

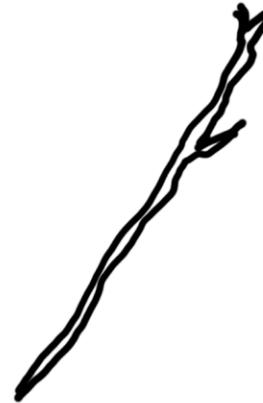
# Realist methods used in the GPs in EDs study

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Carrot



Stick



Sermon



Rewards



Regulations



Information

# What works, for whom, how and in what circumstances?

## Context

- Pre-existing conditions that influence the success or failure of different interventions

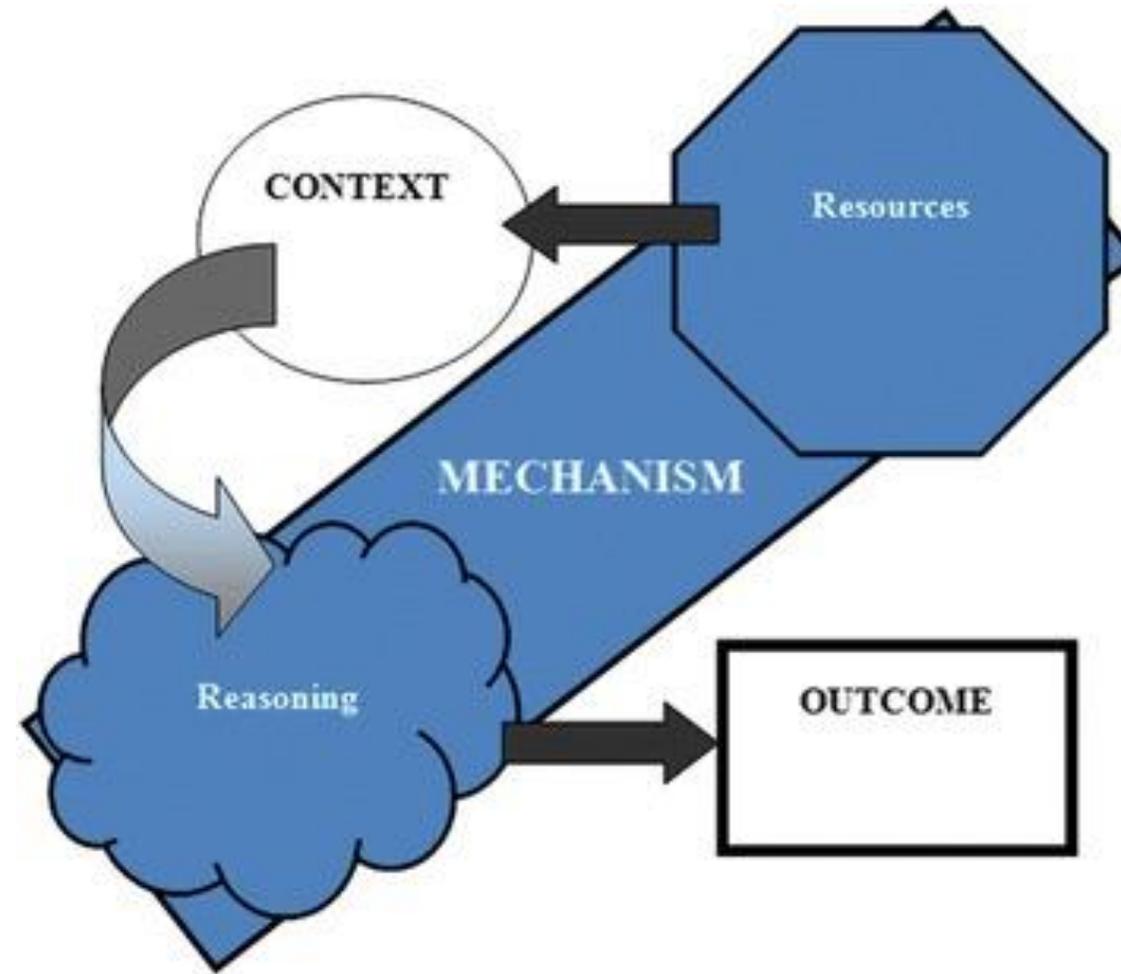
## Mechanisms

- Characteristics of the intervention (resource) and people's reaction to it (reasoning)

