

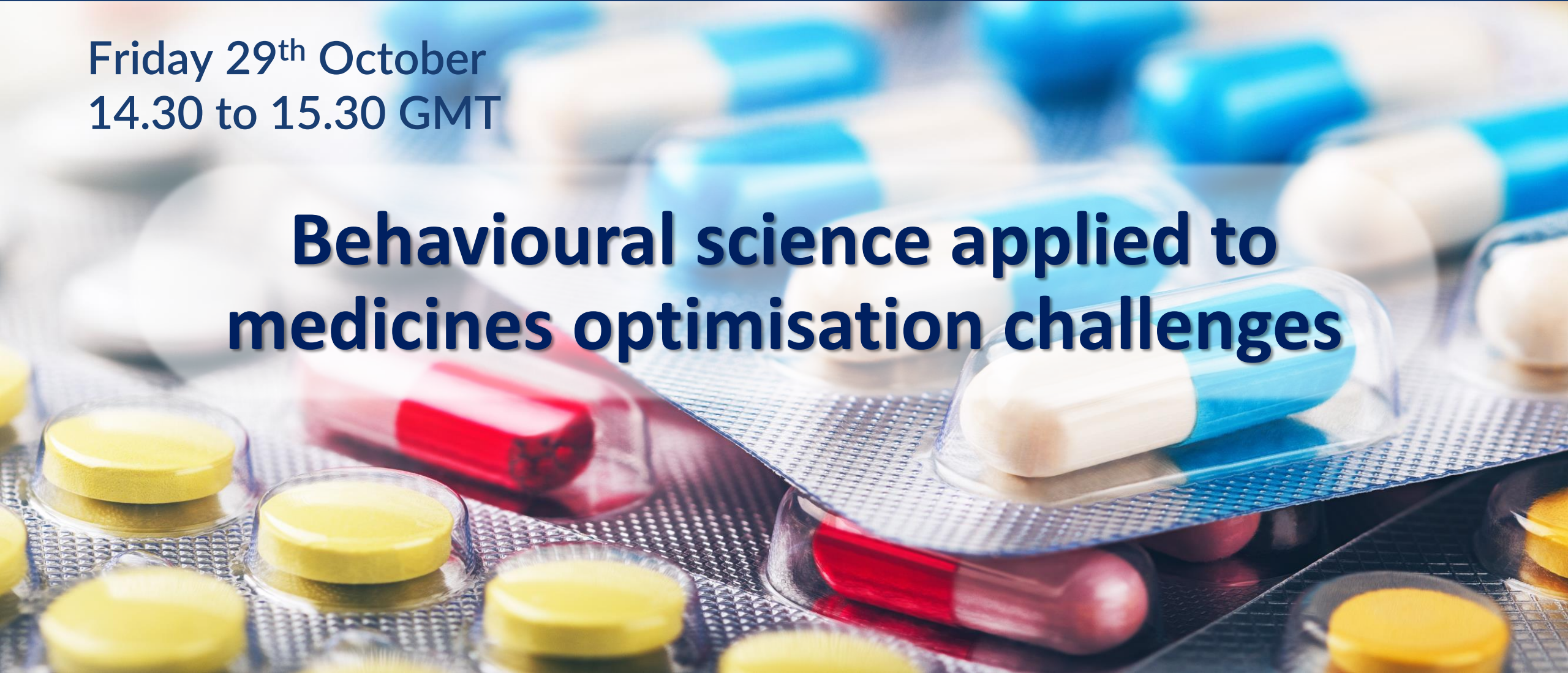
NIHR

Applied Research Collaboration East of England

Ageing and Multi-morbidity

Friday 29th October
14.30 to 15.30 GMT

Behavioural science applied to medicines optimisation challenges





Introduction to the ARC

Prof Claire Goodman,
*Centre for Research In Public health And Primary Care
(CRIPACC) University of Hertfordshire*
Ageing and Multimorbidity theme lead



Behavioural science applied to medicines optimisation challenges



Behavioural science applied to medicines optimisation challenges



Agenda

- 10 min. **Introduction to behavioural science & deprescribing**
- 10 min. **Opioid deprescribing toolkit**
Speaker: Prof Debi Bhattacharya, University of East Anglia, NIHR ARC East of England
- 10 min. **A practitioner behaviour change intervention for deprescribing in the hospital setting**
Speaker: Dr Sion Scott, University of Leicester
- 30 min. **What have we learnt? What next?**
Curated conversation, key points of learning and future research initiatives.

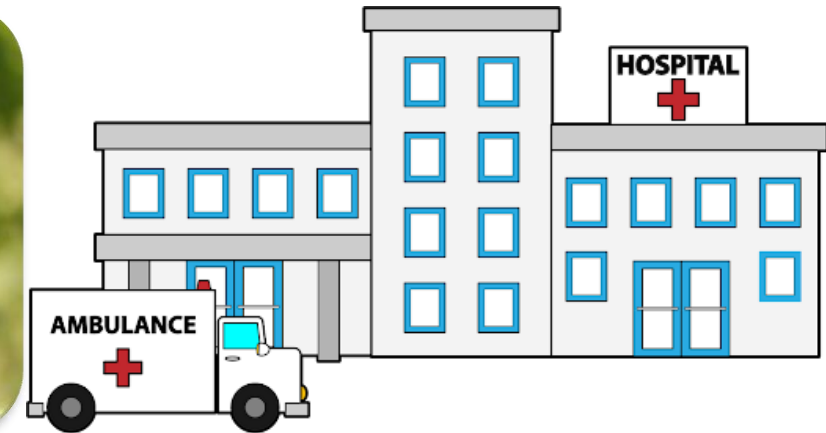




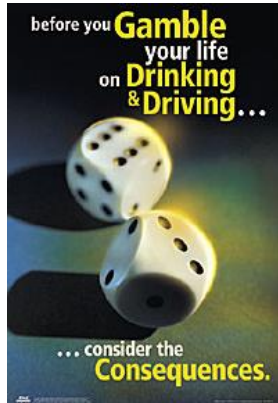
Debi Bhattacharya
Professor of Behavioural Medicine



