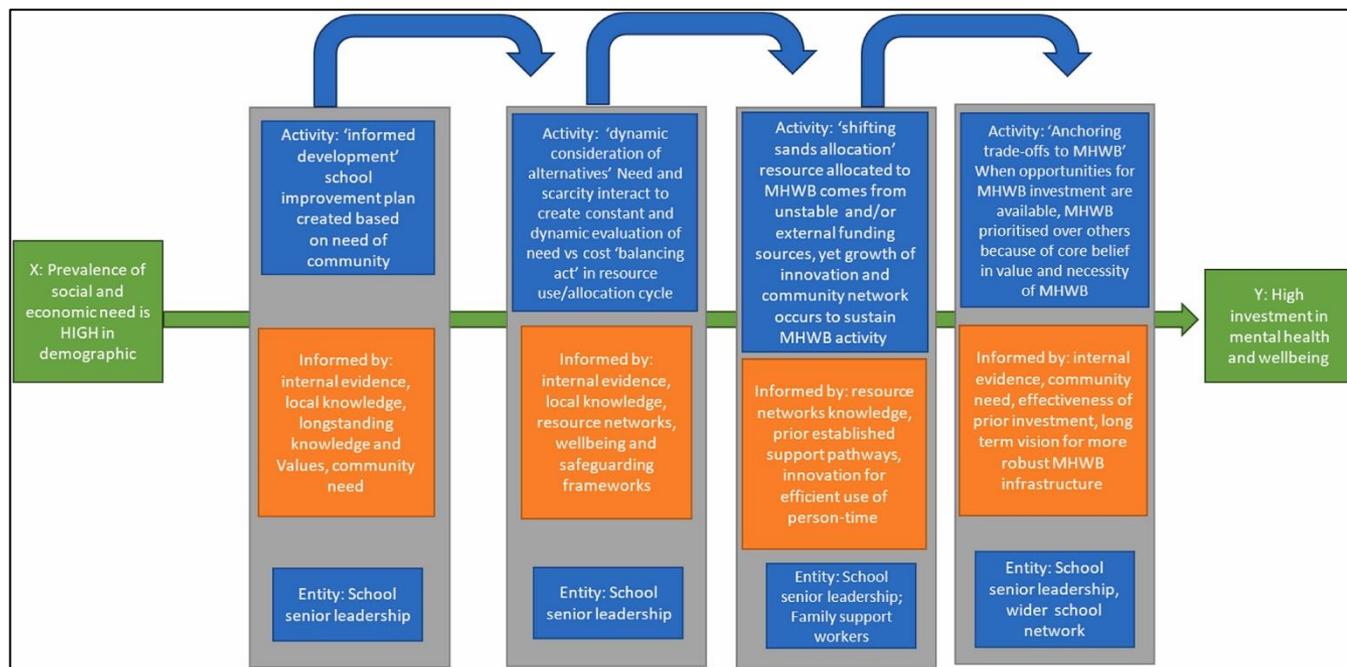
# Pathway 1: Prevalence-based need catalyses high investment

## Catalyst

*We're a school in an area with high levels of deprivation, and we realise that those kinds of challenges ... that our students present with are ones that, in many homes, would be handled in the home, we recognise that we've had to have some service to support them here. (Principal, MAT2)*

## Consideration of alternatives

*The scenarios we can afford aren't enough, so we ask the senior leadership to have what we call a blue-sky thinking day. And we tried to come up with creative ways and trialing working differently and working smarter and it's a bit of trial and error. (Senior Leader, LAM1)*