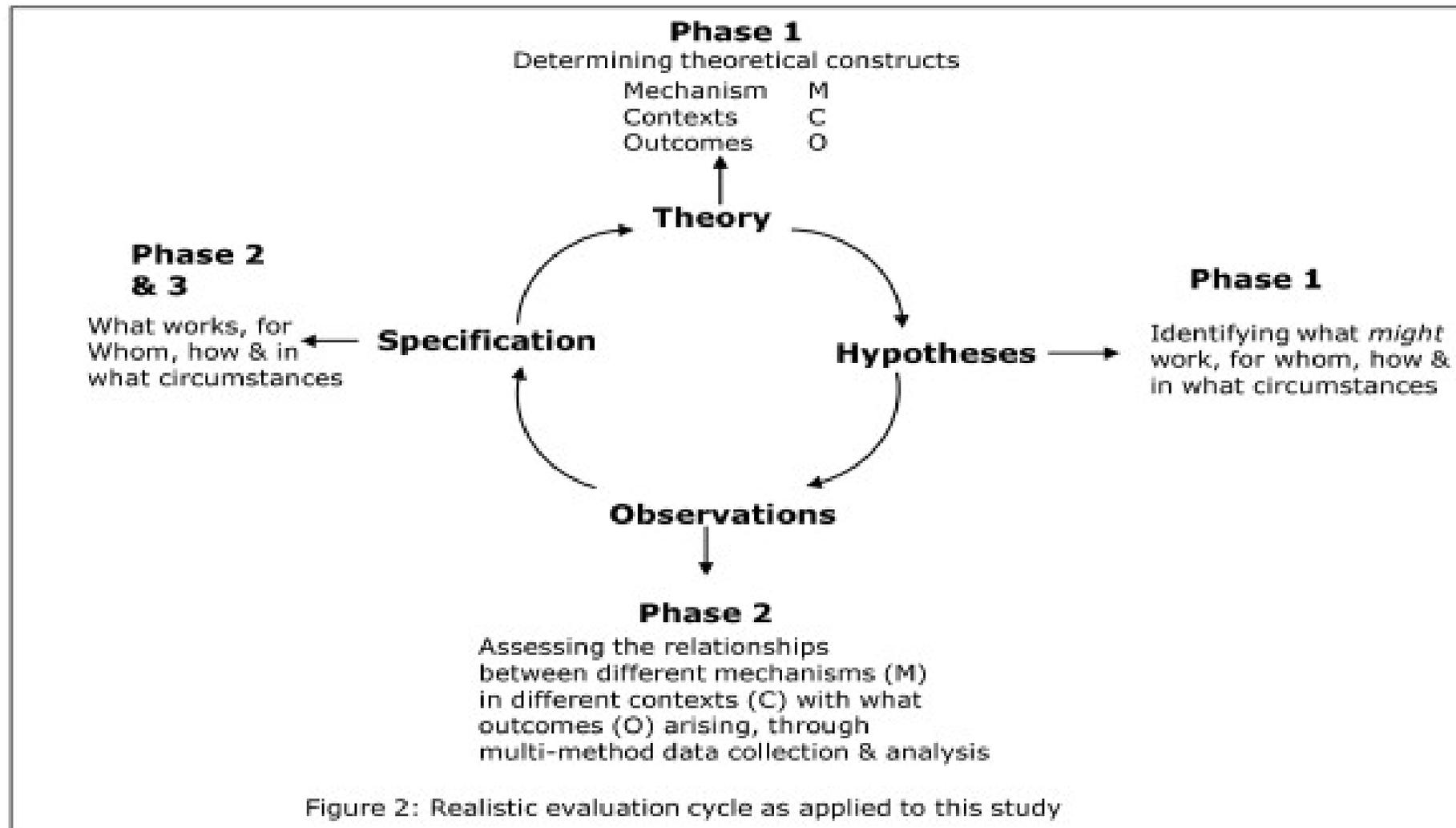
## Outcome

- Intended and unintended results of the intervention because of a mechanism operating within a context

# The aims of the realist researcher



# The realist evaluation cycle



# Theory definitions

## **Initial rough theory**

- An early theory about how, why, for whom, & in what circumstances the intervention is thought to work, described using a context-mechanism-outcome (CMO) configuration. Requires further testing.

## **Refined theory**

- An initial theory that has been refined using primary or secondary evidence

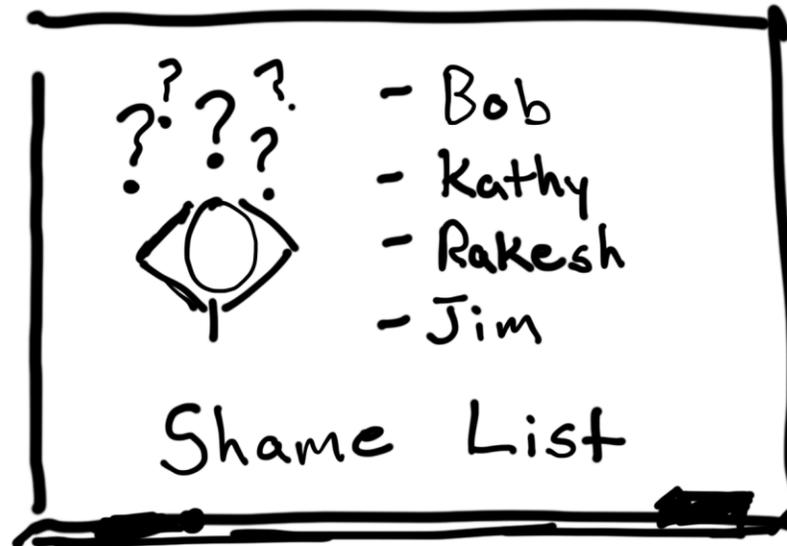
## **Programme theory**

- An overall high-level theory *summarising how the intervention works*, using the theories developed from the data

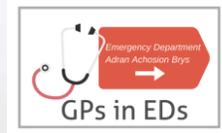
## **Formal theory**

- Existing social theories used as a lens through which to examine the data. Also known as *middle range theory* or substantive theory

The following  
people confused  
Context,  
outcome, and  
mechanism.