Sion Scott
Lecturer in Behavioural Medicine



Human beings are complex



Behaviour change in healthcare

Evidence  **Practice**

Behaviour change in healthcare

RESEARCH INTO PRACTICE I

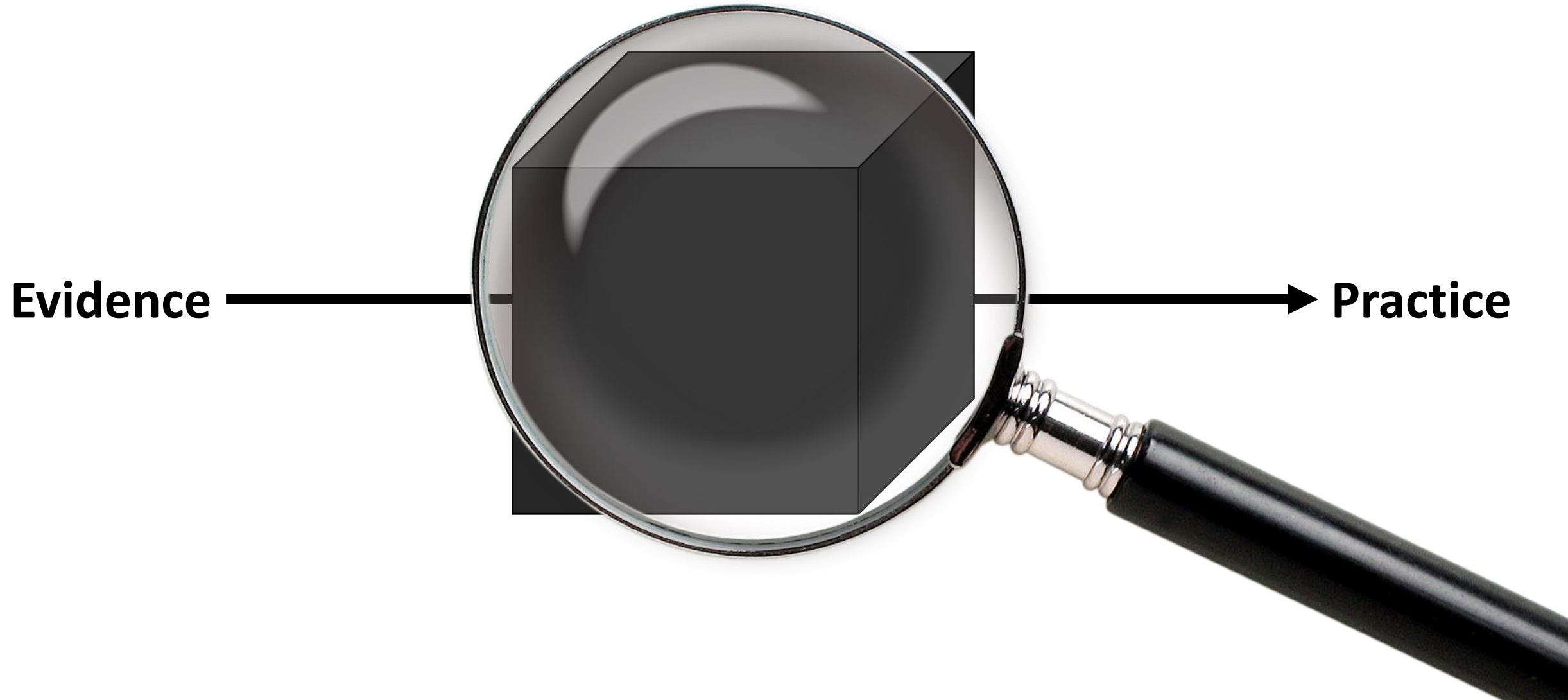
Research into practice I

**From best evidence to best practice: effective implementation of
change in patients' care**

Richard Grol, Jeremy Grimshaw

“...30-40% of patients do not receive care
according to present scientific evidence...”

Healthcare practitioner behaviour



Behavioural science applied to medicines optimisation challenges



1. I am interested in hearing others' experiences of using behavioural science to address medicines optimisation challenges.
2. I am interested in using behavioural science to address medicines optimisation challenges.
3. I am using/have used behavioural science to address medicines optimisation challenges.