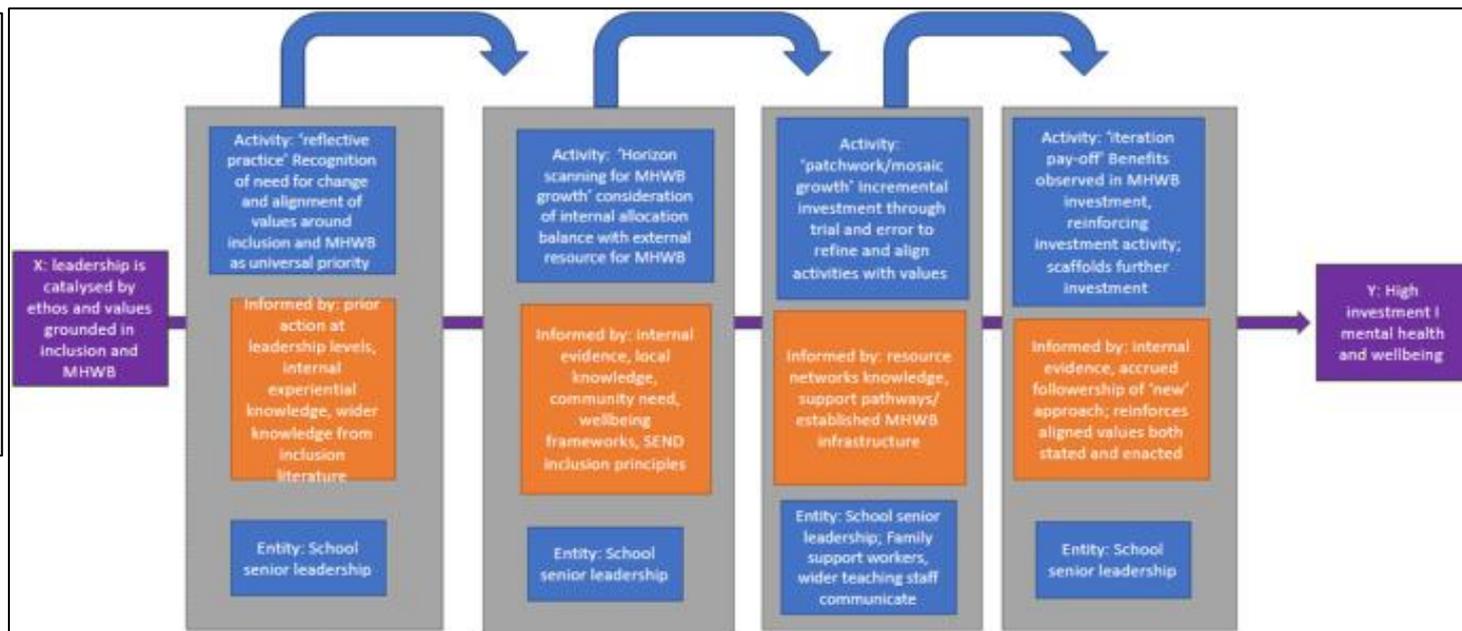
## Growth of network and innovation

*Most deprived schools often are dealing with lots and lots more problems ... Whereas the affluent head teachers often know more places to access. So we try and buddy up with affluent schools with deprived schools so there's some sharing and some learning (Regional Children's Services Commissioner)*



# Pathway 2: Ethos-driven need for change catalyses high investment

**Patchwork growth #1**  
*... we always reach out, we worked with the British Council, we had a linked school [overseas], we did a lot of work to start with, from that link, we were enabled to get involved in others projects, they said there was a space for us to join ... so we did (Headteacher LAM2)*