# GPs in EDs: A realist evaluation of effectiveness, safety, patient experience and system implications of different models of using GPs in or alongside Emergency Departments





# A realist evaluation of effectiveness, safety, patient experience and system implications of different models of using GPs in or alongside Emergency Departments

## The team:



Adrian Edwards (PI)  
Alison Cooper  
Freya Davies  
Andrew Carson-Stevens  
Tim Rainer  
Michelle Edwards  
Nigel Pearson  
Delyth Price  
Sir Liam Donaldson



Bridie Evans  
Barbara Harrington  
Julie Hepburn



Matthew Cooke



Helen Snooks  
Pippa Anderson  
Alison Porter  
Damon Berridge  
Alun Watkins  
Shaun Harris  
Saiful Islam



Thomas Hughes



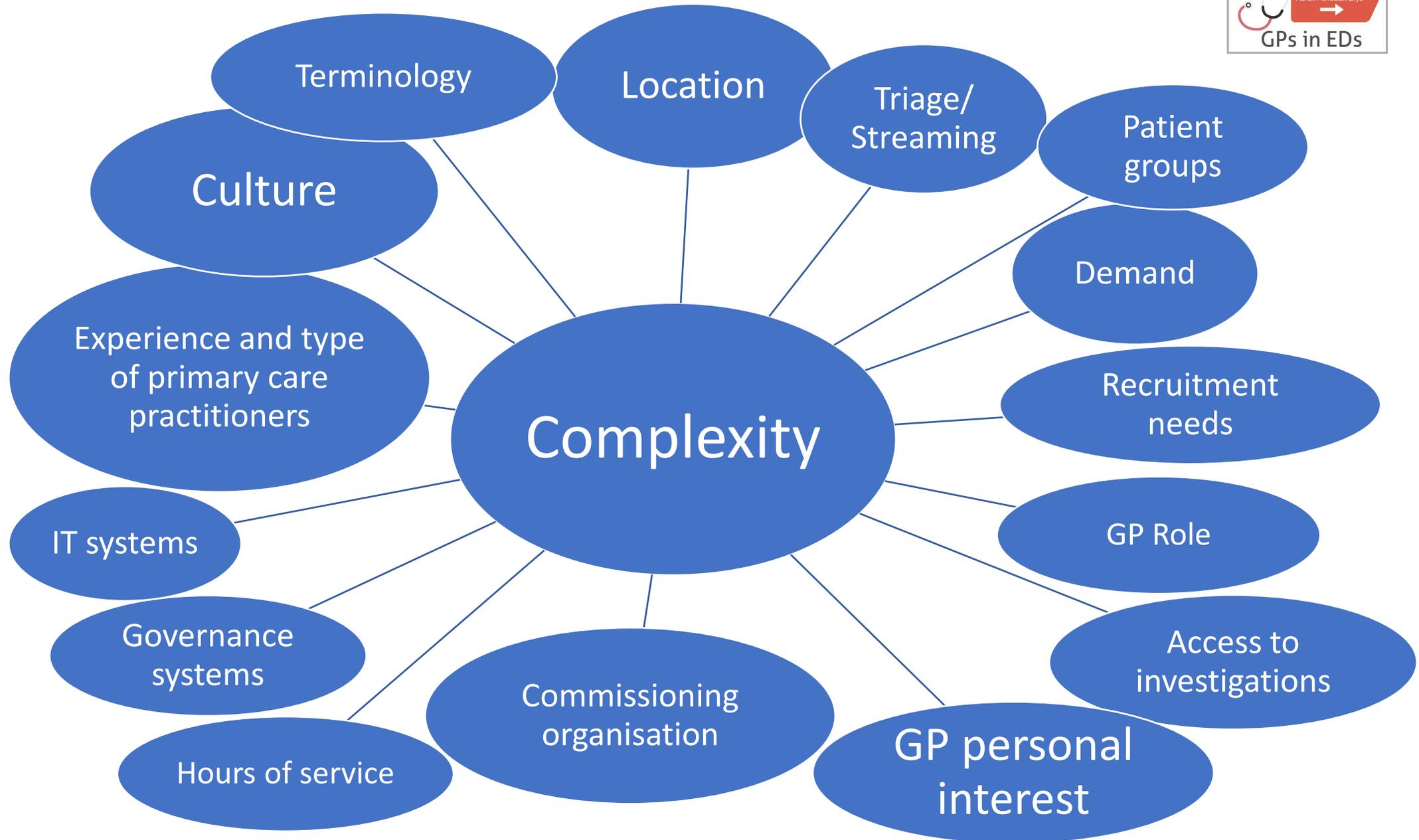
Jeremy Dale



Niro Siriwardena



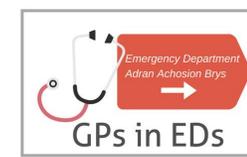
Peter Hibbert



# To understand what works, for whom, how and in what circumstances?



# A realist evaluation of effectiveness, safety, patient experience and system implications of different models of using GPs in or alongside Emergency Departments



Time (m)