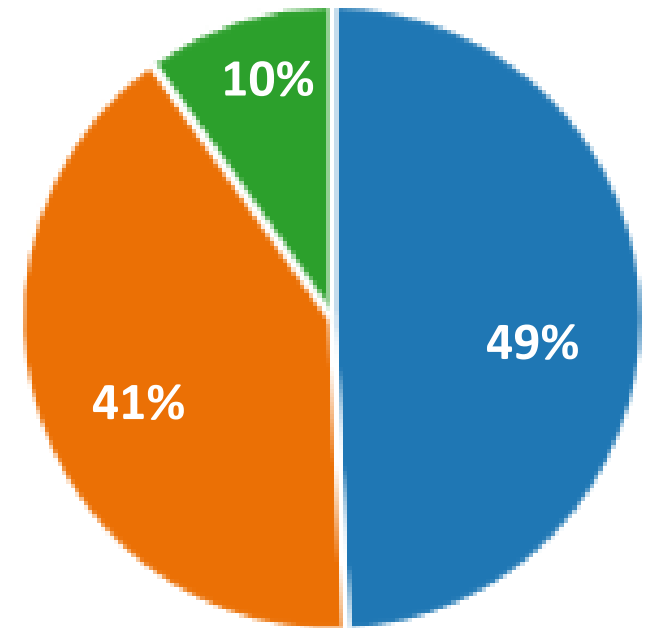
Location of people who registered



Survey results

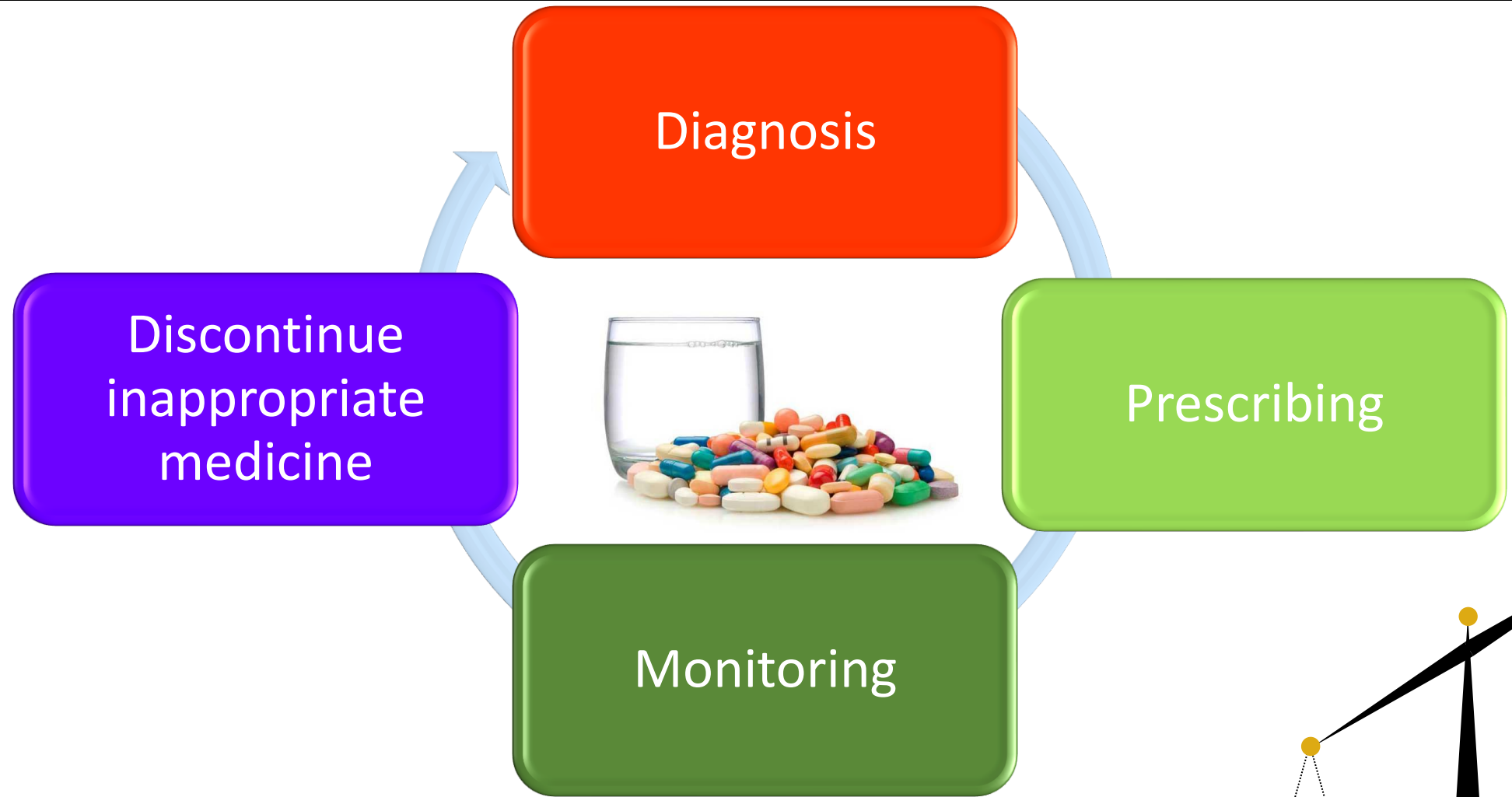


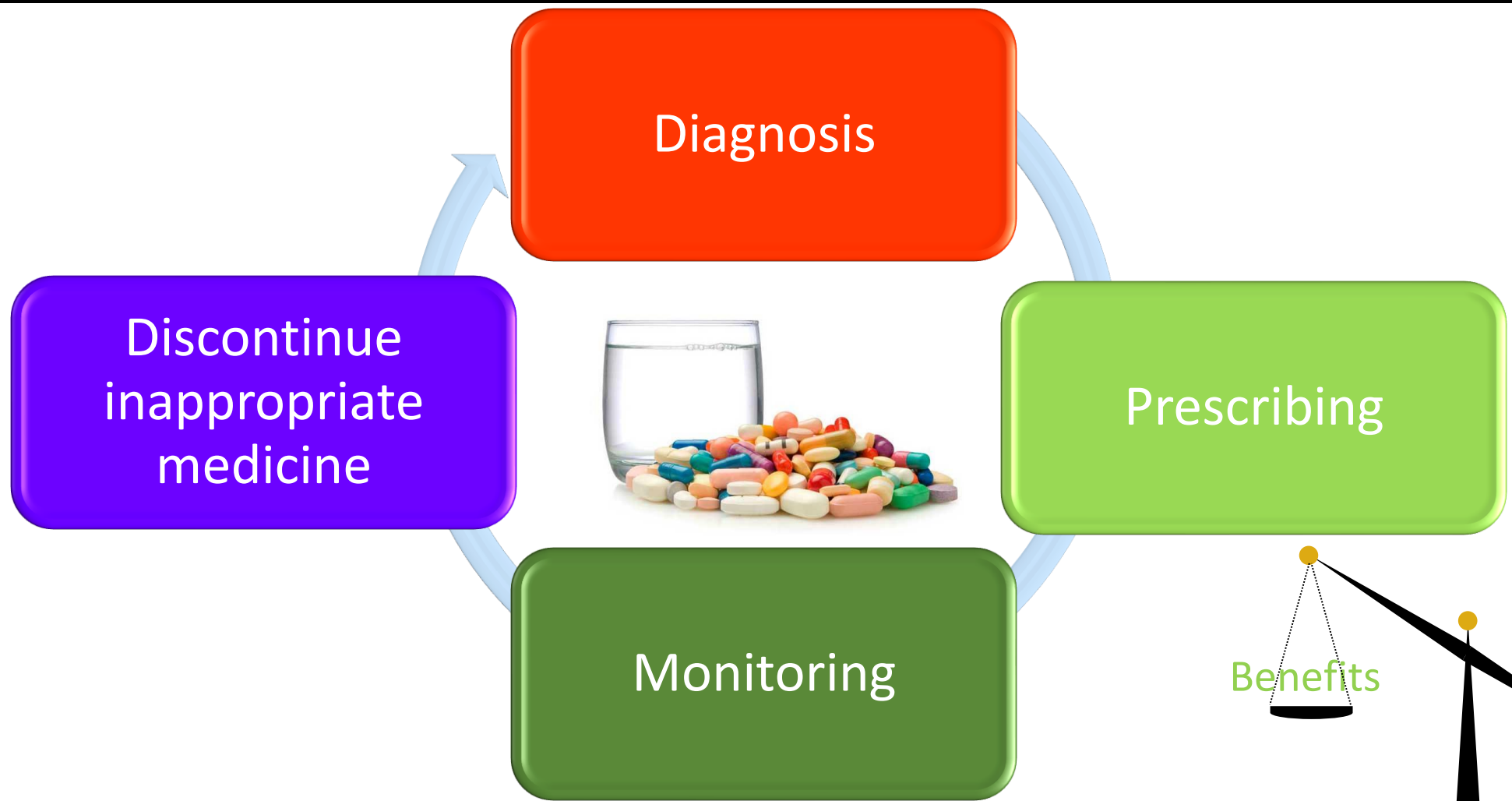
- I am interested in **hearing others' experiences** of using behavioural science to address medicines optimisation challenges.
- I am interested in **using behavioural science** to address medicines optimisation challenges.
- I am **using/have used behavioural science** to address medicines optimisation challenges.

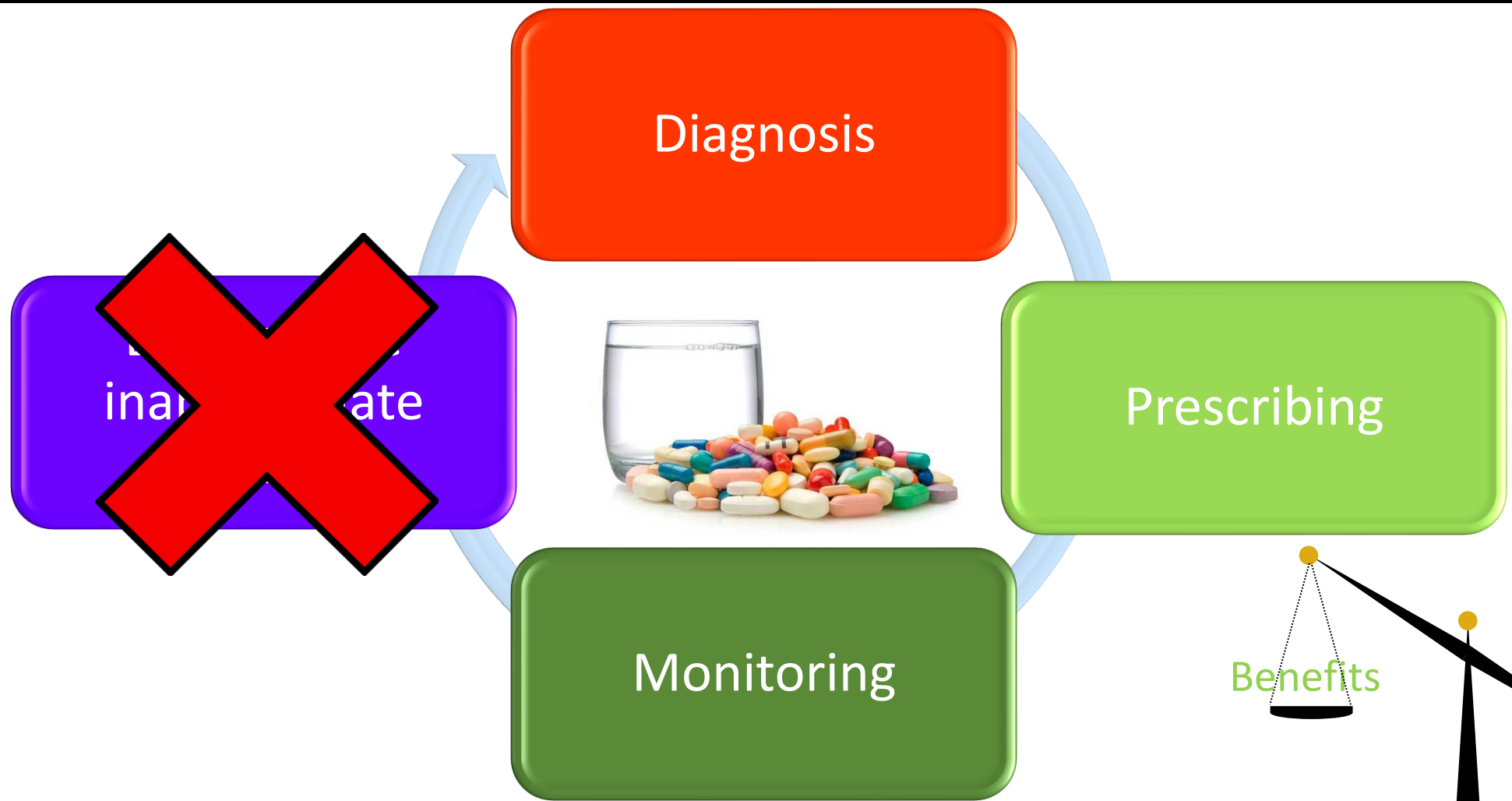


Role of behavioural science in deprescribing









Organisational requirements for supporting primary care practitioners to tackle opioid prescribing

Debi Bhattacharya

Background

- Numerous opioid deprescribing trials
 - Patient behaviour change focus
 - None successfully implemented to yield the same effects
- Numerous opioid deprescribing services in operation
- All highly complex interventions



The realist approach

We implemented the same program in two locations. For some reason, we had very different results.