## Patchwork growth #2

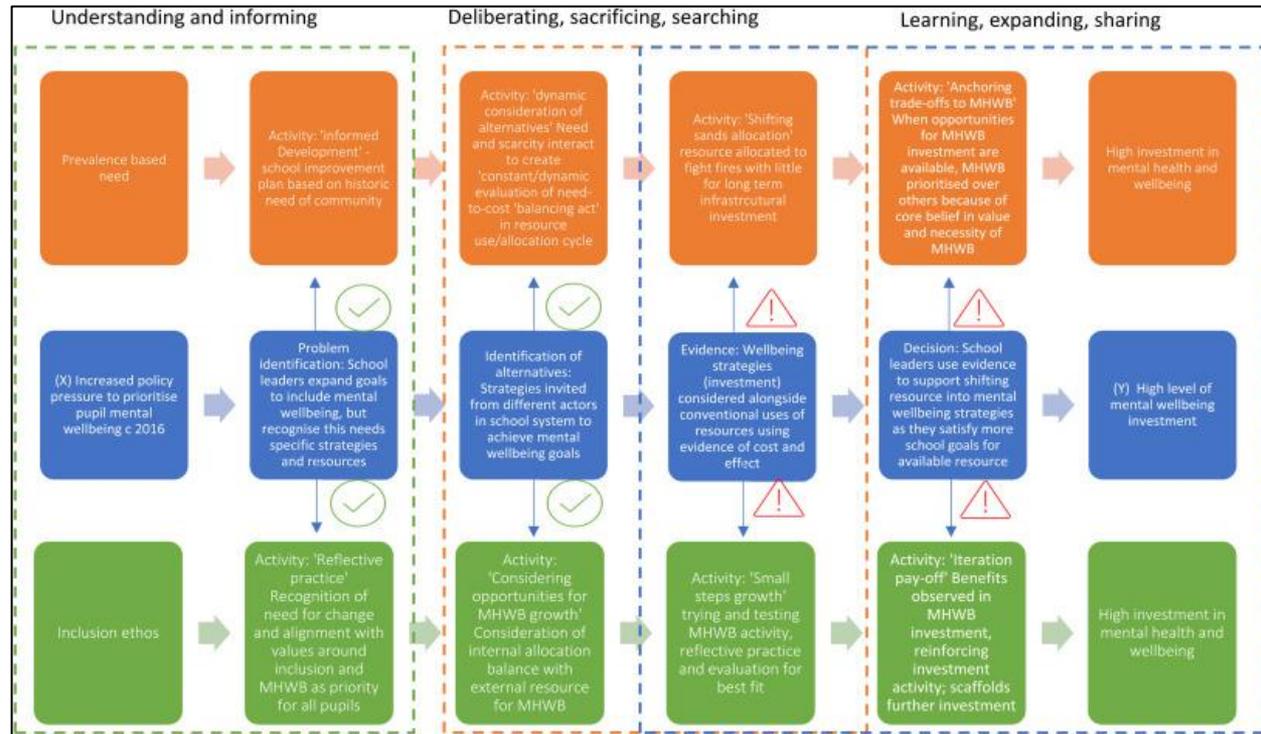
*This ... was the caretaker's bungalow. So I got a capital funding grant, only a very small amount, to knock down the wall ... to make a classroom space here ... Which then obviously expanded the provision that we could offer (Assistant Head LAM2)*

## Network building

*And now schools are sometimes approaching us, because it's also part of ... meetings throughout the year where the educational psychologist of the school did the table going in to identify what pupils need support (Wellbeing and Inclusion Support Manager for Local Authority)*



# 'Care-as-capital' mechanism



Two pathways brought together in 'care-as-capital' process theory (blue) ←

Broad alignment with problem solving theory

Deviation later with external search and capital building



# Implications of 'care-as-capital'

- New elements *search for external resource and capital building cycle*
  - Research
  - Practice
- But does the theory travel?
- And why do some schools not become high investors?



# Method



## *Process Tracing Methodology:*

It is like detective work, where we carefully follow the clues — steps, evidence, and influence.

## **Study Stages:**

<b>Stage</b>	<b>Case Study</b>	<b>Status</b>
Theory Development	High investors	Completed
Theory Testing	High and low investors	Work in progress



# Data

We use a variety of sources of information:

- Interviews with school senior leadership (28 interviews).
- Document analysis (93 documents).
- Observations (6 case studies).
- School senior leadership survey (129 schools).