0

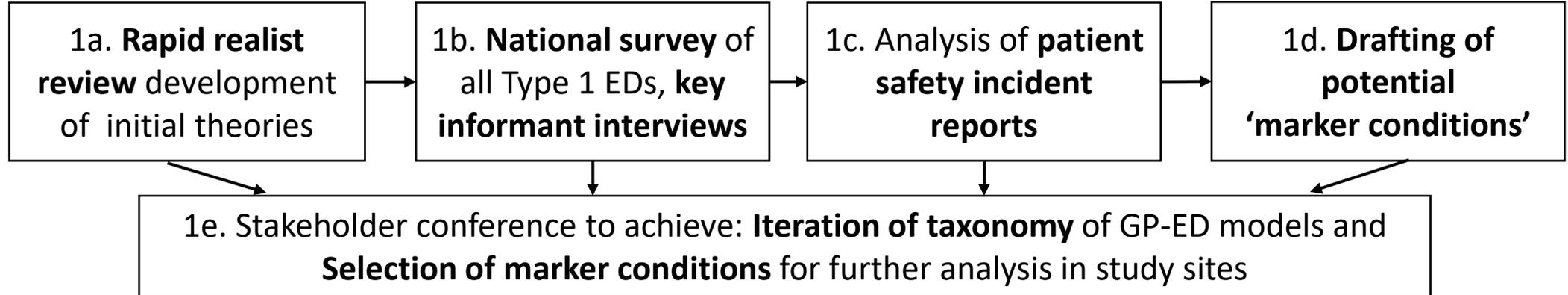
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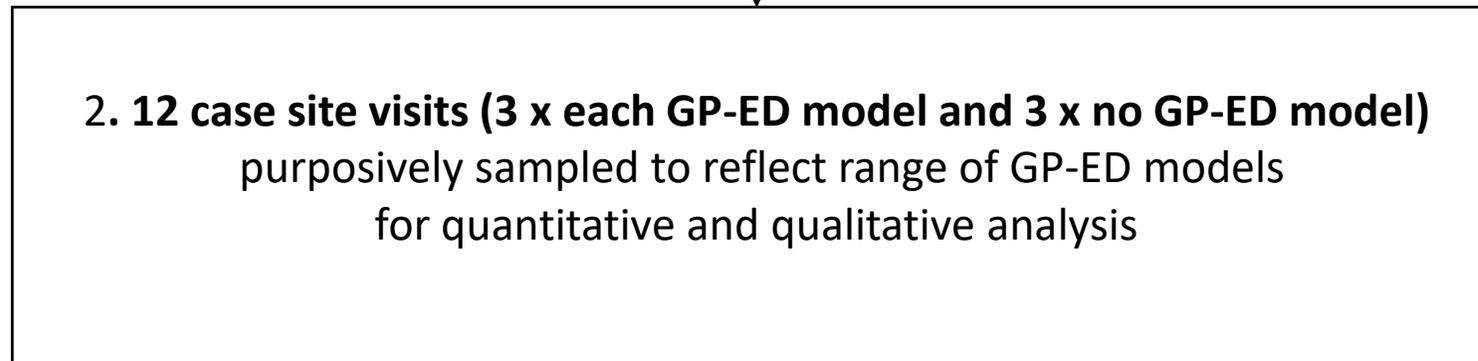
## Phase 1