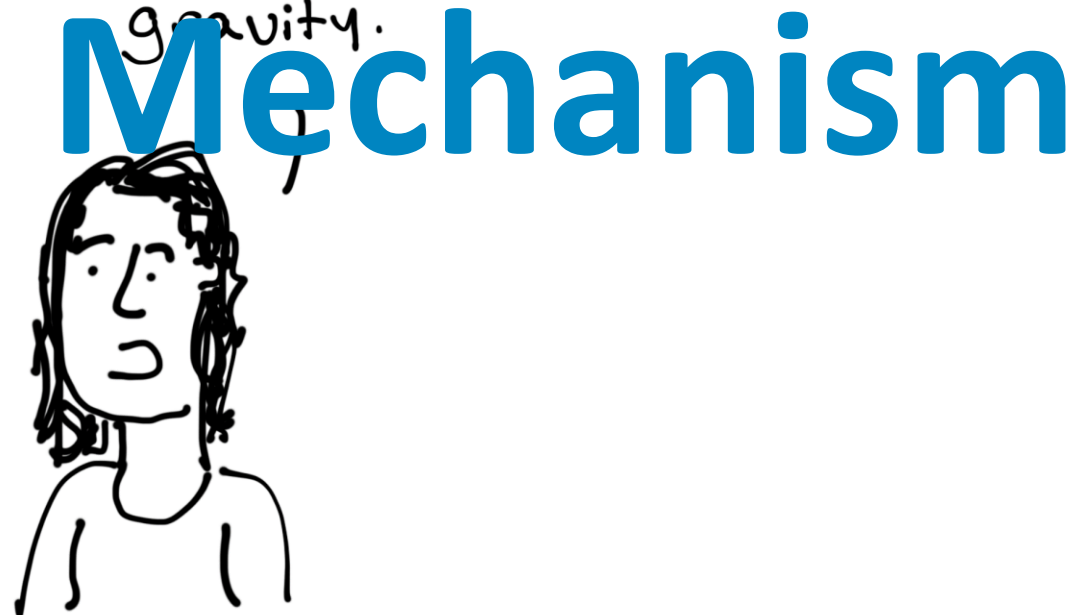


The realist approach

Everytime I throw
the ball up, it just
comes back down
again.



That's just
gravity.



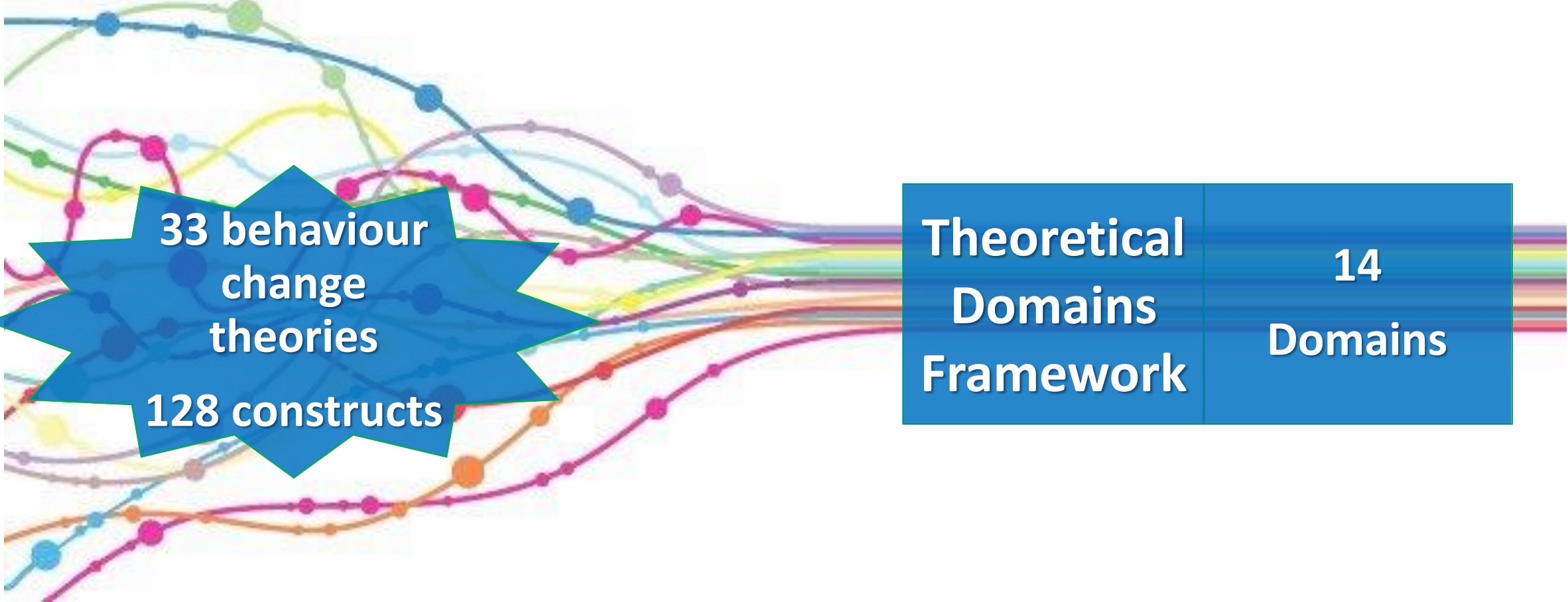
Methods

- Convene stakeholder group (n=23)
 - Prescribers, researchers, commissioners, policy makers

Programme theory

If practitioners receive training on how and when to taper opioid doses then they are more likely to encourage patients to do so.





