

Prof Julie Reed

Julie Reed Consultancy

Implementation in Practice Translating Evidence in Complex Systems

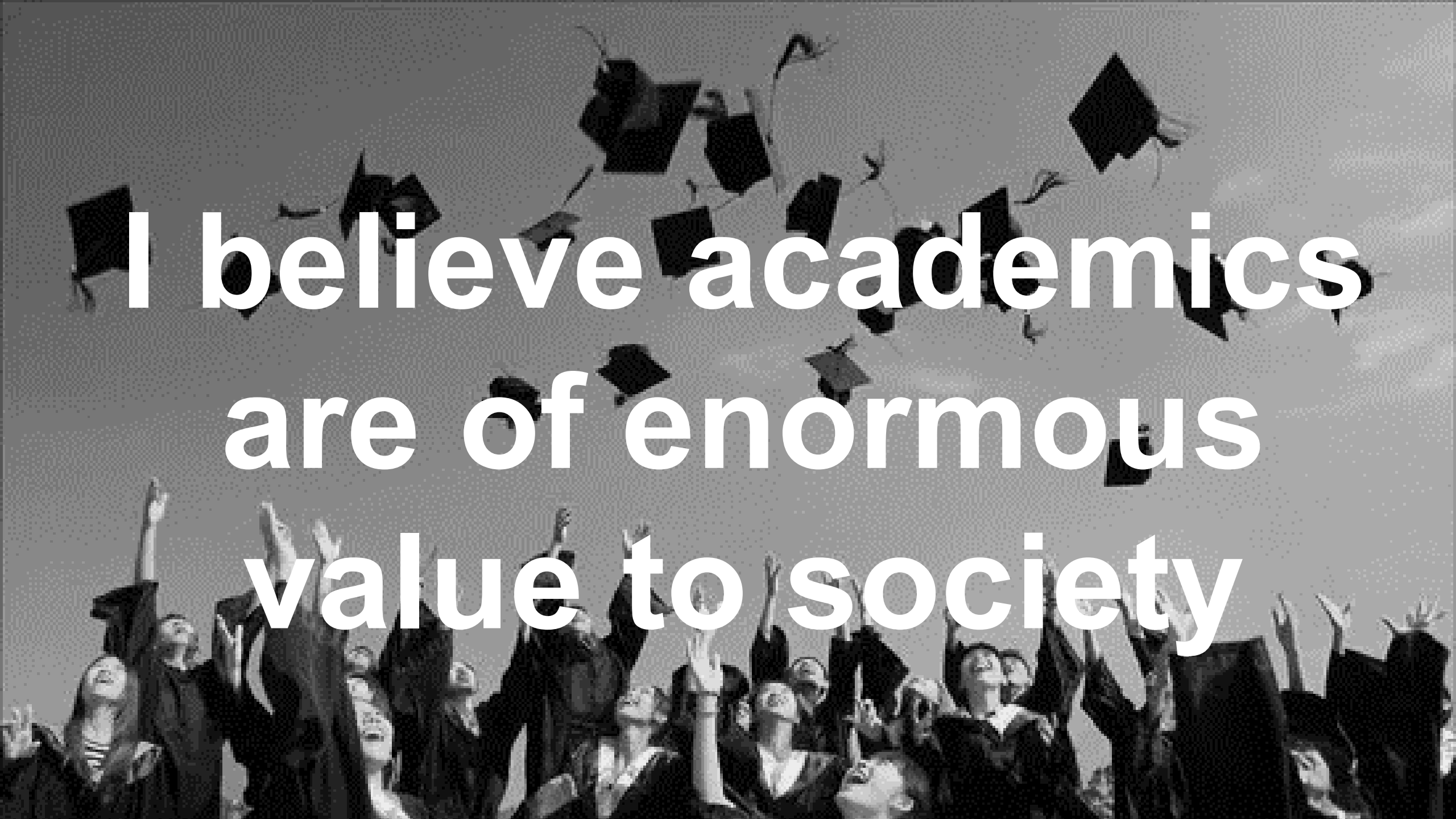
Imperial College
London



HALMSTAD
UNIVERSITY

Critical optimist





**I believe academics
are of enormous
value to society**



**Shared
responsibility for
achieving
improvements**



**QI as a solution in a
health care system
under pressure**

**Are we choosing
wisely and doing
the right things?**

Planning and Preparation

Working together to
make change happen



Care Delivery



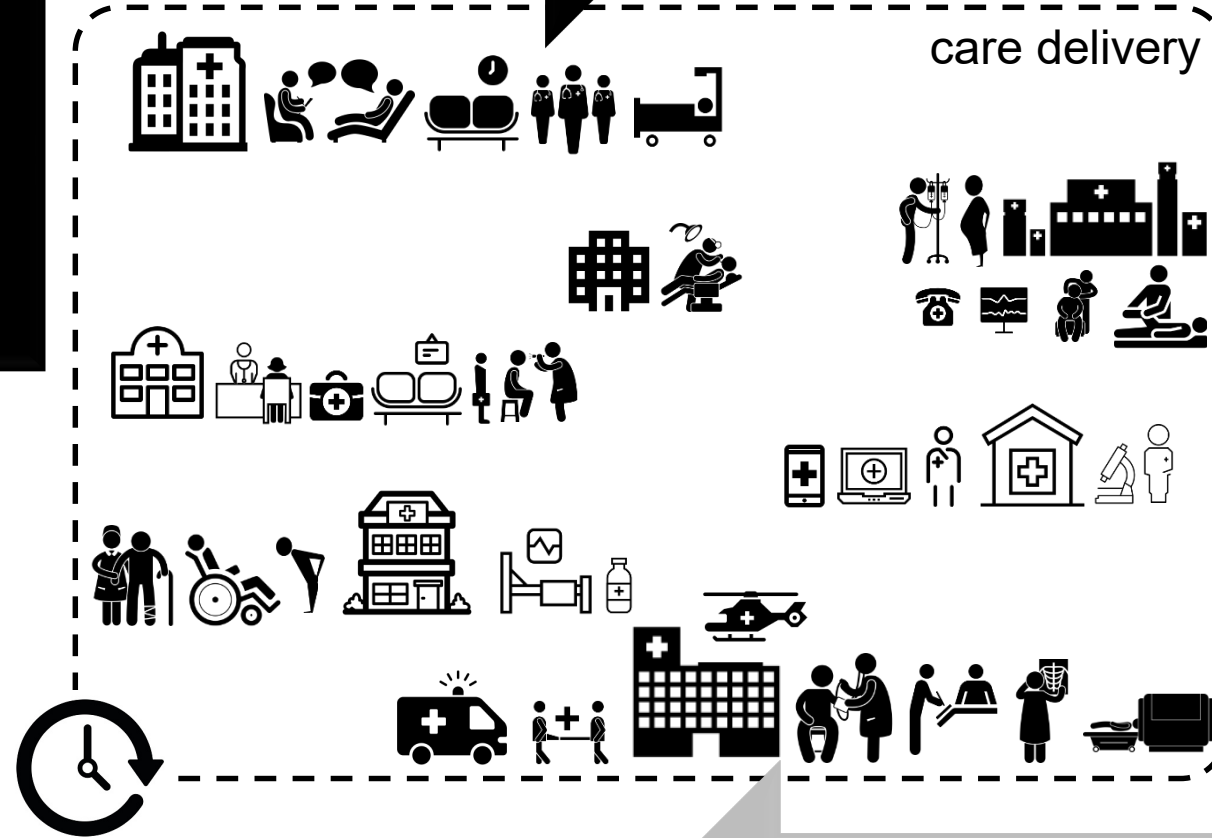
Learning and
organisational memory

Evaluation

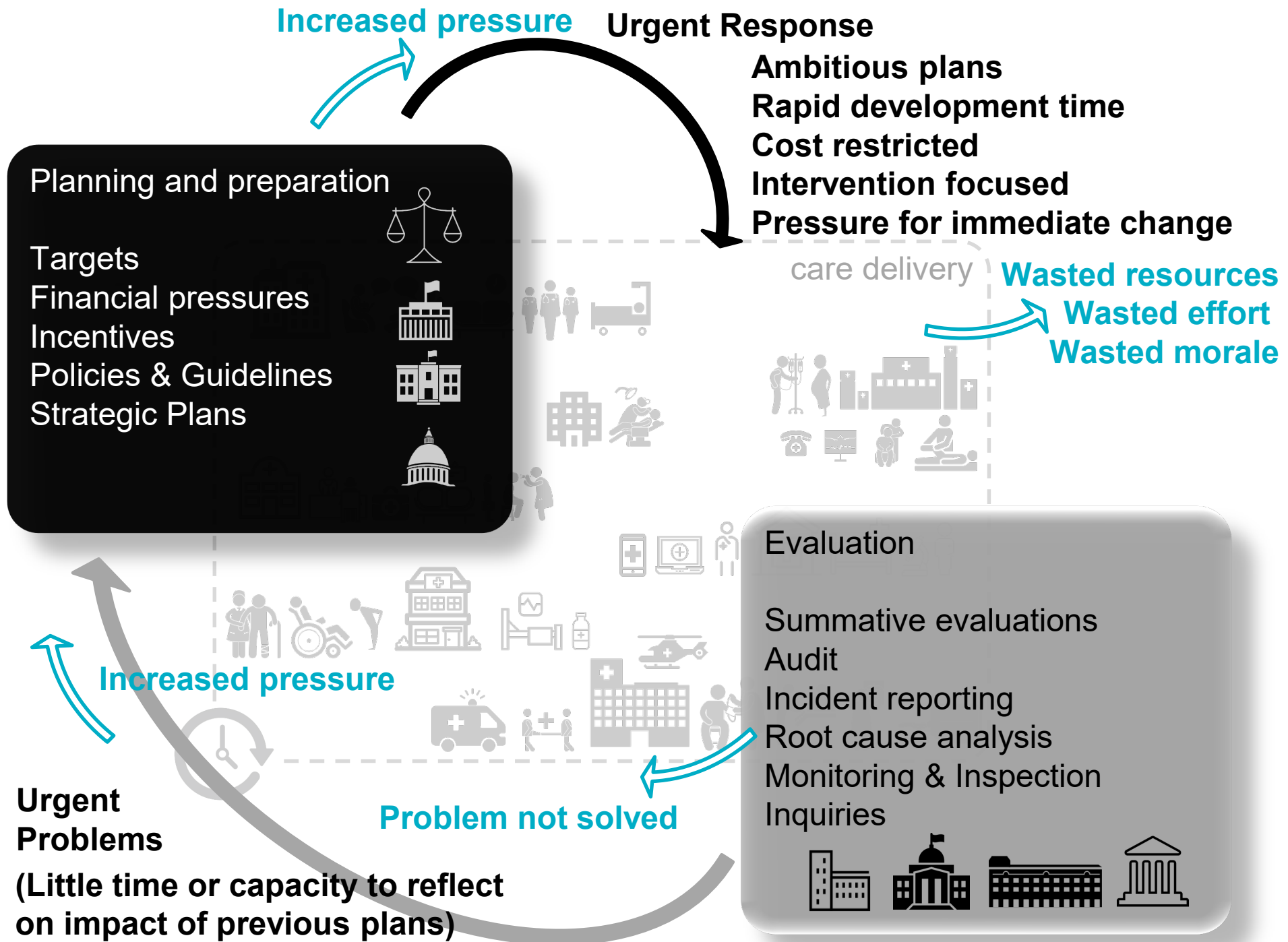


Delivering Improvements

Planning and Preparation



Evaluation



Is this familiar?