1



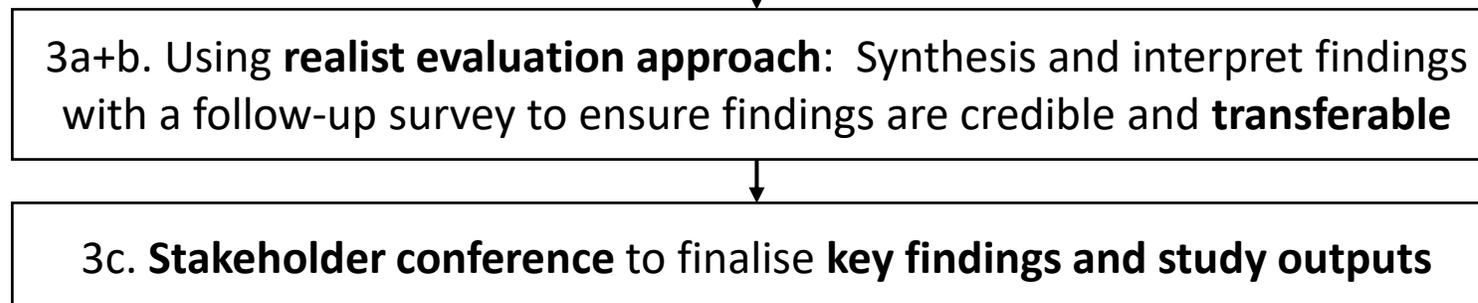
## Phase 2

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## Phase 3

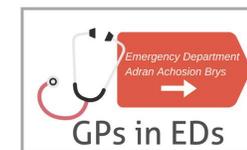
3



# BMJ Open The impact of general practitioners working in or alongside emergency departments: a rapid realist review

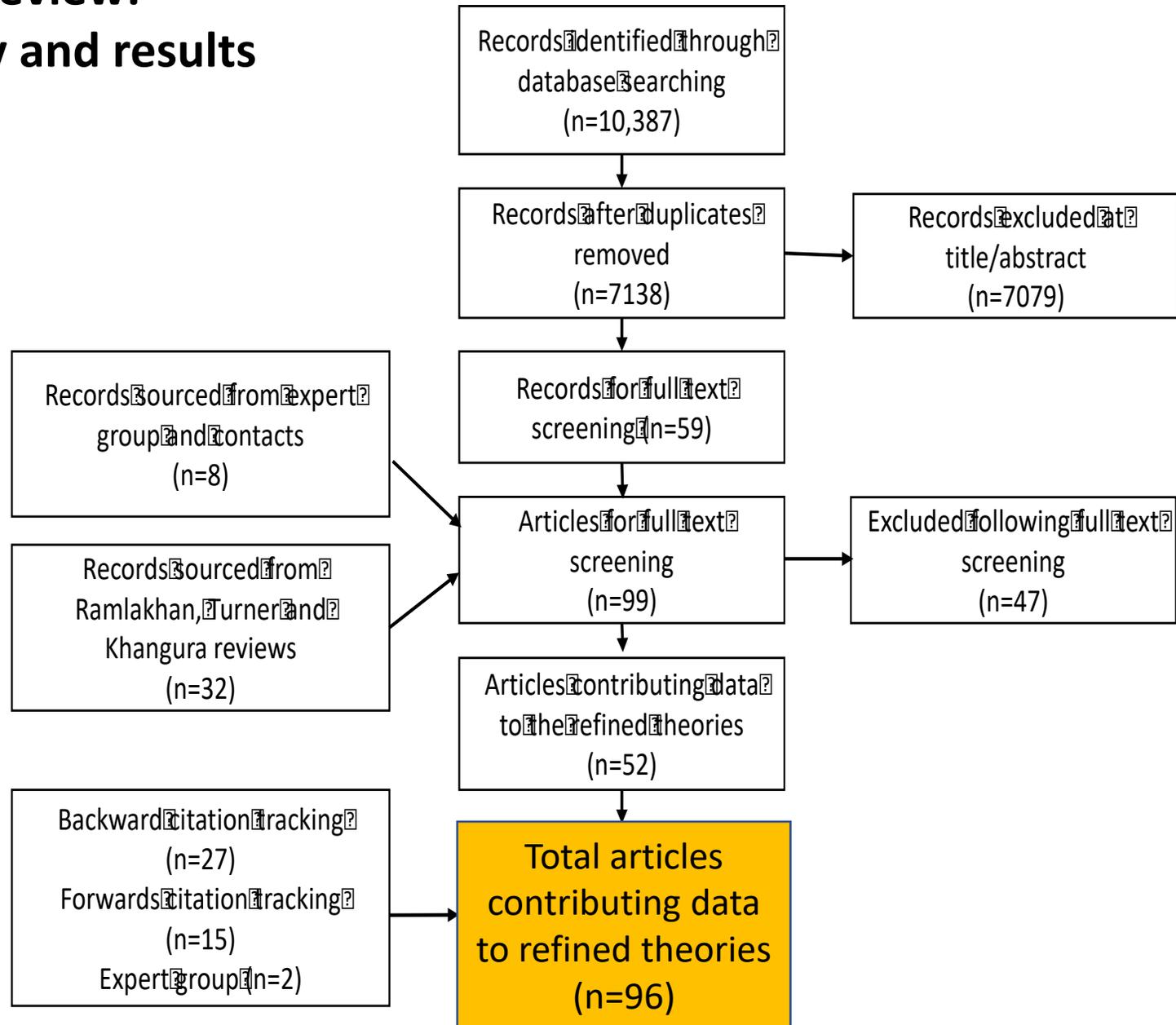
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Alison Cooper,<sup>1</sup> Freya Davies,<sup>1</sup> Michelle Edwards,<sup>1</sup> Pippa Anderson,<sup>2</sup>  
Andrew Carson-Stevens,<sup>1</sup> Matthew W Cooke,<sup>3</sup> Liam Donaldson,<sup>4</sup>  
Jeremy Dale,<sup>3</sup> Bridie Angela Evans,<sup>5</sup> Peter D Hibbert,<sup>6,7</sup> Thomas C Hughes,<sup>8</sup>  
Alison Porter,<sup>5</sup> Tim Rainer,<sup>1</sup> Aloysius Siriwardena,<sup>9</sup> Helen Snooks,<sup>5</sup>  
Adrian Edwards<sup>1</sup>



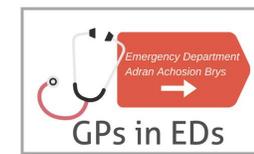
	Systematic review	Realist review
Aim	Does the intervention work?	To develop and refine programme theory
Unit of analysis	Intervention	Theory: CMO configurations
Best evidence	High quality RCTs	Anything that helps develop the theory – including policy documents, opinion pieces
Stakeholder role	??	Provide information about relevant literature. Initial theory development. Guide the strategy to ensure policy relevance
Search strategy	Narrow inclusion criteria Search completed before data extraction	Iterative searching to confirm or refute ideas about programme theory Searches ongoing during data extraction
Search completed	All relevant articles obtained	Theoretical saturation reached
Findings	Intervention specific	Generalisable programme theory

# Rapid Realist Review: Search strategy and results



## GP Role and patient safety

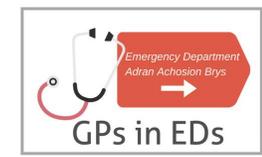
When GPs working in the ED maintain a ‘traditional role’ using the same approach taken in the primary care setting (M) to treat patients with primary care problems (C), investigations, admissions and process times will reduce (O). However, if GPs adopt an ‘emergency clinician role’ working as another pair of hands (‘going native’) because of their personal interest or experience or because they feel this is the correct way to work in this setting (M), there will be no difference in the rate of investigations and admissions (O).