**33 behaviour
change
theories**

128 constructs

**Theoretical
Domains
Framework**

**14
Domains**

Theoretical Domains Framework

1. Knowledge

2. Skills

3. Social/
professional role
& identity

4. Beliefs about
capabilities

5. Optimism

6. Beliefs about
consequences

7.
Reinforcement

8. Intention

9. Goals

10. Memory,
attention &
decision making

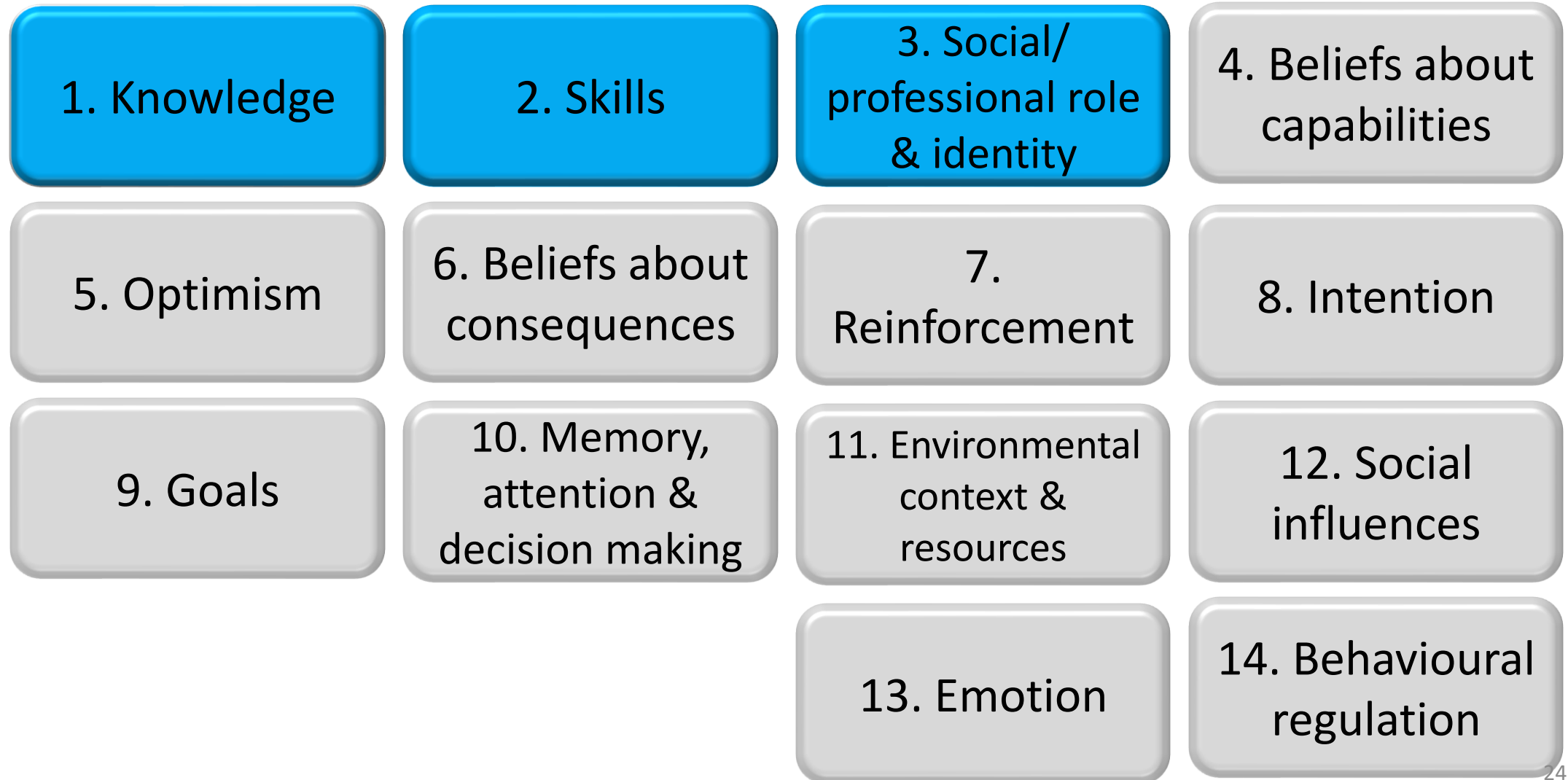
11. Environmental
context &
resources

12. Social
influences

13. Emotion

14. Behavioural
regulation

Theoretical Domains Framework



Example initial programme theories

If programmes adopt a pathway incorporating guidelines, then practitioners are more likely to be successful in supporting patients to reduce their opioid use.

(Knowledge)

If programmes ensure practitioners are equipped to deliver the intervention (through training or experience) then they will be successful in supporting patients to reduce their opioid use.

(Skills)

If there is a clear expectation that opioid deprescribing is the responsibility of the clinicians, then they are more likely to initiate deprescribing discussions with patients.

(Social and Professional role and identity)

Initial programme theories tested



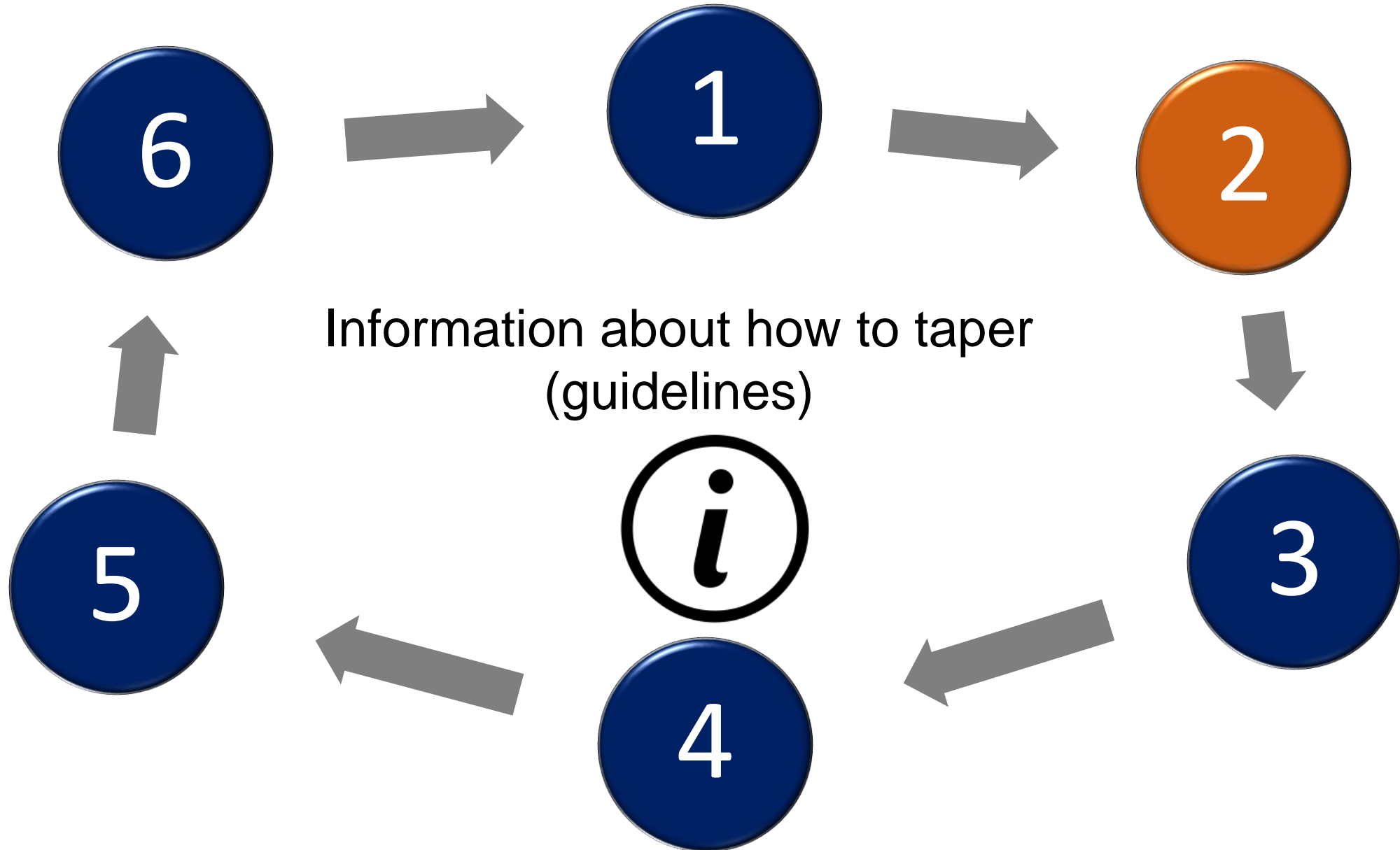
- Research evidence from opioid deprescribing trials