**What is driving
the problem?**

**How do we break
the pattern?**

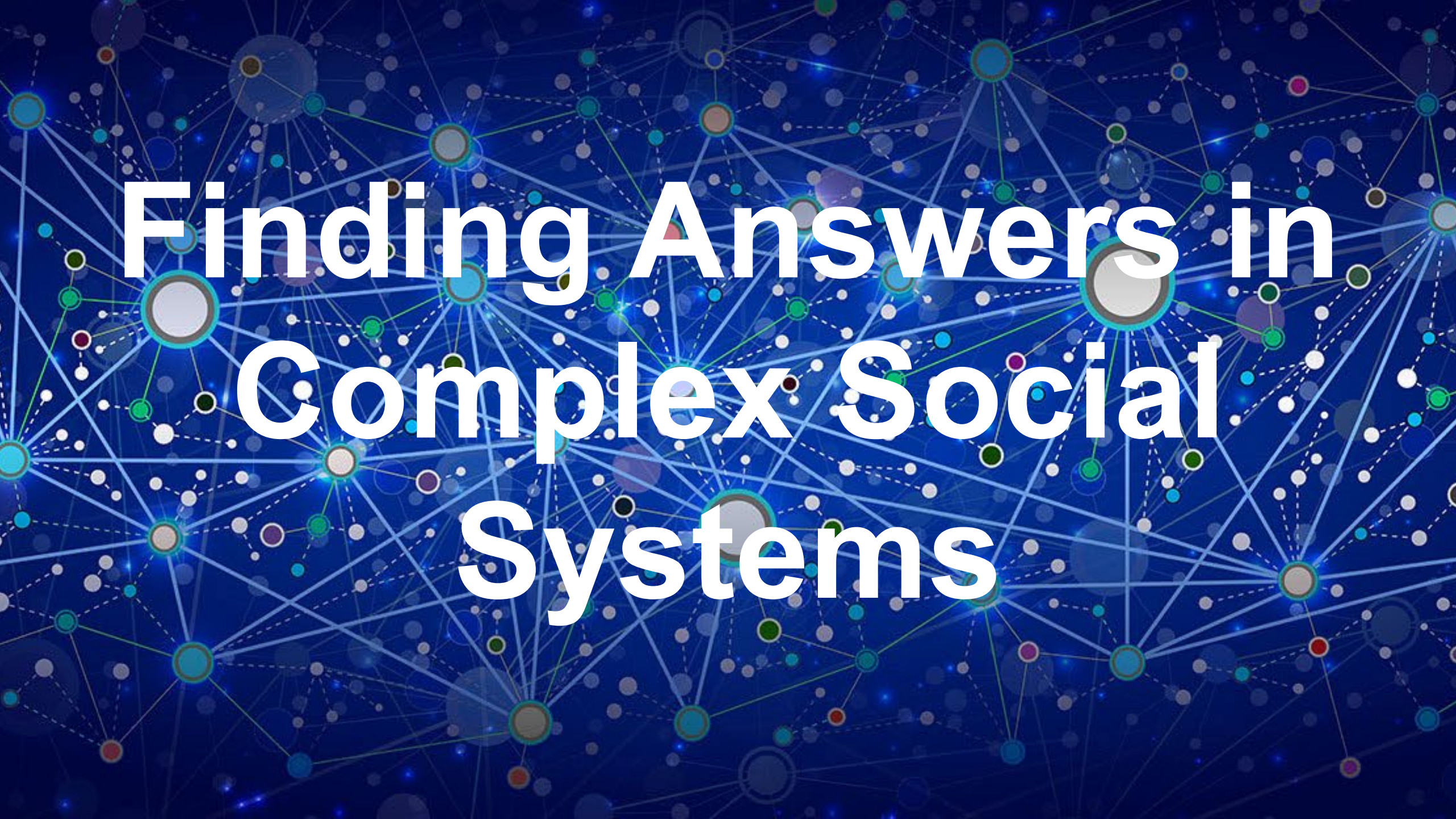


The hunt for simple answers

The common ground between academics and practitioners

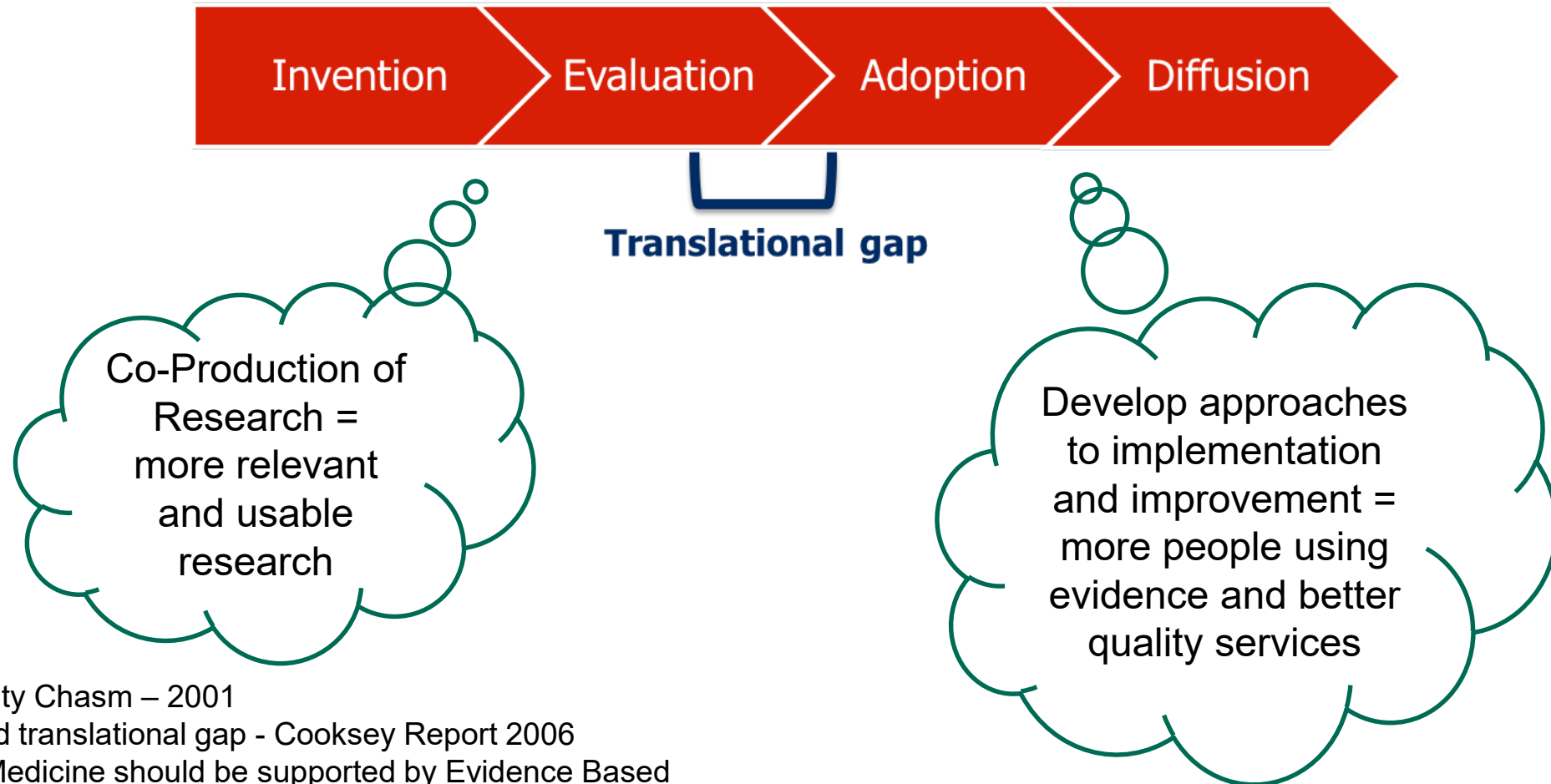
- Knowledge can be picked up and past along
- Knowledge independent of context
- There are universal solutions
- Effortless



The background of the image is a dark blue field filled with a complex network of nodes and edges. The nodes are represented by circles of various sizes and colors, including light blue, teal, green, yellow, and white. Some nodes have a glowing effect. The edges are thin lines, some solid and some dashed, connecting the nodes in a dense, web-like pattern. The overall impression is one of a highly interconnected system, such as a social network or a complex data structure.

Finding Answers in Complex Social Systems

Approaches to the second translational gap



Crossing the Quality Chasm – 2001
Closing the second translational gap - Cooksey Report 2006
Evidence Based-Medicine should be supported by Evidence Based
Implementation – High Level Group for Clinical Effectiveness 2007
High Quality Care for All – Ara Darzi 2008

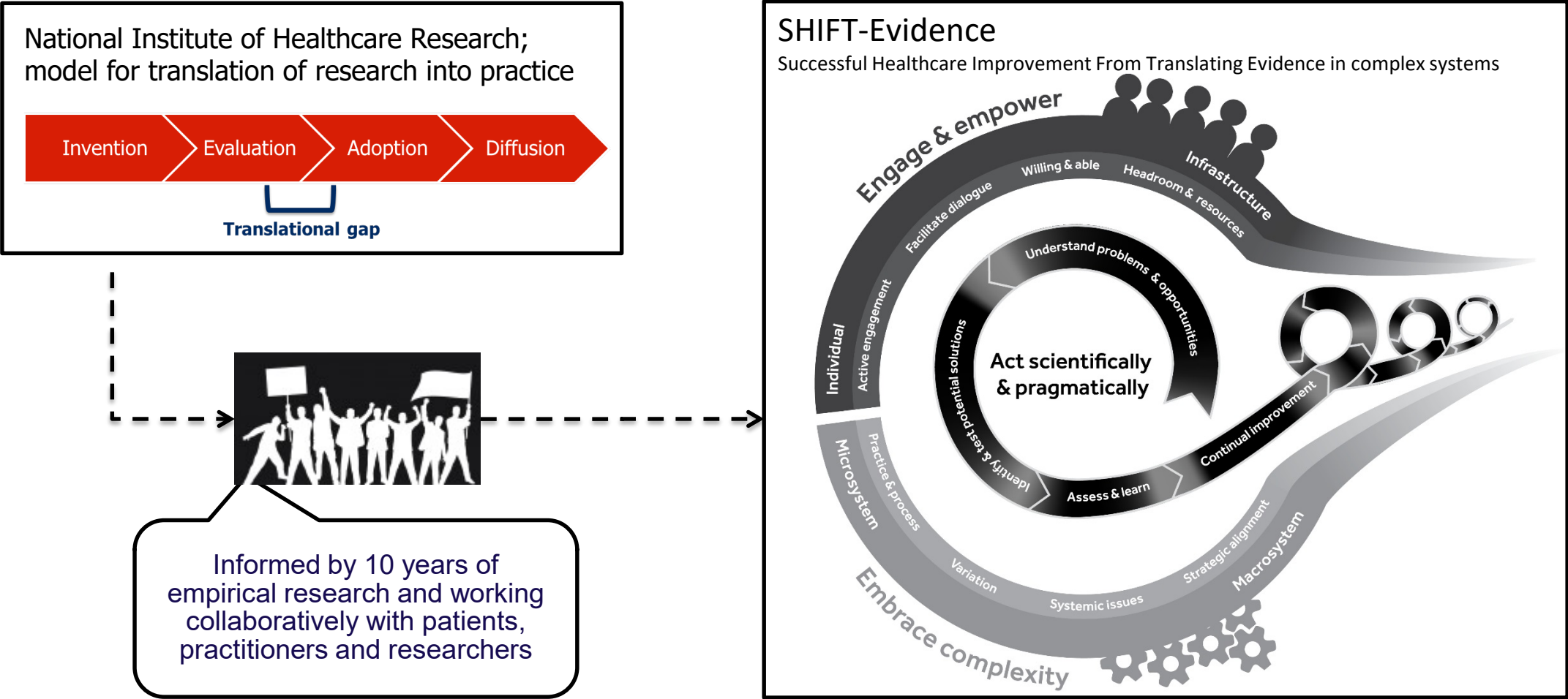
Complex social systems

- Autonomous agents acting in parallel
- Interconnected
- Responding and reacting to each other
- Dynamic - continually changing and evolving
- Influenced by historic events
- Uncertainty and surprise
- Embedded patterns, behaviours, structures and routines