“I guess our emergency medicine approach is we’re looking for something dreadful and a GP approach is very different in that most of the time they know it’s minor stuff or... moderate stuff that is self-limiting and so... they’re looking to find symptomatic relief and how can we get this patient home and away from hospital”  
(Consultant) Ablard et al. EMJ 2017

“Once they start becoming like everyone else then they stop being like a GP and they don’t necessarily work quickly and effectively which is supposed to be the whole benefit of having them there.”  
(Consultant) Ablard et al. EMJ 2017

# Streaming



General practitioners (GPs) and emergency department (ED) staff use their own personal experience and expectation (C) when interpreting streaming guidance (M) To influence which Patients are streamed to GPs (O)

“It seems that patients are difficult to classify (for A&E or walk in centre GPs or nurse practitioners) on limited information for several reasons: serious conditions can sound minor and vice versa”

Van der Straten et al EMJ 2012

# BMC Emergency Medicine

Learning from diagnostic errors to improve patient safety when GPs work in or alongside emergency departments: incorporating realist methodology into patient safety incident report analysis

[Alison Cooper](#) , [Andrew Carson-Stevens](#), [Matthew Cooke](#), [Peter Hibbert](#), [Thomas Hughes](#), [Faris Hussain](#), [Aloysius Siriwardena](#), [Helen Snooks](#), [Liam J. Donaldson](#) & [Adrian Edwards](#)

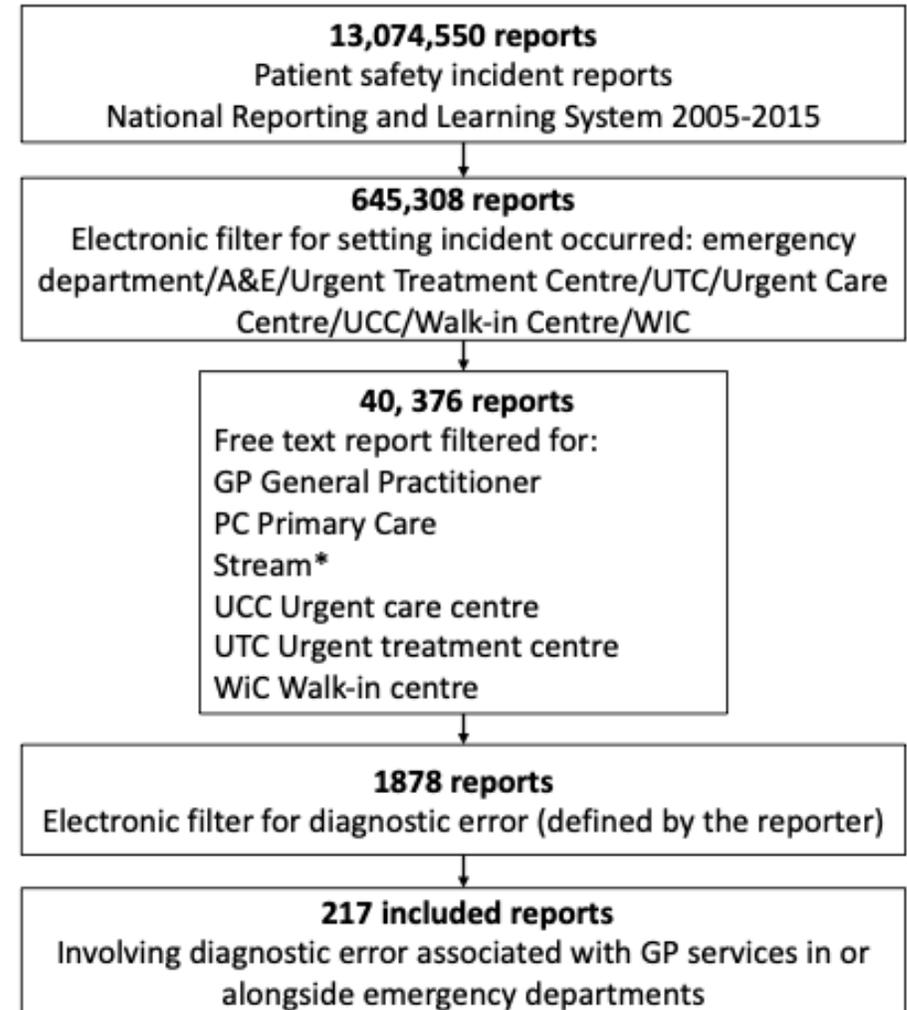
# National patient safety incident reports describing diagnostic error



## Coroners' reports to prevent future deaths

Courts and Tribunals Judiciary Reports to Prevent Future Deaths Category	Date of published reports	Number of reports	Included in study
Community health care and emergency services related deaths	14/08/18 – 30/07/13	284	5
Hospital death (Clinical procedures and medical management related deaths)	14/08/18 - 30/07/13	1063	4

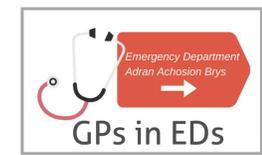
## National reporting and learning system patient safety incident reports



# Methods

- PISA: Familiarisation and data coding
  - Primary incident type, contributing incidents/factors, harm outcomes
- Generation of data summaries
  - Descriptive statistics frequency of harm and key contributing factors
- Interpretation of themes and learning
  - Incorporated realist methods to infer why incidents may have occurred
  - Used initial theories from the RRR
- Stakeholder feedback
  - Additional stage to validate findings

# GP Role and patient safety



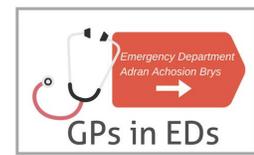
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If patients present to the emergency department with a **condition not usually dealt with in primary care** (C)  
and are seen by a GP who may have inadequate knowledge or skillset for the condition (M)  
the patient may be at **risk of a mis-management** (O)

---

*“Patient attended the ED (emergency department) following a fall. Landed onto right side. Patient sent to **Urgent Care Centre**. Seen by doctor and **discharged home**. Patient reattended the **same day** seen again and **diagnosed fractured Neck of Femur** (hip fracture).”*

# Streaming



---

If patients presenting to the emergency department (C) are assessed for streaming **but the streaming nurse is unclear which patients are appropriate (due to unclear guidance or inexperience) (M)**