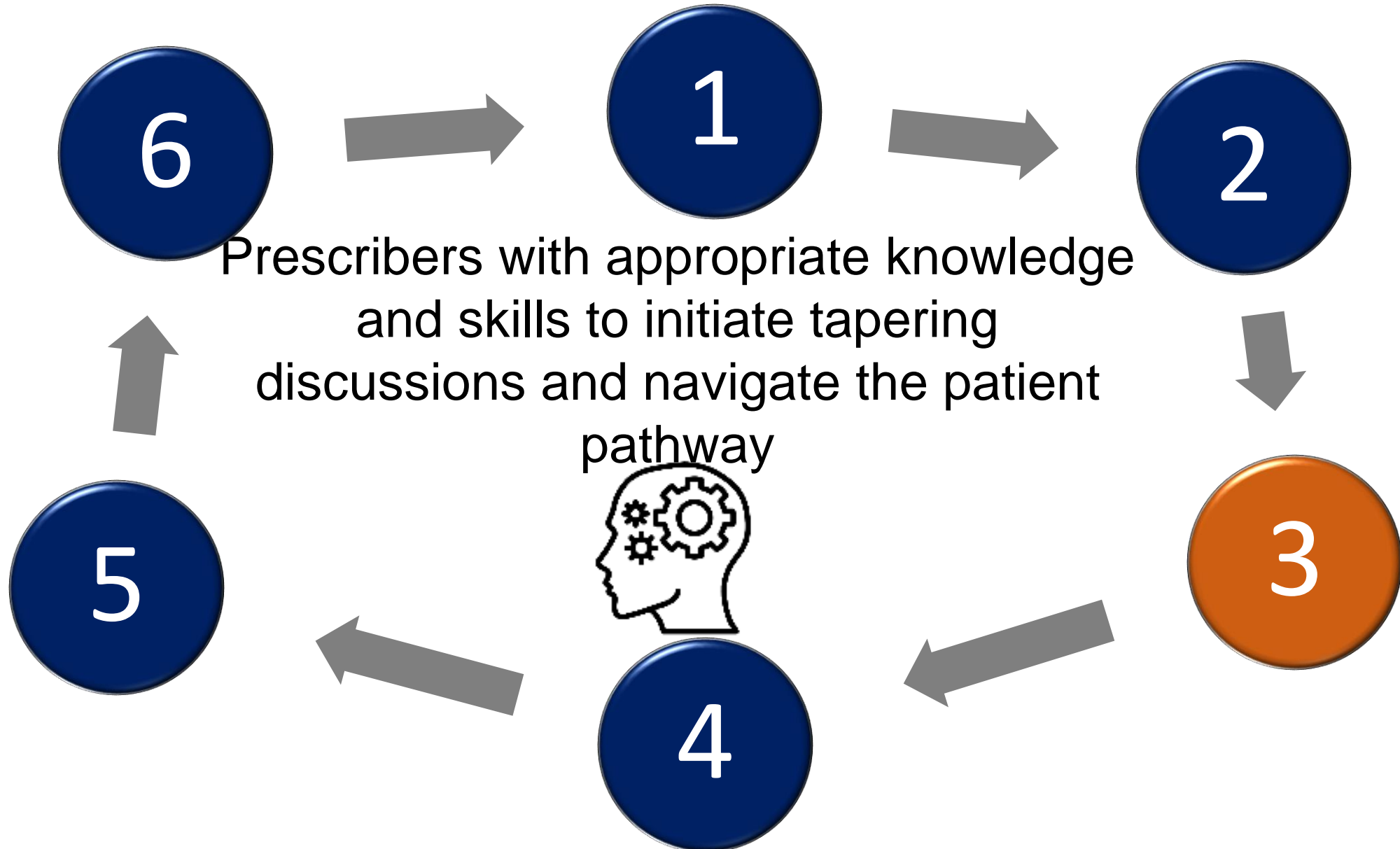


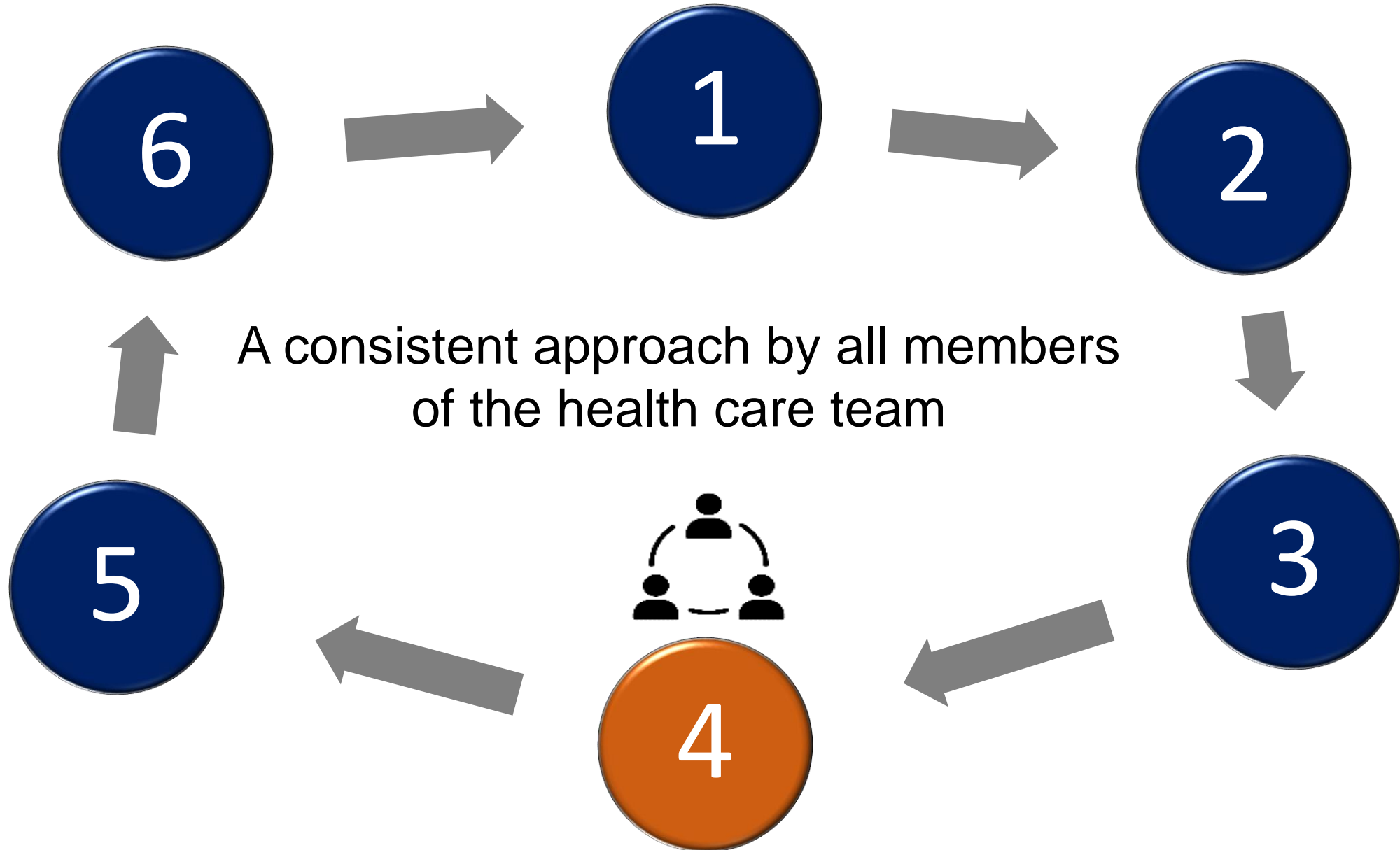
- Practice evidence from national survey of opioid deprescribing service managers/commissioners