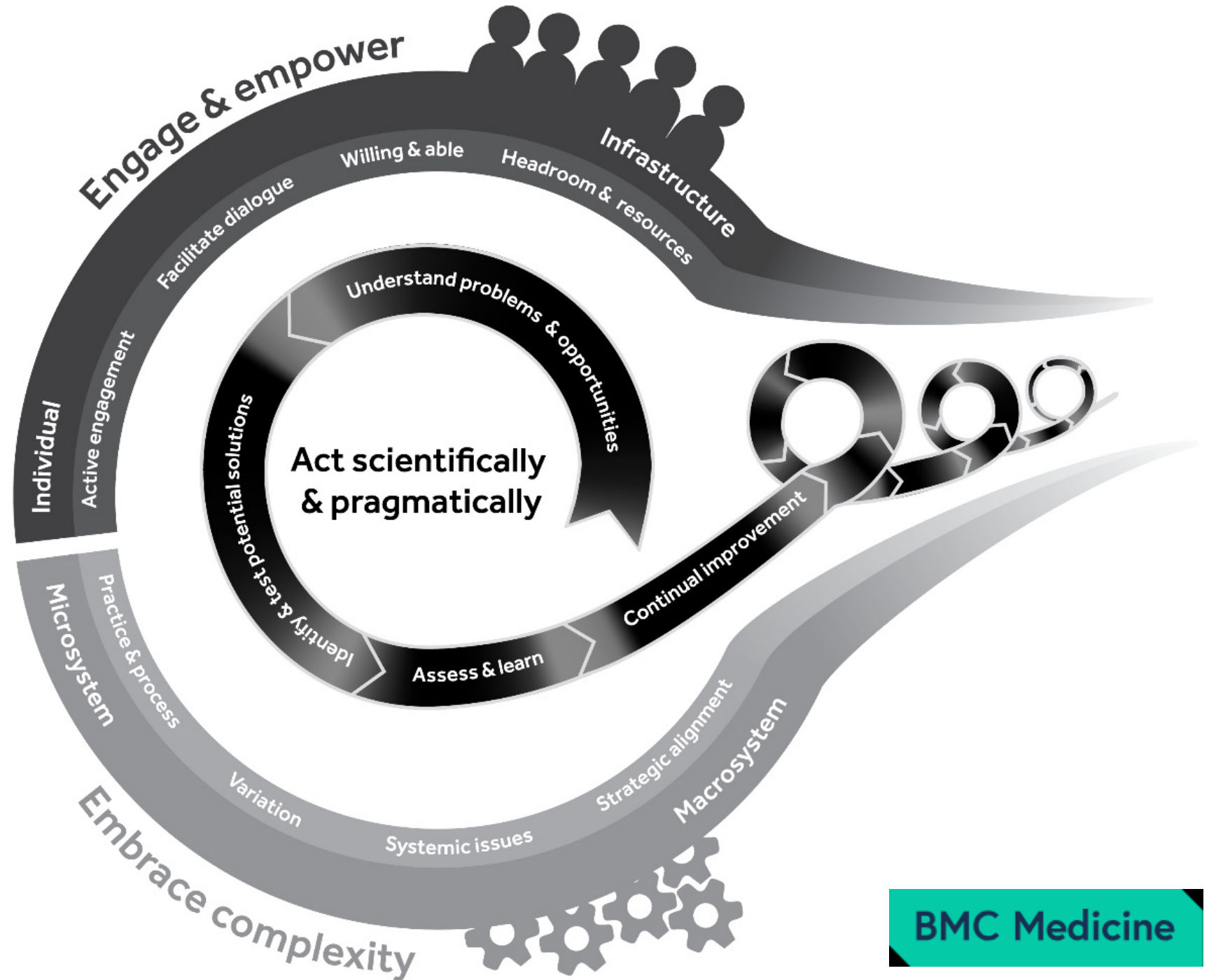
SHIFT-
Evidence
Reed, Howe et
al BMC
Medicine 2018

Innovator and Service Centric Models of Change



SHIFT- Evidence

Successful
Healthcare
Improvement
From
Translating
Evidence in
complex
systems



Act Scientifically and Pragmatically

Strategic Principle	Common Challenges	Simple Rules
Act Scientifically and Pragmatically Knowledge of existing evidence needs to be combined with knowledge of the unique initial conditions of a system. Interventions need to adapt as the complex system responds and learning emerges about unpredictable effects.	Pre-selected interventions may not solve the problems of the local system	Understand the problem and opportunities
	‘Evidence’ and interventions need to be perceived as locally relevant and actionable	Identify, test and iteratively develop potential solutions
	Individual perceptions of system performance are unreliable	Assess whether improvement is achieved, capture and share learning
	Interventions need to be reviewed and adapted as systems evolve overtime.	Invest in continual improvement