# Case Study School Characteristics

School	Type	Pupils	Pupil Premium (%)	Investor Score	Expenditure (£)	Interviews	Docs
<i>High Investors</i>							
1	Primary	469	49.2%	88	£6,339	5	16
2	Primary	401	21.9%	79	£5,343	5	15
3	Secondary	555	12.4%	92	£5,596	3	21
4	Secondary	928	42%	88	£6,856	8	18
<i>Low Investors</i>							
1	Secondary	570	45%	71	£8,491	3	11
2	Secondary	673	63%	67	£ 8,014	4	12



# Evidence Types

Evidence Type	Details	Example (Cause: Prevalence of Deprivation)
Trace	Documents	In the school documents, the proportion of Pupils Premium is 49.2% which is significantly higher than the national average.
Account	Interviews	<i>"As a partnership, our first aim and principle is children and families first. They are all in very highly disadvantaged areas."</i> (MAT CEO).
Patterns	Figures	Based on the Index of Multiple Deprivation 2019, the school is located among the 20% most deprived areas in England.
Sequence	Interviews or documents that indicates the temporal order of events	<i>"The last ten years or so, with the removal of so many services that made an impact for all families, and the increase in waiting lists and the increase in being knocked back... I think a school had to pick up the pieces..."</i> (Headteacher).