**or the initial assessment is inadequate (limited history or lack of basic physiological observations) (M)**

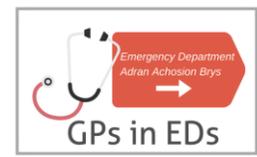
then higher risk patients may be streamed to the GP service (O)

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*“A (>65-year-old man) presented at (time) with **dizziness** and feeling like he was going to collapse. **No vital signs recorded by GP streamer. Waited 1 hour** to be seen in urgent care centre - when assessed by nurse practitioner heart rate 24 and BP unrecordable. **Transferred to resus.**”*



**British Journal of General Practice**  
bringing research to clinical practice



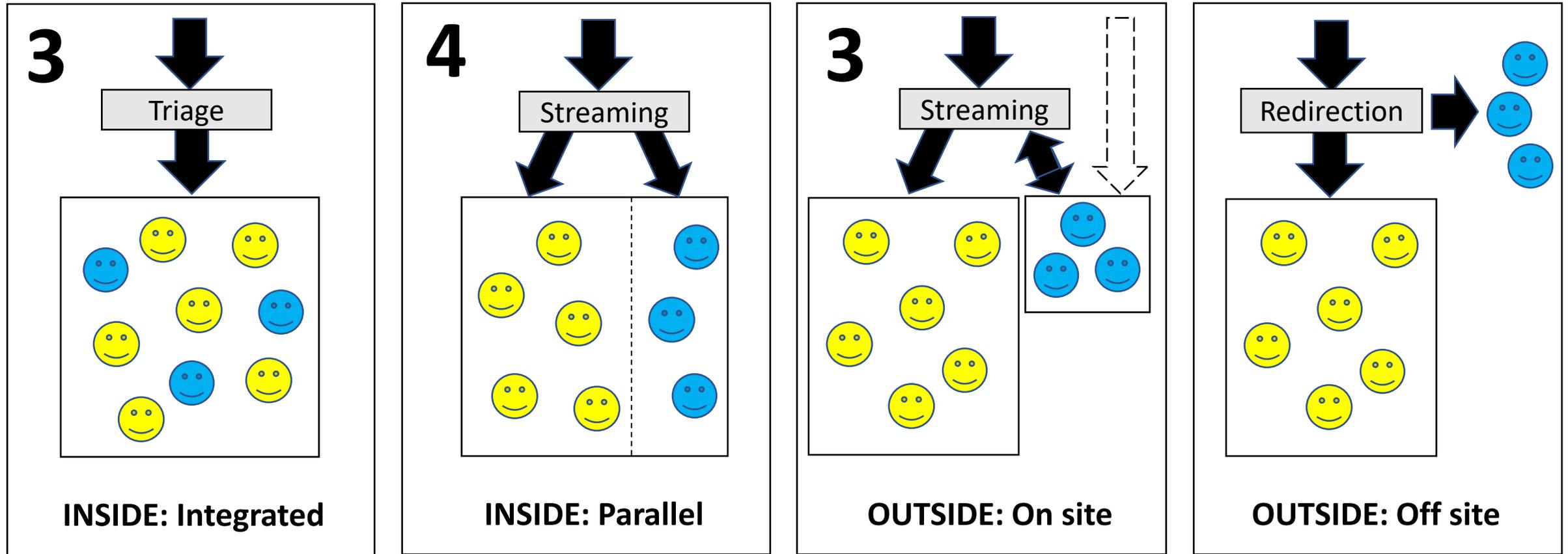
## Research

Alison Cooper, Andrew Carson-Stevens, Michelle Edwards, Freya Davies, Liam J Donaldson, Pippa Anderson, Matthew Cooke, Jeremy Dale, Bridie Angela Evans, Barbara Harrington, Julie Hepburn, Peter Hibbert, Thomas Hughes, Alison Porter, Aloysius Niroshan Siriwardena, Helen Snooks and Adrian Edwards

# Identifying safe care processes when GPs work in or alongside emergency departments:

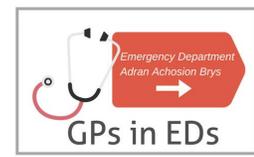
a realist evaluation

# FORM: General practitioner service models in or alongside emergency departments



Key: Patient flow Emergency medicine clinicians General practitioners

I have an idea. Let's all show our cards. It will be much easier to decide if we should fold.

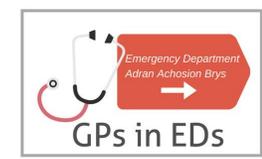


# Realist interviews – theory testing

There's this idea that GPs may manage patients differently to ED clinicians, being more comfortable with uncertainty using less investigations and admitting less patients. What is your experience of this?

Prompts – certain conditions? Different situations? Time of day? Type of patient? Experience of doctor? Because GPs diagnose differently? More comfortable with risk taking? Availability of investigations? Expectation of doing investigations?