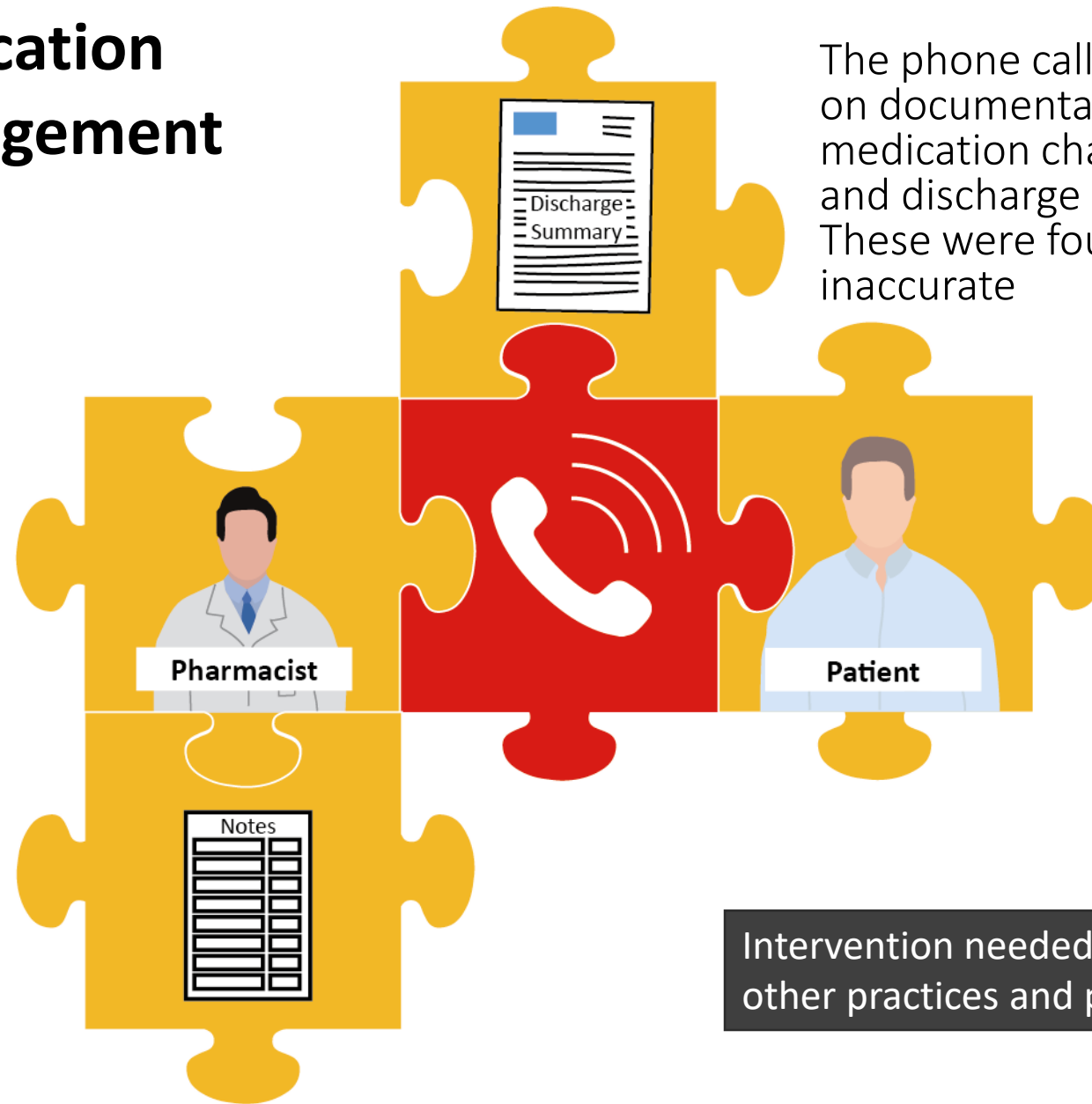
Medication Management

- Patients leaving hospital with multiple medication changes



- Phone call within 72 hours to counsel on medication changes

Medication Management

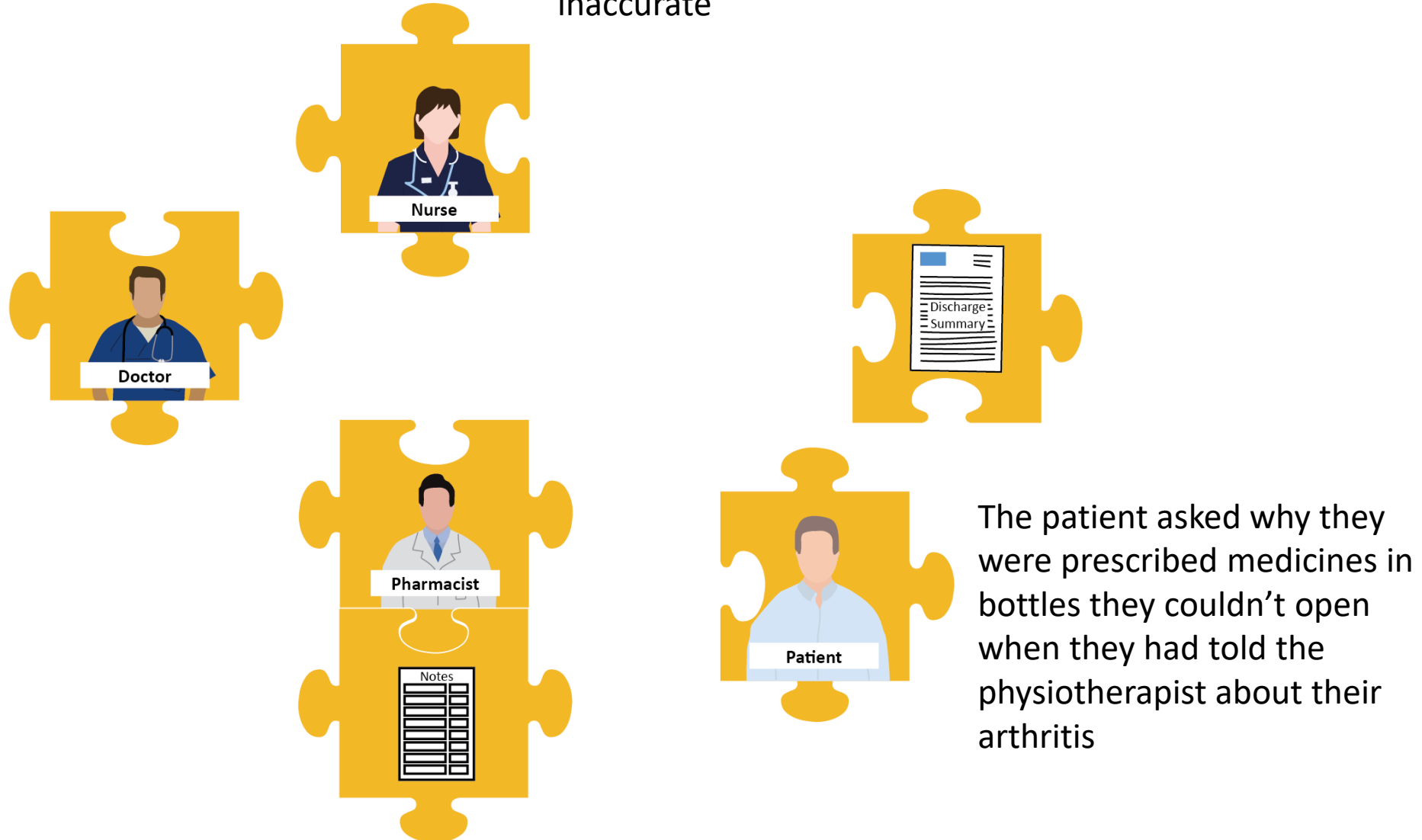


The phone call was dependent on documentation of medication changes in hospital and discharge summary. These were found to be inaccurate.

Intervention needed to work with other practices and processes

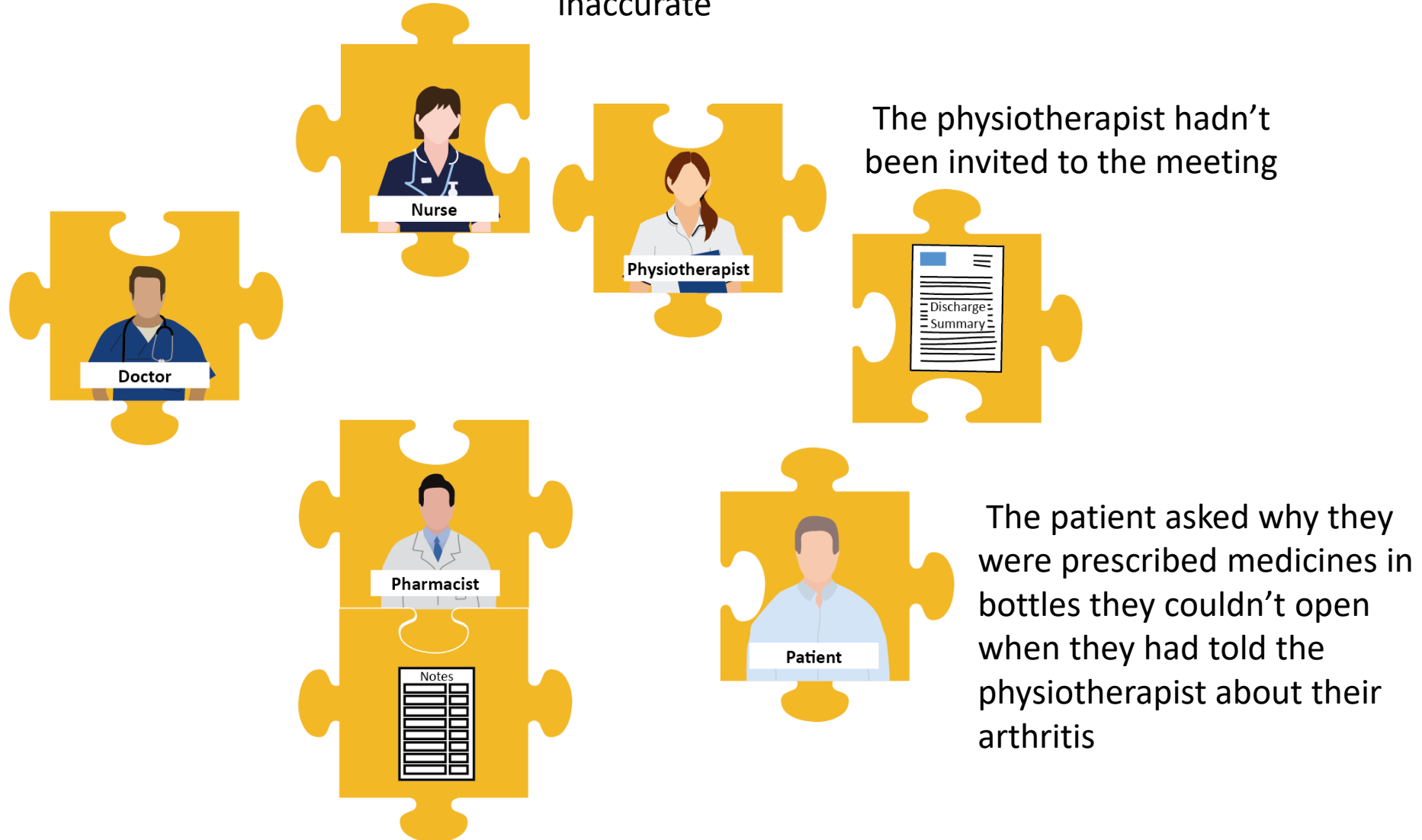
Medication Management

A pharmacist, doctor, nurse and patient met to understand why the drug charts and discharge summaries were inaccurate



Medication Management

A pharmacist, doctor, nurse and patient met to understand why the drug charts and discharge summaries were inaccurate