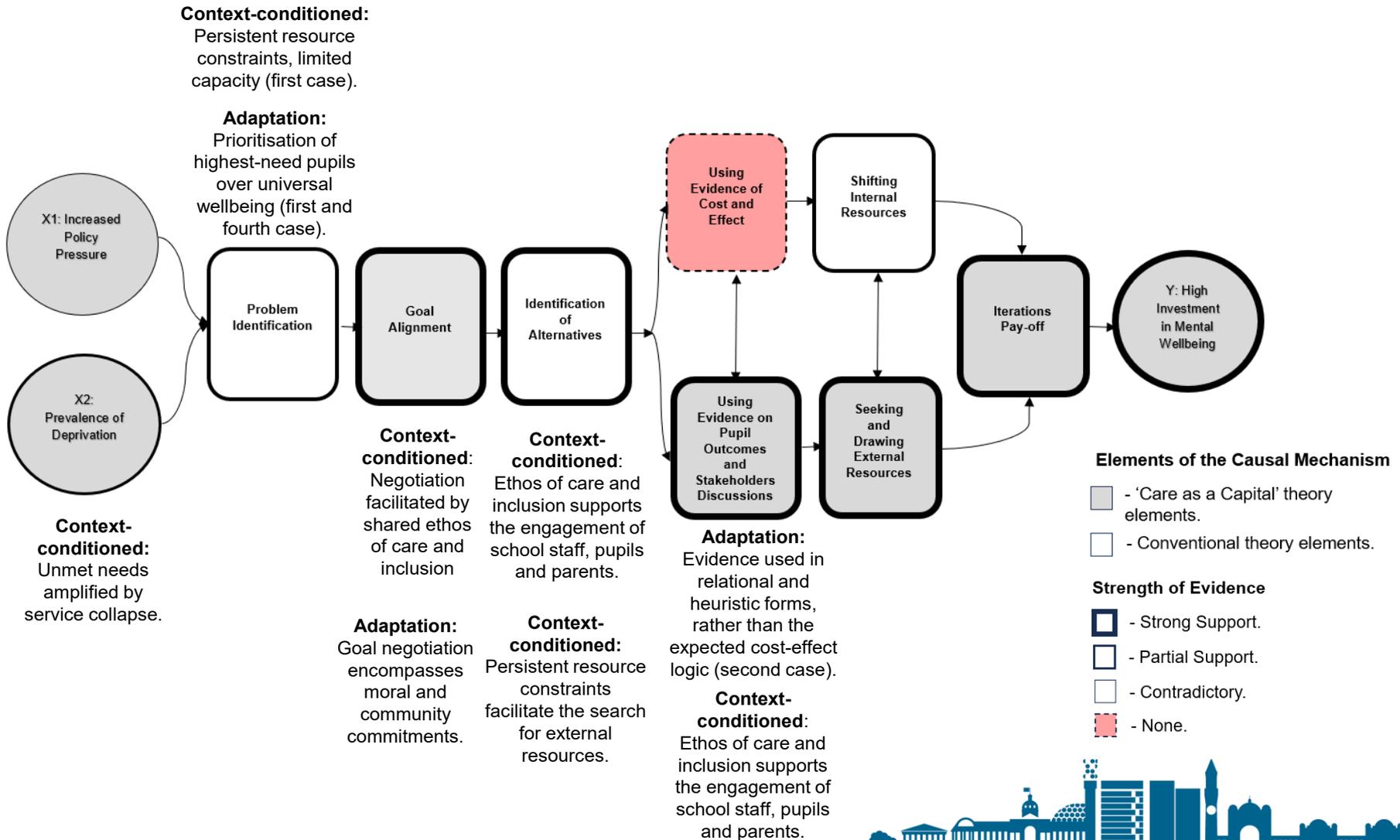


# Testing Strength of Evidence

Evidence Strength	In-case Decision Rule	Between-case Decision Rule
Strong	≥2 independent types of evidence	≥3 cases show strong support, and no case refutes
Partial	One type/source only; or multiple pieces of the same type/source	Cases are split between strong and partial support
Contradictory	Evidence both for and against the stage/link in the same case	Some cases support while others contradict/refute
Refutes	Credible evidence against, with no supporting evidence	≥3 cases refute and none strongly support
None	No probative evidence available	No case shows relevant evidence
Manifestation Qualifiers		
Adaptation	Mechanism stage is present but enacted in a substantively different form than theorised, while serving the same function	A mechanism element is consistently enacted in a different but functionally equivalent way across multiple cases
Context-conditioned	Stage occurs only under specific contextual conditions	A mechanism element operates only in specific conditions



# 'Care-as-Capital' Mechanism



# Goal Alignment Between School and MAT

*Our financial director [in MAT] is holding the budget and can be a tough cookie; she is ultimately supportive, so if there are ways around it, then she will try to get resources.*

Safeguarding Lead,  
High-Investment School 3

*We have an overarching strategy, obviously, for mental health and wellbeing that incorporates every single person in the organisation.*

Trust CEO,  
High-Investment School 1



# Drawing External Resources and Networking

*There is a termly safeguarding lead forum... but it is a little bit more of a one-way conversation.*

*So, we have started to have conversations and meet up [with other schools] and talk to us about what we do... build up a little bit of an informal... sharing ideas.*