# Case study work: clinical leads reported services were safe



More cautious  
GP approach

The choice to take  
a GP approach or  
an emergency  
medicine approach

Usual GP  
approach

Expectation to  
adopt an  
emergency  
medicine approach



“If you *select the right patients* to see, as a GP in the department, you should be able to deal with them in a *similar way to you do in primary care*, but always just having that *slight radar on* to think okay, is there something else going on, *do we need to do that little bit more?*”

GP GPED14 inside integrated

“Thinking about defence, if you don’t do tests when they’re right next to you, and something were to happen, an adverse event, you would have to be able to *stand up to that and defend yourself* and say why you didn’t do those tests, so *it’s tricky, and I go through that all the time in my head.*”

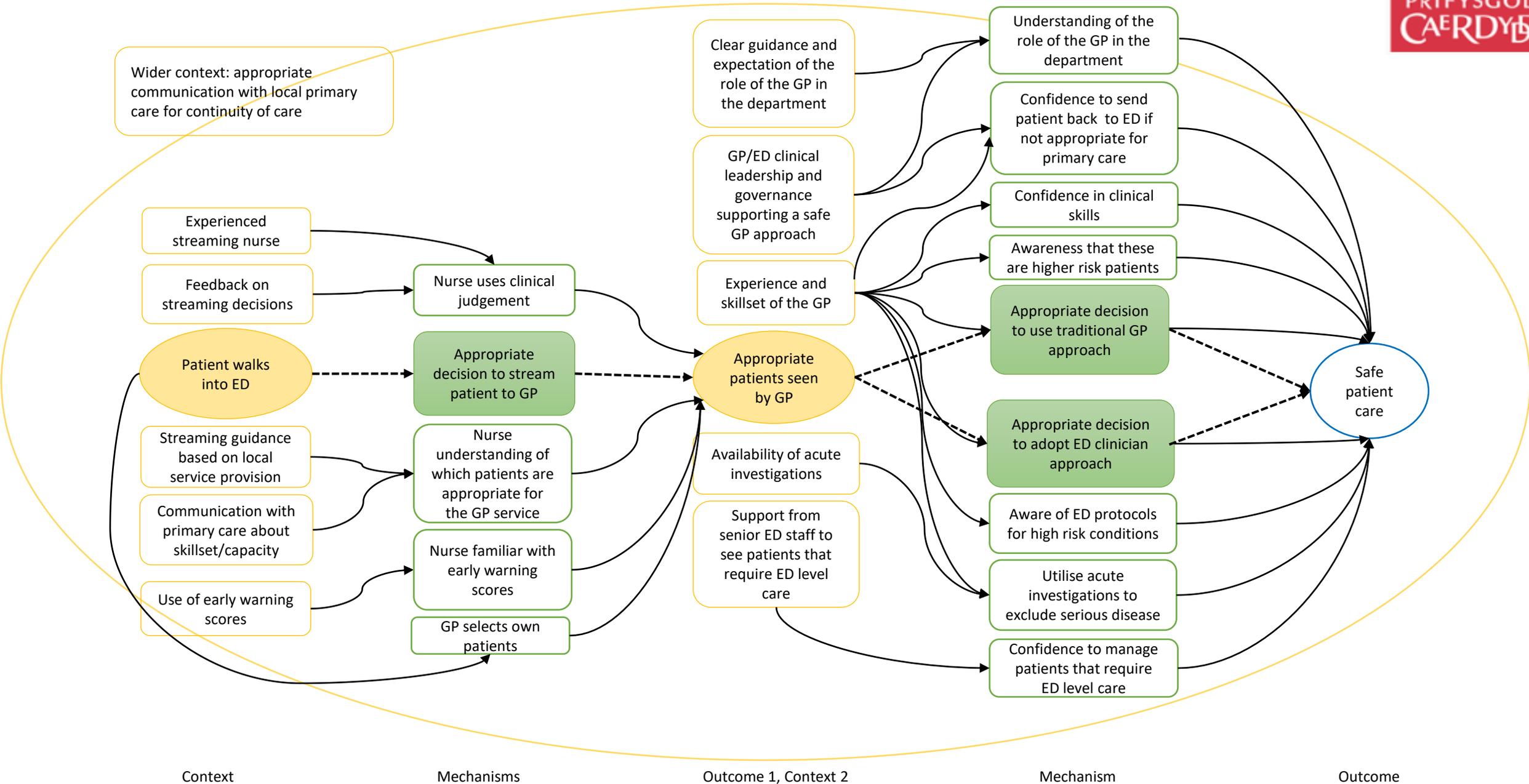
GP GPED14 inside integrated

# Formal theory: Croskerry's dual-process model of reasoning

- 'System I'
  - fast, effortless, intuitive, and automatic – relies on pattern recognition
  - typical in diagnostic decision making by experienced clinicians
  - Risk of cognitive biases
- 'System II'
  - Slow, laborious and logical
- Croskerry applied this to ED settings, describing the risks of cognitive biases
  - diagnostic generation, evaluation, verification

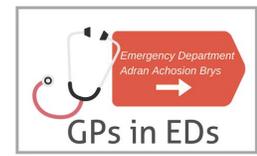
If GPs work in emergency departments with **clear governance processes**; are **aware of their intended role** and expectation depending on their **experience, skillset, and patient demand** (C); use **communication skills** to gather patient information for hypothesis generation (M); **actively consider prevalence of more serious diseases** that may present to the emergency department setting (M); use **clinical skills to rule out serious diagnoses** (M); **refer to guidance when acute investigation/referral may be necessary** to exclude serious disease (M); and use **safety netting** to help manage diagnostic uncertainty (M), then **safe patient care will be facilitated** (O).

# Programme theory: influences perceived to facilitate safe patient care when GPs work in EDs



# Next steps

- Triangulation with quantitative data
  - HES ITSA: Attendances, reattendances, waiting time, admissions
  - Marker conditions
- Further theory testing/refining
- Programme theory development
  - GP-ED models
  - GP role, streaming, patient experience
- Toolkit
  - Assist service design and monitoring



Diolch yn fawr - Thank you!

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