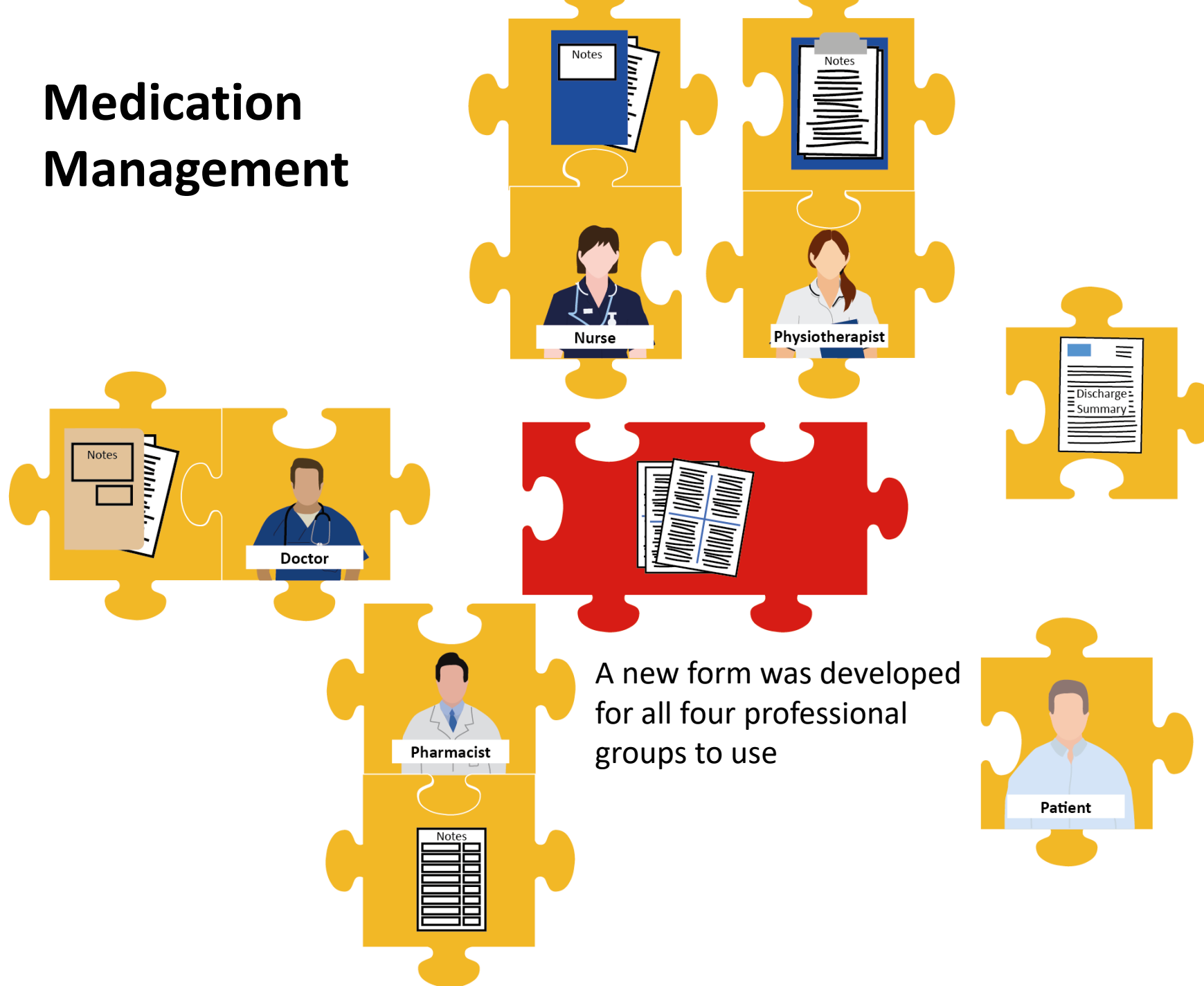
Medication Management



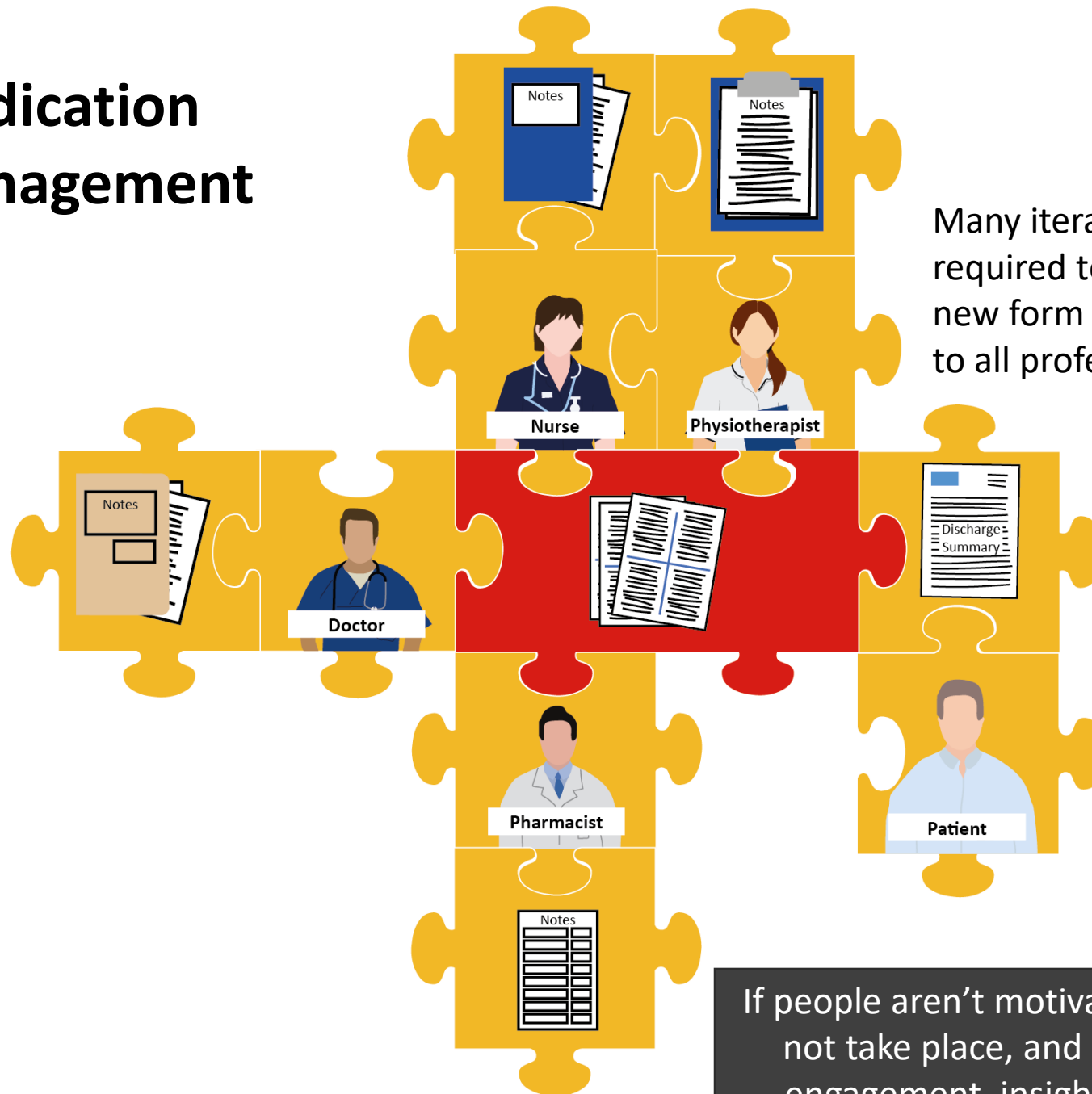
The team realised that four professional groups all maintained separate documentation relating to patient medications
No process existed for coordinating this information

It can not be assumed processes are working well

Medication Management



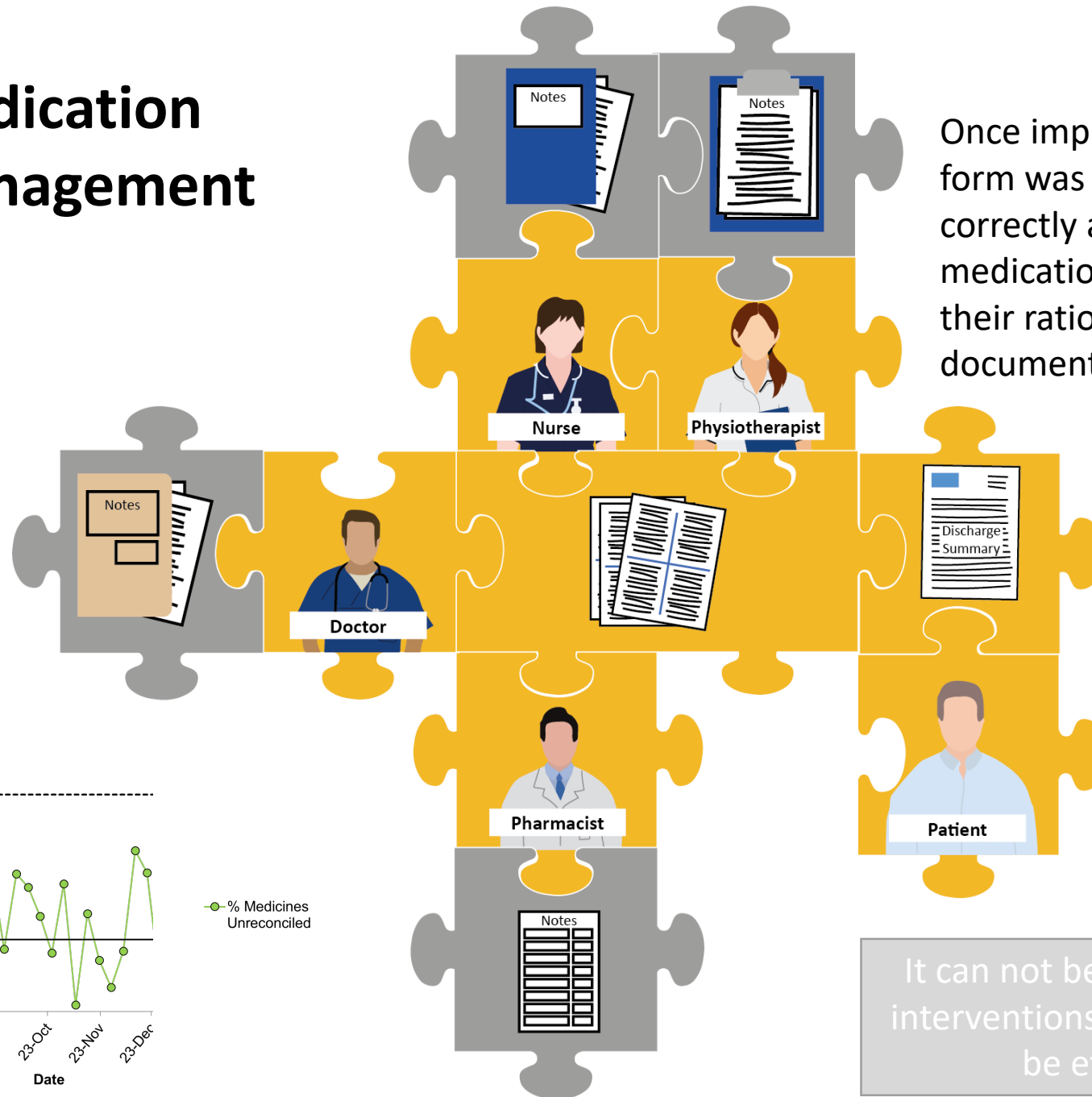
Medication Management



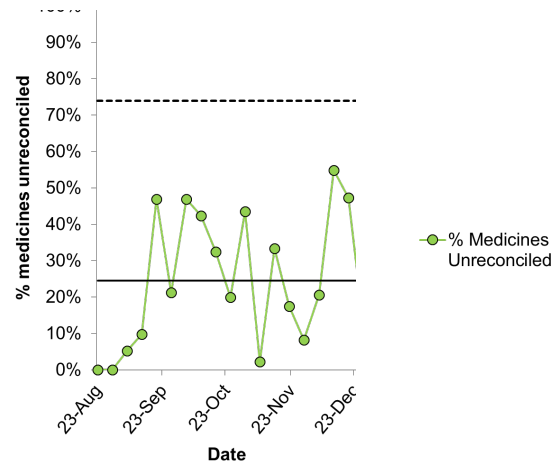
Many iterations were required to ensure the new form was acceptable to all professional groups

If people aren't motivated change will not take place, and without their engagement, insights will be lost

Medication Management



Once implemented the form was not always used correctly and not all medication changes or their rationale were documented

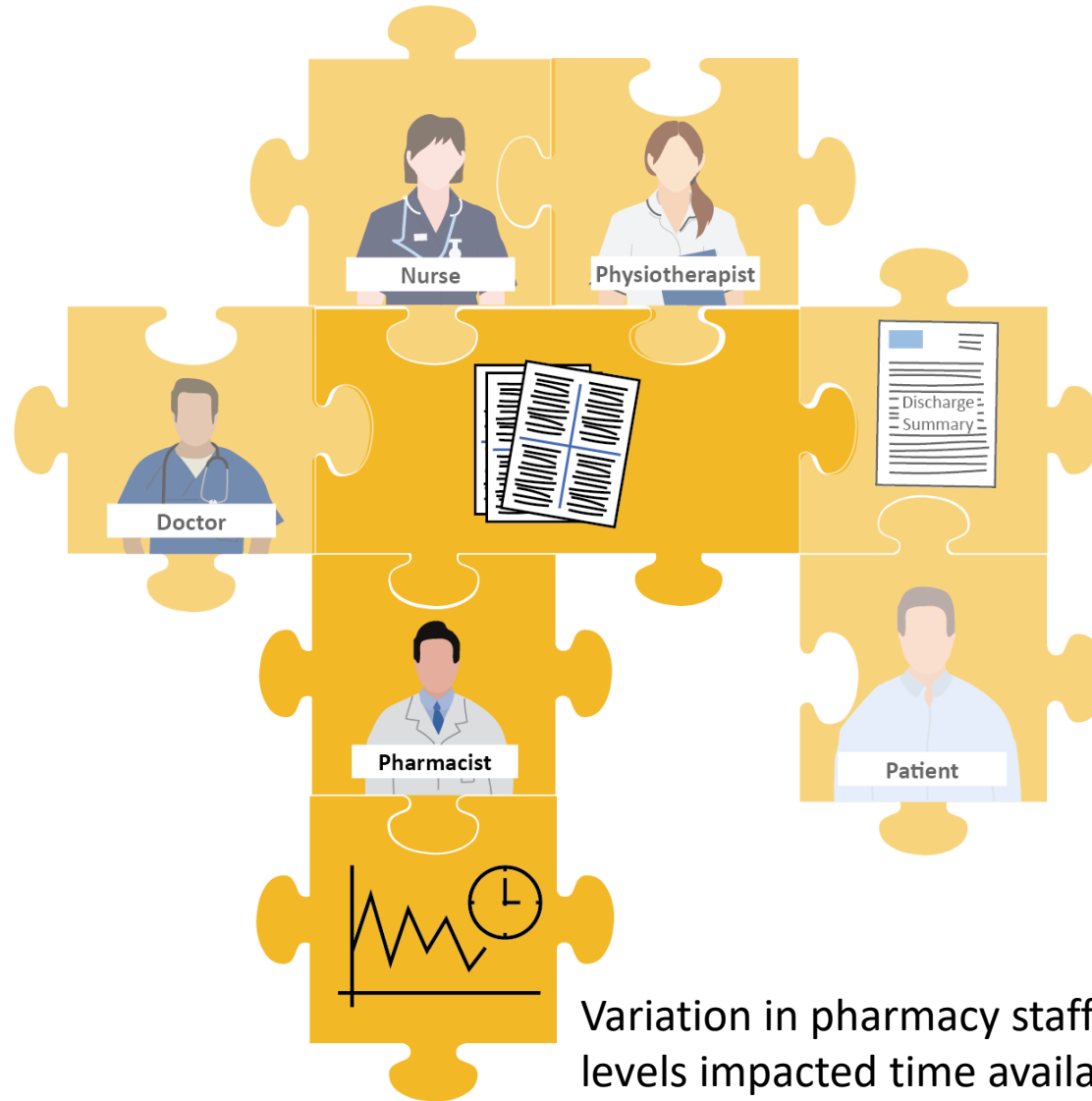


It can not be assumed that interventions will be used or be effective

Embrace Complexity

Strategic Principle	Common Challenges	Simple Rules
Embrace Complexity Evidence-based interventions only work if related practices and processes of care within the complex system are functional. Evidence-translation efforts need to identify and address any problems with usual care, recognising this typically includes a range of interdependent parts of the system.	Interventions don't work on their own - they need to fit with practices and processes of care	Understand practices and processes of care
	There is rarely a single, standardised, way by which care is delivered	Understand types and sources of variation
	It cannot be assumed that dependent processes or systems are working well	Identify systemic issues
	Any intervention will compete for attention and resource with other initiatives or requirements	Seek political, strategic and financial alignment