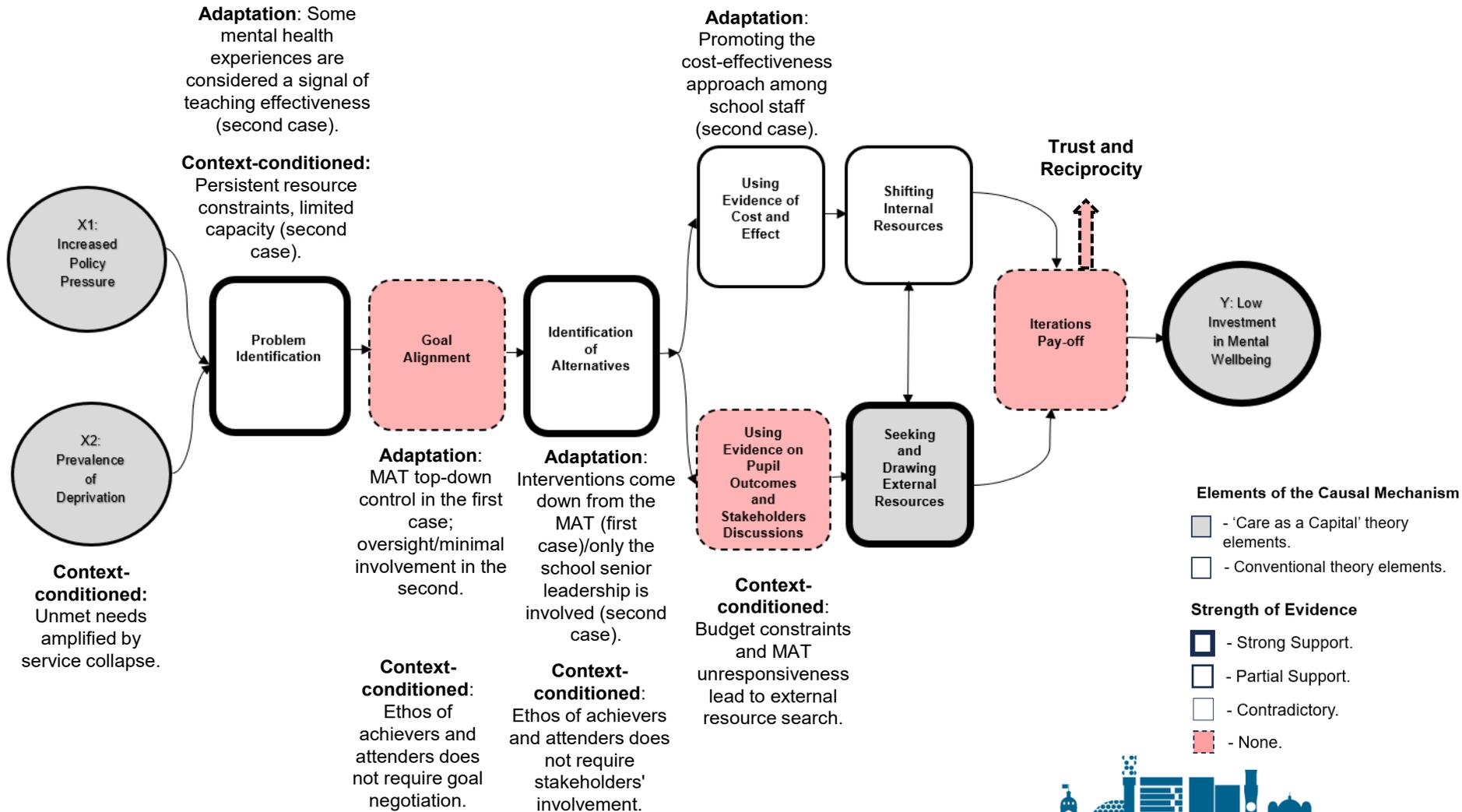
Headteacher,  
High-Investment School 3

*We have used different resources through the years. We had 'Mind' provided us a few years ago with a series of resources which were an early intervention universal offer for students. We incorporated that.*

Safeguarding Lead,  
Medium-Investment School 1



# Where Does the Mechanism Break Down?



# Goal Misalignment Between School and MAT

“

*That [decision-making] will come down to the MAT Team which will have a huge influence on that because they manage all the finances... Even if we did know and had a great idea... the other side of it is... begging, borrowing and stealing from the MAT Finance Team...*

Deputy Headteacher,  
Low-Investment School 1

“

*I would say as far as the trust is concerned there is not a direct fund to mental health.*

Safeguarding Lead, Low-Investment School 2

“

*The trust are the people that have to report to the government about how the money works and how they have spent the money.*

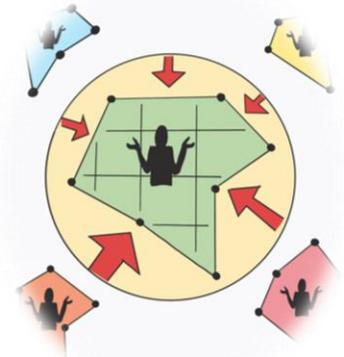
Headteacher, Low-Investment School 2



# Conclusions

## How can we support schools?

- Facilitate alignment between school-level and MAT goals.
- Support external resource search and networking.
- Encourage schools to consider both costs and outcomes in their decision-making.
  - Propose outcome indicators that capture the relational component.