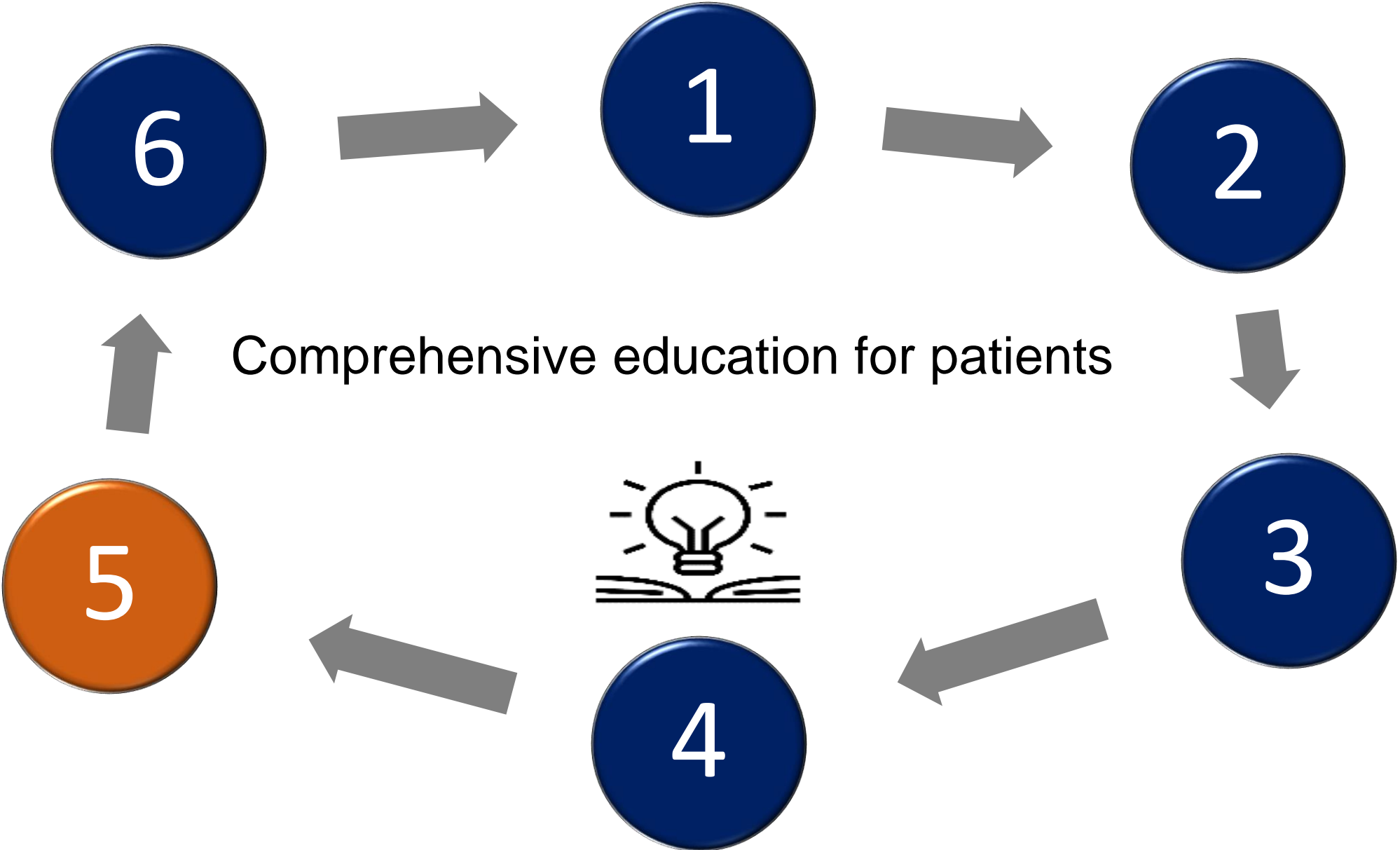




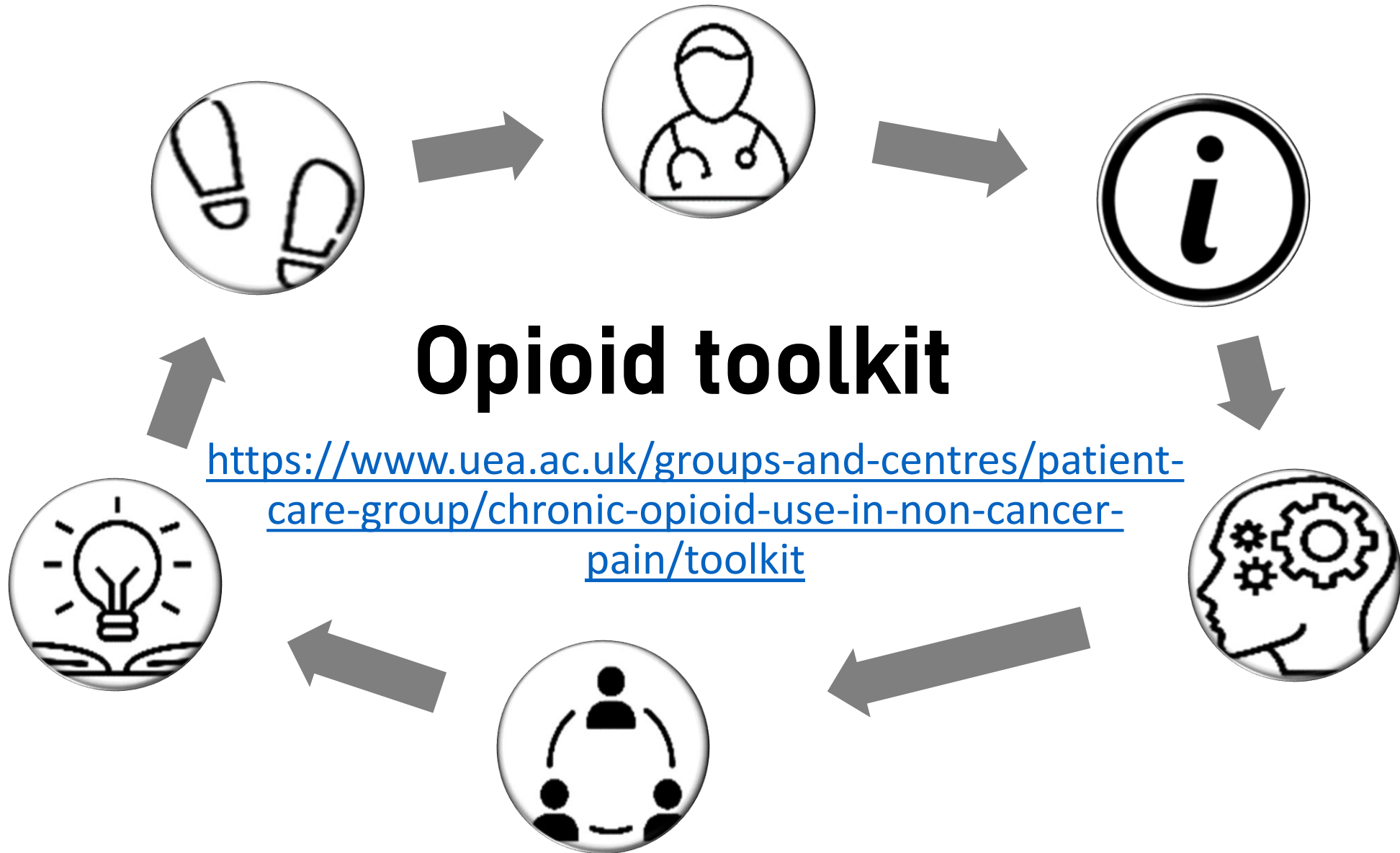












Questions to consider

- What medicines optimisation challenges need behavioural science
- How would you like to take this forward?
- How can the ARC support you in making this happen?