Medication Management



Variation in pharmacy staffing levels impacted time available for medication management

Medication Management



Variation in pharmacy staffing levels impacted time available for medication management

It was necessary to revise staff rotas including weekend working

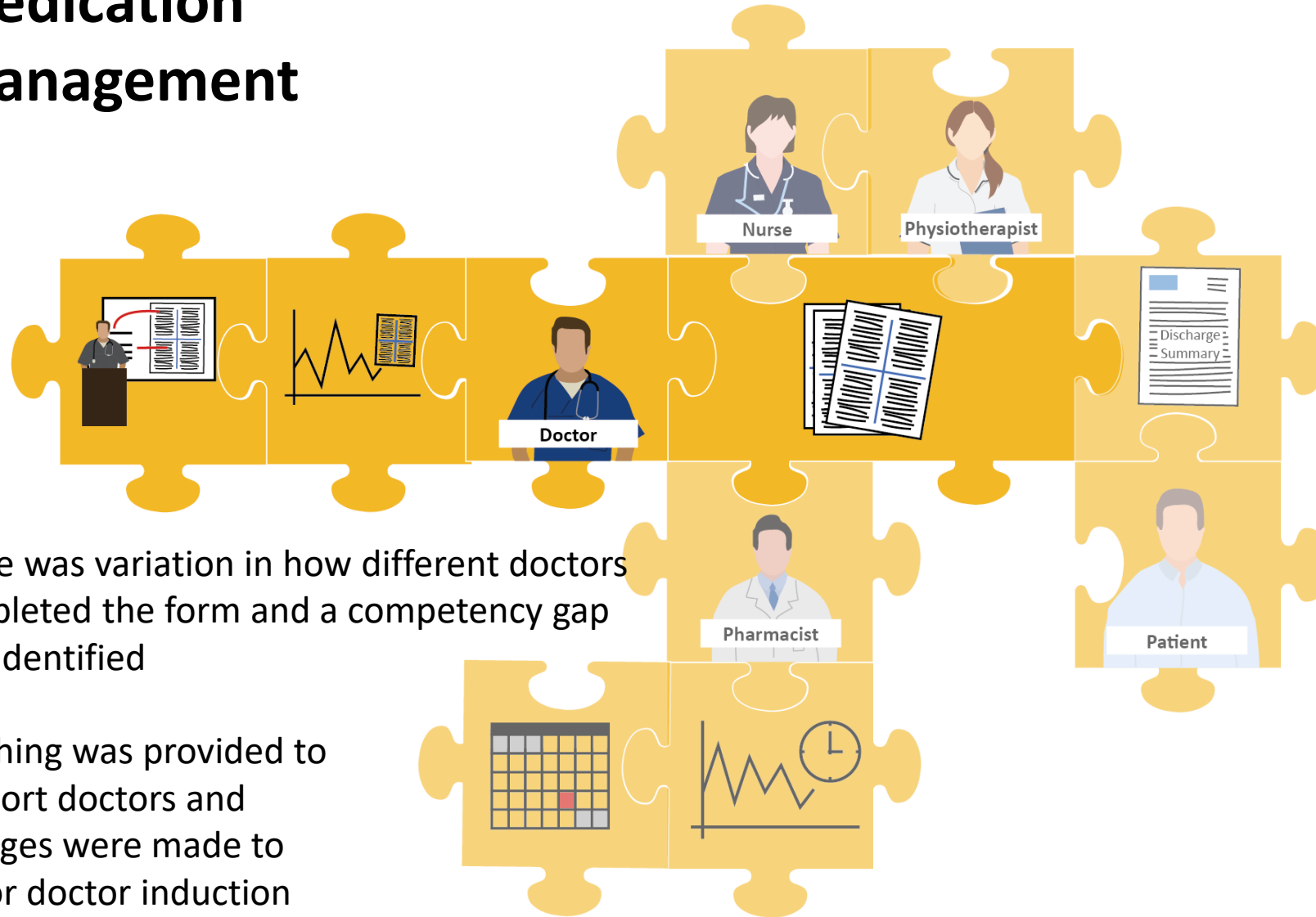
Medication Management



There was variation in how different doctors completed the form and a competency gap was identified

Broad variation in care is pervasive

Medication Management

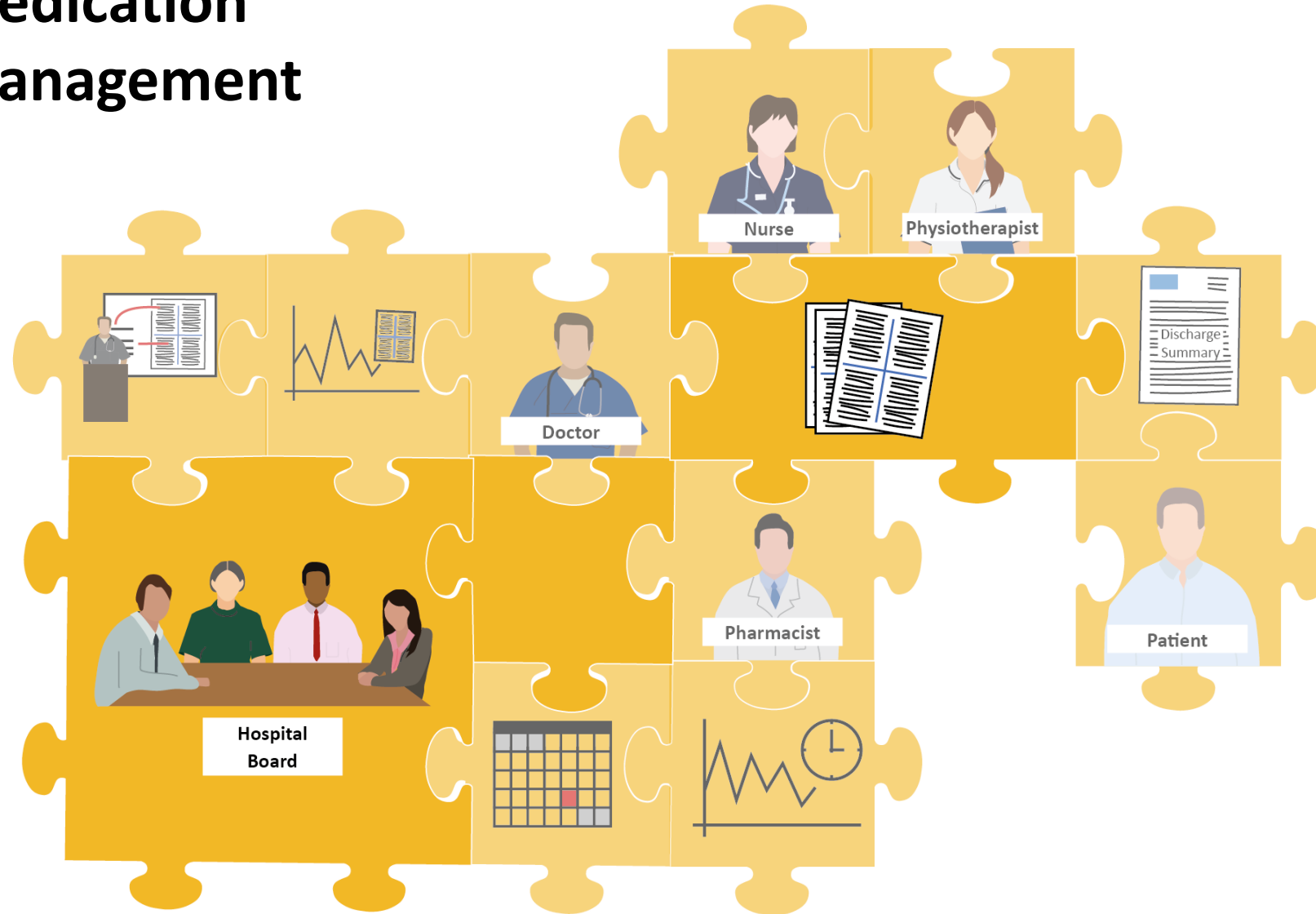


There was variation in how different doctors completed the form and a competency gap was identified

Teaching was provided to support doctors and changes were made to junior doctor induction