# Reflection on Using Process Tracing in the WISE Study

## Challenges:

- **Takes time** – Careful step-by-step reasoning needed
- **Too much data** – Stay focused, think like a detective
- **No fixed rules** – Can be tricky, but also flexible

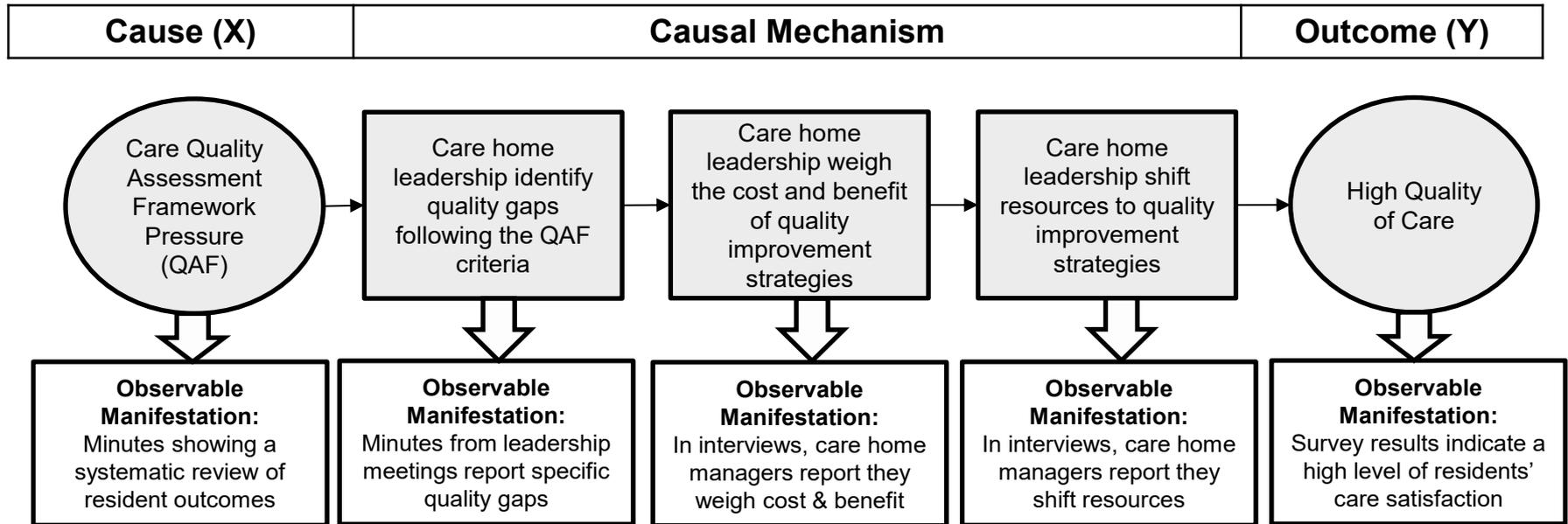
## Advantages:

- Rigorous approach to studying processes
- Internal and external validity
- Mechanistic thinking useful for policy



# Process Tracing in Social Care

## How Did Care Homes Improve Care Quality?



# Conclusion

Is process tracing a useful methodology for studying decision-making in health and care systems?

Yes! But....

Thank you

## References

- Alvarado et al. (2021). Evidence of a health risk ‘signalling effect’ following the introduction of a sugar-sweetened beverage tax. *Food Policy*, 102, 102104.
- Beach, D., & Pedersen, R. B. (2019). *Process-Tracing Methods: Foundations and Guidelines*. University of Michigan Press.
- Johnson, R., Allard, C., Soan, C., Beach, D., & Al-Janabi, H. (2025). ‘Care as capital’: Developing theory about school investment in mental health and wellbeing. *Social Science & Medicine*, 366, 117665.
- Johnson, R., Beach, D., & Al-Janabi, H. (2024). How is process tracing applied in health research? A systematic scoping review. *Social Science & Medicine*, 117539.
- Yin, R. K. (2009). *Case study research: Design and methods* (Vol. 5). sage.