Broad variation in care is pervasive

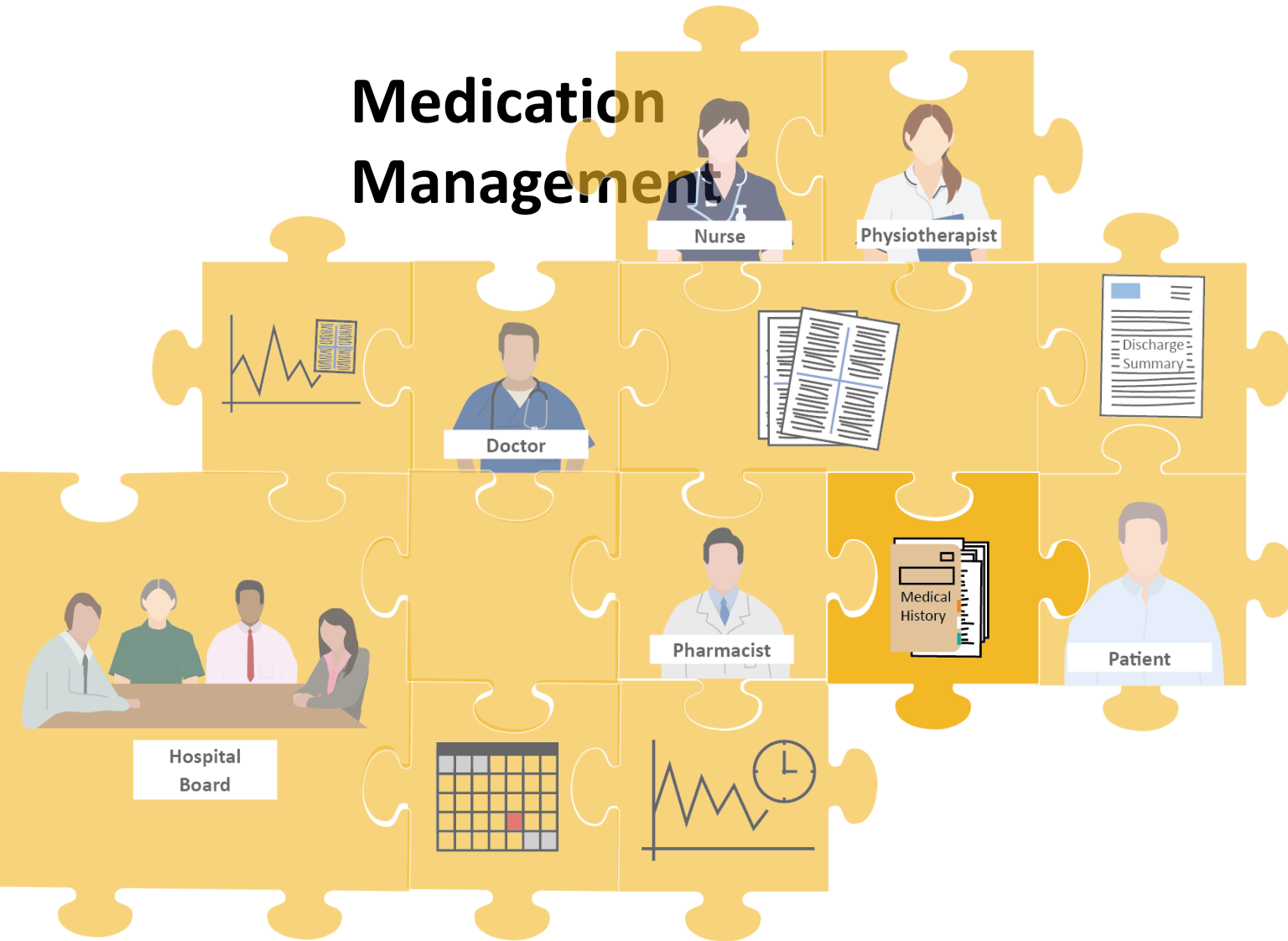
Medication Management



Making these changes required permission from organisational leaders

Improvement often requires organisational and financial support

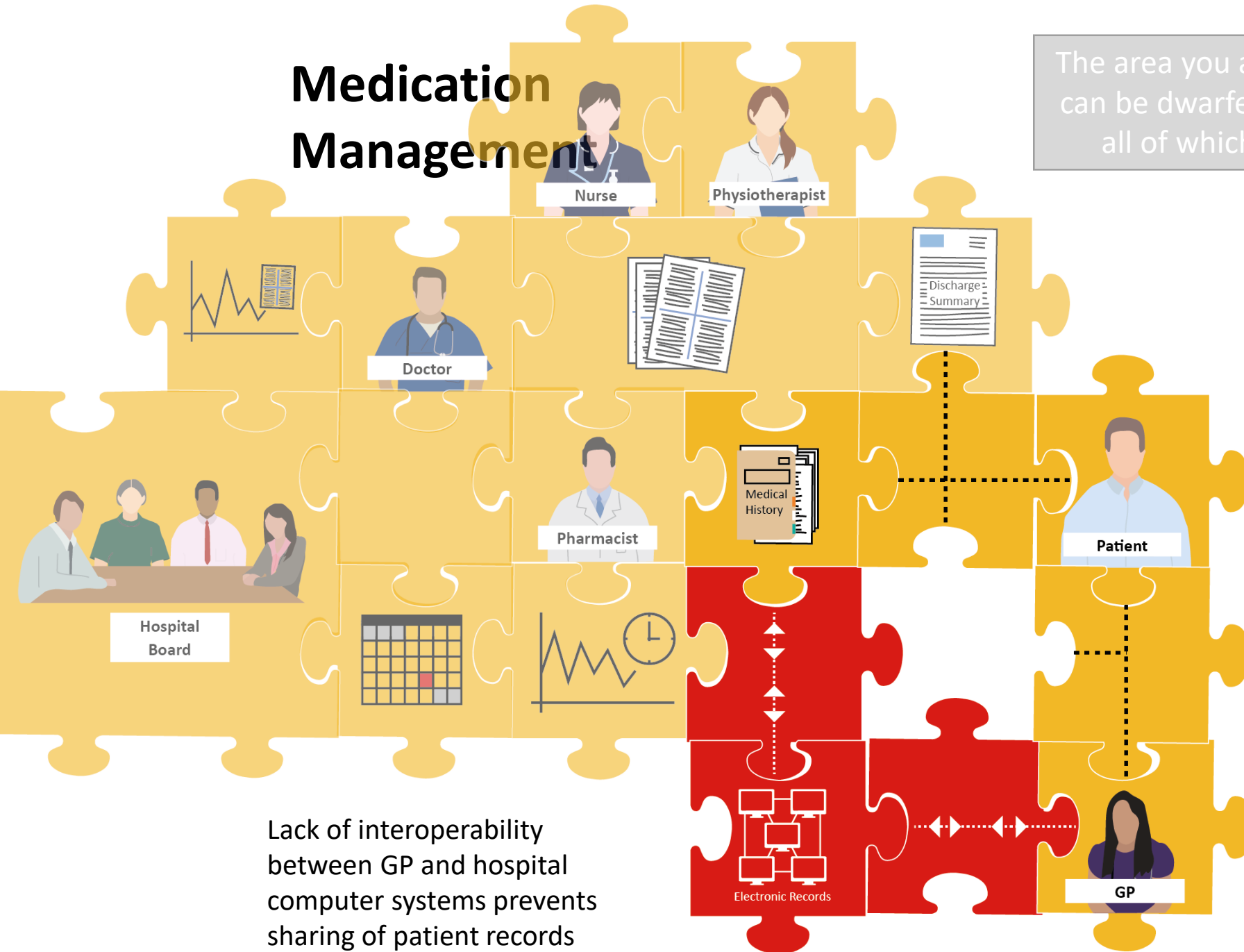
Medication Management



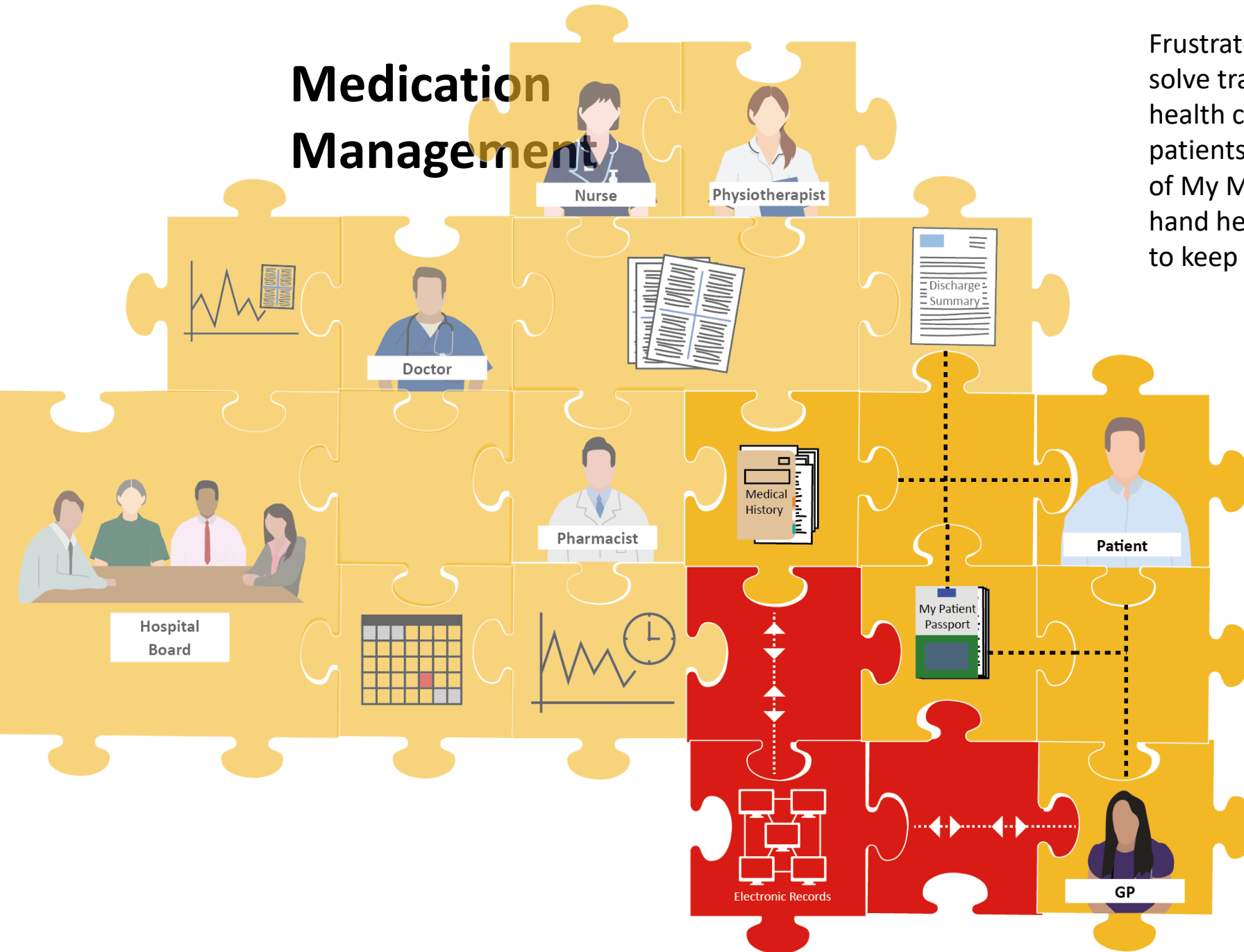
There was a lack of information about a patients medication history when they arrived at hospital

Medication Management

The area you are trying to improve can be dwarfed by other issues, not all of which can be fully resolved

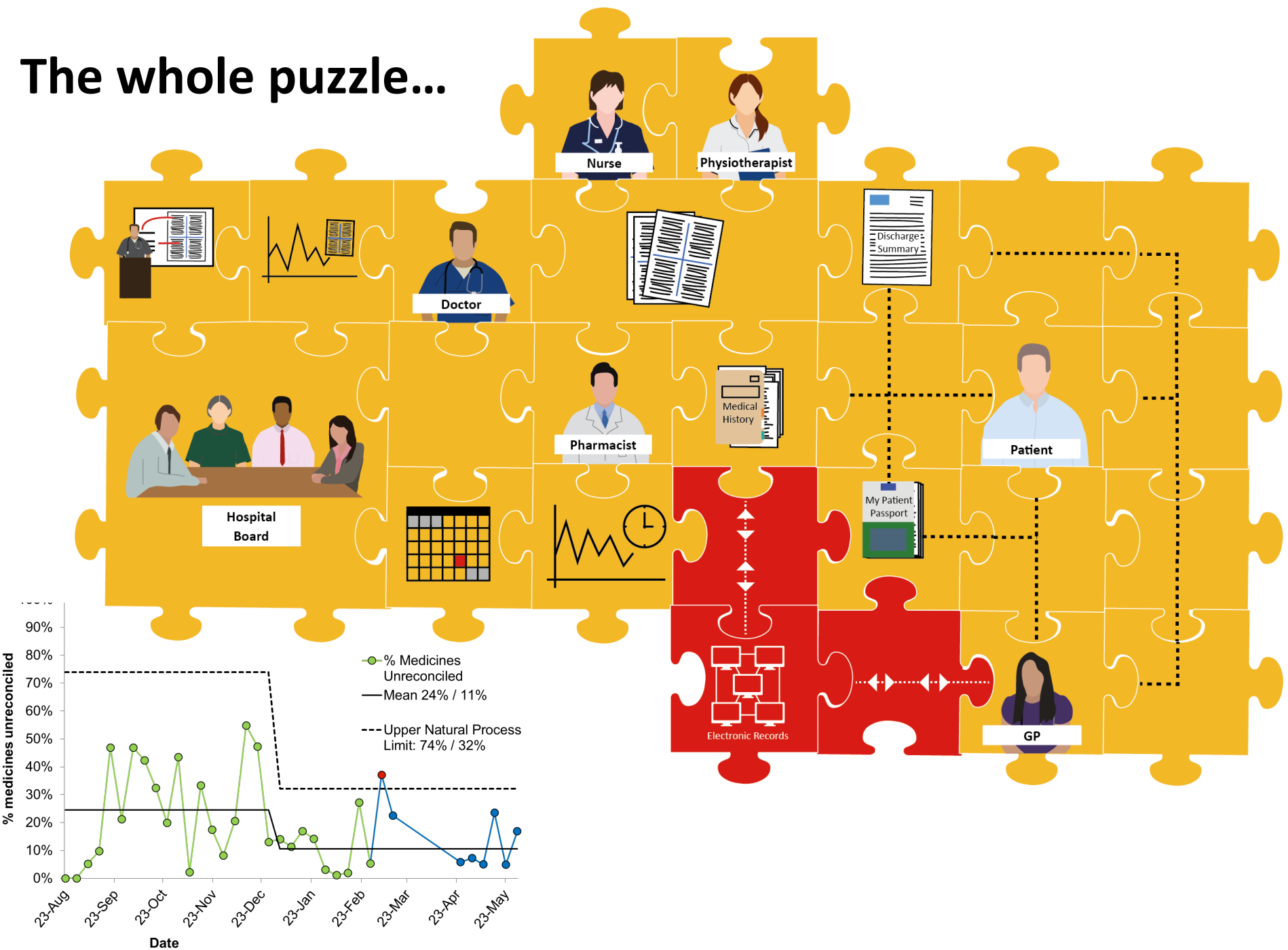


Medication Management



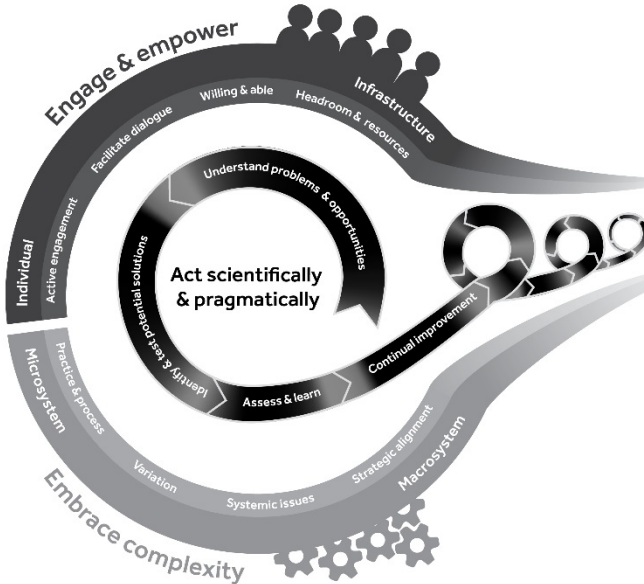
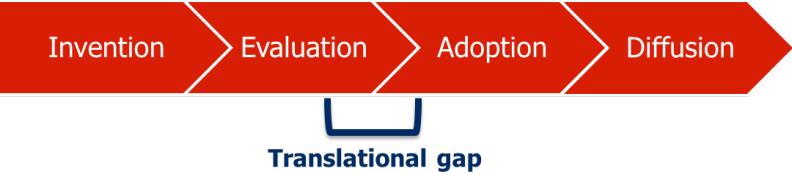
Frustrated with the inability to solve transfer of electronic health care records a group of patients led the development of My Medication Passport, a hand held record for patients to keep track of

The whole puzzle...

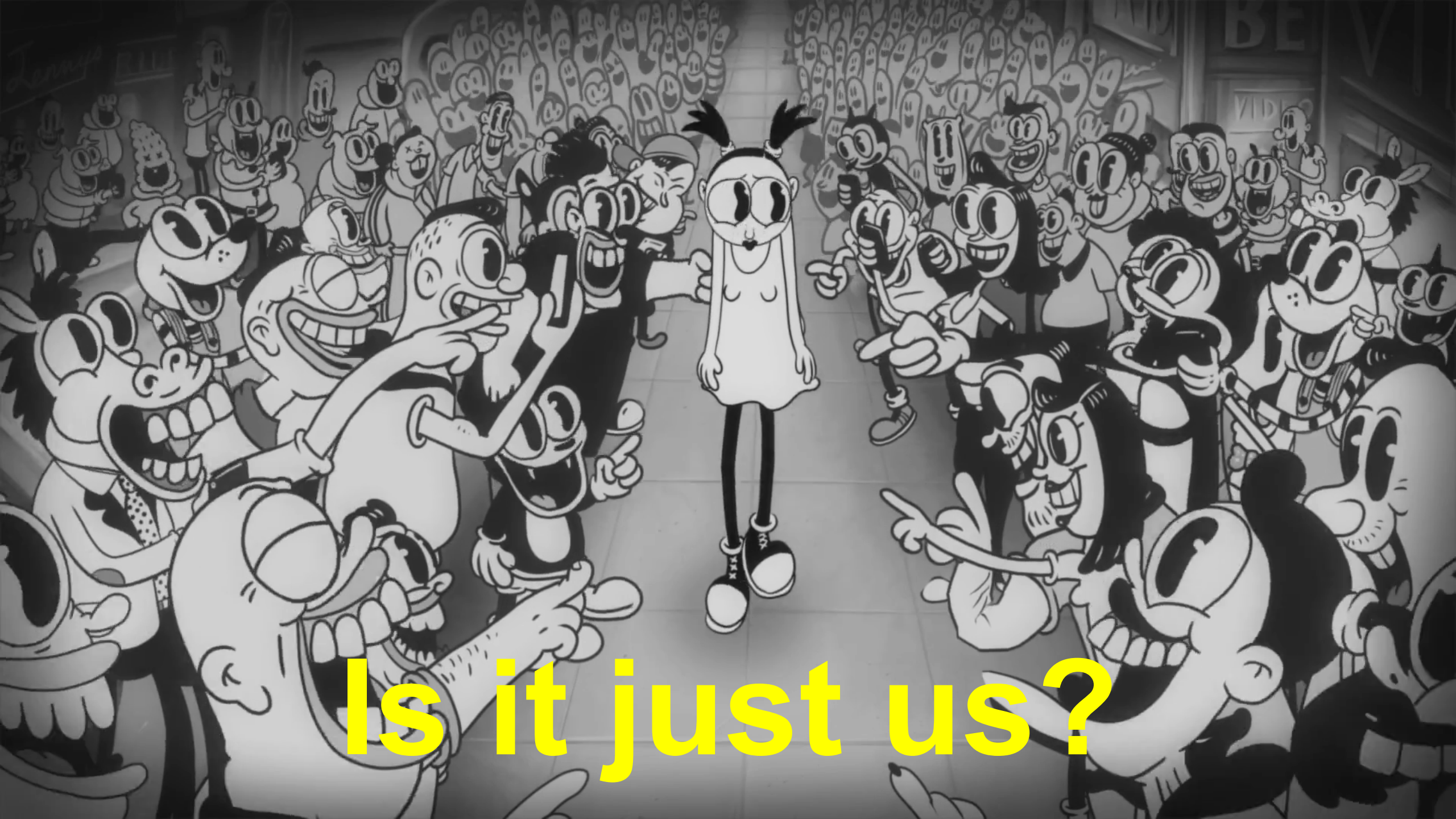


Engage and Empower

Strategic Principle	Common Challenges	Simple Rules
Engage and Empower Evidence translation and system navigation requires commitment and insights from staff and patients with experience of the local system. Changes need to align with their motivations and concerns.	If people aren't motivated change will not take place, and without their engagement, insights will be lost	Actively engage those responsible for and affected by change
	Expect conflict and tension	Facilitate dialogue
	Underlying expectations are to get it right, first time, quickly	Build a culture of willingness to learn and freedom to act
	Improving complex systems takes time, effort and reflection	Provide headroom, resources, training and support



Linear model	Complex systems model
Innovator-centric	Service-centric
Intervention	Intervening
Implementation: particular innovation, evidence, policy into practice with assessment of whether goal achieved or not	Improvement; where the outcome goal is fixed, and different interventions deployed and adapted until that goal is met
“Did it work?” “What works everywhere?”	“How can we make it work here?”
Disproportional investment in planning with the expectation that if this is done well the rest will follow	Learning through doing/intervening (having humility from the outset that change ideas are likely to require modification and preparing to learn/fail and revise)
Evaluators as objective spectators	Taking shared responsibility to inform the design, delivery and evaluation of improvement



Is it just us?



A silhouette of a person pushing a large, round boulder up a hill. The scene is set against a dramatic sunset sky with orange and yellow clouds. The sun is visible on the right side of the frame, creating a strong backlight effect. The person is positioned on the right side of the boulder, leaning forward and pushing it upwards. The hill is dark and silhouetted against the bright sky.

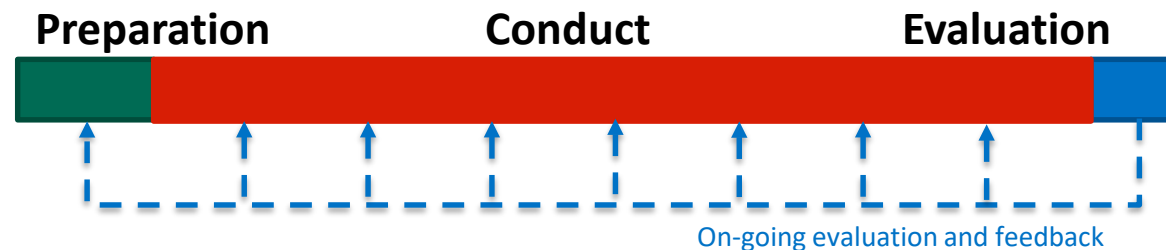
**Effort
Honesty and Evidence**

Thinking Differently About Investing Effort

Traditional policy and academic perspectives in healthcare



Shifting perspectives



Overcoming systemic denial about effort required

A photograph of a dense forest with tall, thin trees. Sunlight is streaming through the canopy, creating bright rays of light that illuminate the forest floor. The ground is covered in green moss and fallen leaves. The overall atmosphere is serene and natural.

The good news... we
have many of the
answers already

The bad news... people
may not like them