A behaviour change intervention for deprescribing in the hospital setting

Sion Scott



The problem¹⁻³

- 51.3% of older hospital patients (≥ 65 years) prescribed at least one potentially inappropriate medicine on admission
 - Morbidity, mortality and rehospitalisation
- $< 1\%$ of admission medication *proactively* deprescribed in hospital
- 99.8% of older hospital patients and family members would have a medicines deprescribed in hospital if suggested by a doctor

MISSED OPPORTUNITY

Gallagher, P., Lang, P. O., Cherubini, A., Topinková, E., Cruz-Jentoft, A., Montero Errasquín, B., Mádlová, P., Gasperini, B., Baeyens, H., Baeyens, J. P., Michel, J. P., & O'Mahony, D. (2011). Prevalence of potentially inappropriate prescribing in an acutely ill population of older patients admitted to six European hospitals. *European Journal of Clinical Pharmacology*, 67(11), 1175–1188.

Scott, S., Clark, A., Farrow, C., May, H., Patel, M., Twigg, M. J., Wright, D. J., & Bhattacharya, D. (2018). Deprescribing admission medication at a UK teaching hospital; a report on quantity and nature of activity. *International Journal of Clinical Pharmacy*. <https://doi.org/10.1007/s11096-018-0673-1>

Scott, S., Clark, A., Farrow, C., May, H., Patel, M., Twigg, M. J., Wright, D. J., & Bhattacharya, D. (2019). Attitudinal predictors of older peoples' and caregivers' desire to deprescribe in hospital. *BMC Geriatrics*, 19(1), 108.

Aims

- ❑ Understand geriatricians' and pharmacists' the barriers and enablers to proactive deprescribing in hospital
- ❑ Identify Behaviour Change Techniques to address barriers and enablers



Aims

- ❑ Understand geriatricians' and pharmacists' the barriers and enablers to proactive deprescribing in hospital
- ❑ Identify Behaviour Change Techniques to address barriers and enablers



Methods

- Eight focus groups across four hospitals
 - 54 geriatricians and pharmacists
 - Two each of smaller district general and larger teaching hospital
- Topic guide underpinned by the Theoretical Domains Framework explored
 - Perceptions of *existing* deprescribing practice
 - Barriers and enablers to deprescribing



Analysis

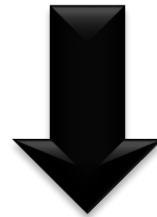
Inductive
thematic
analysis

Mapped
barriers and
enablers to the
TDF

Analysis

Inductive
thematic
analysis

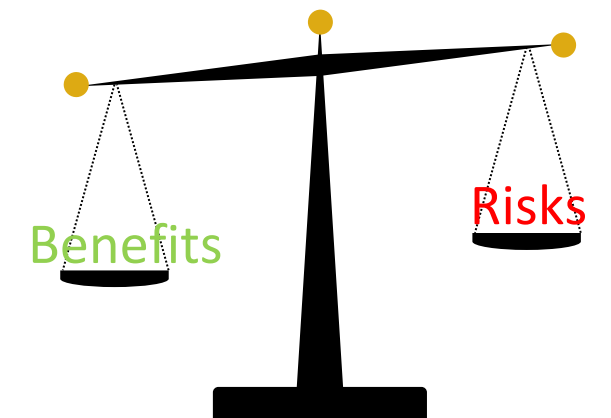
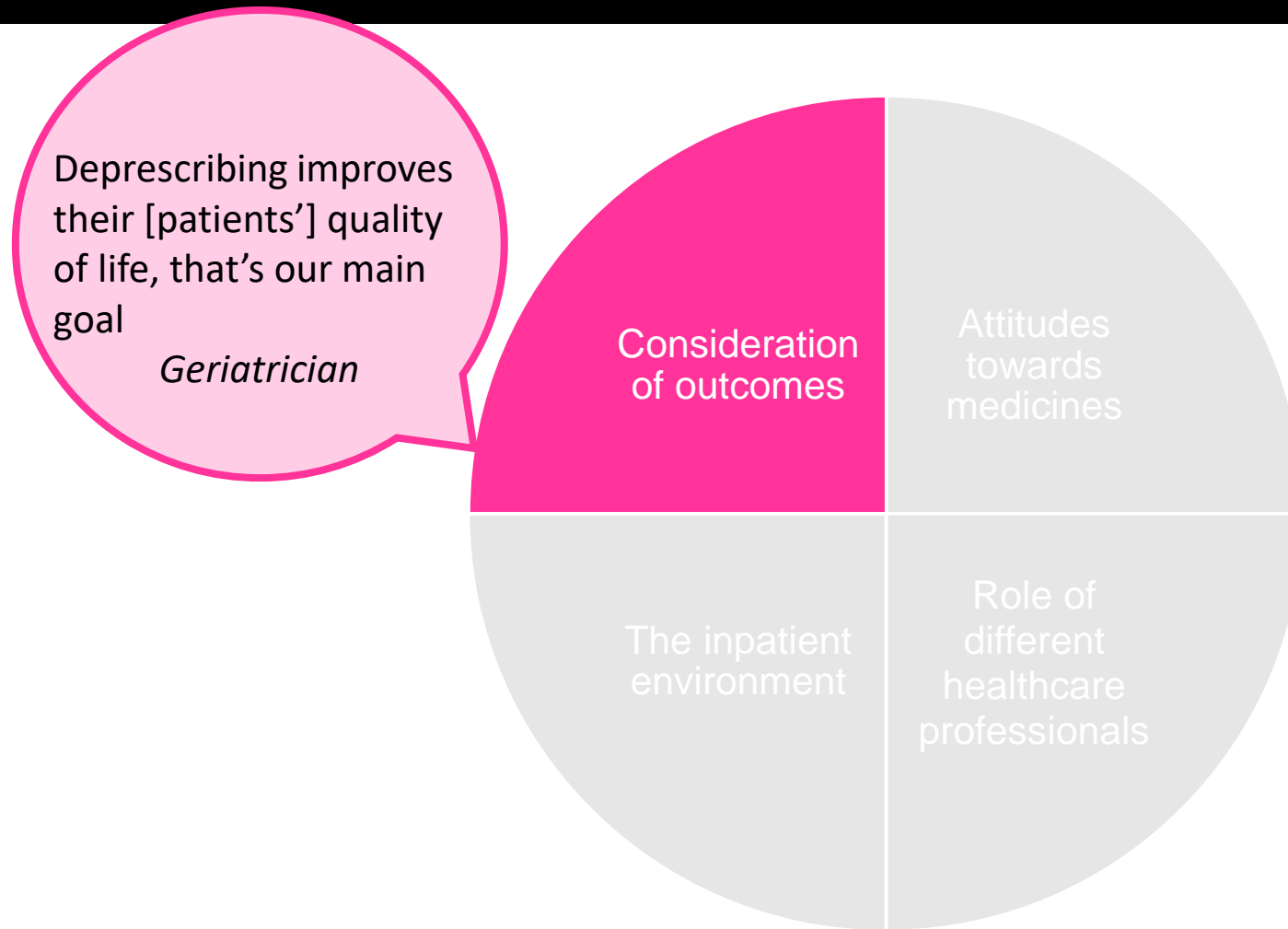
Mapped
barriers and
enablers to the
TDF



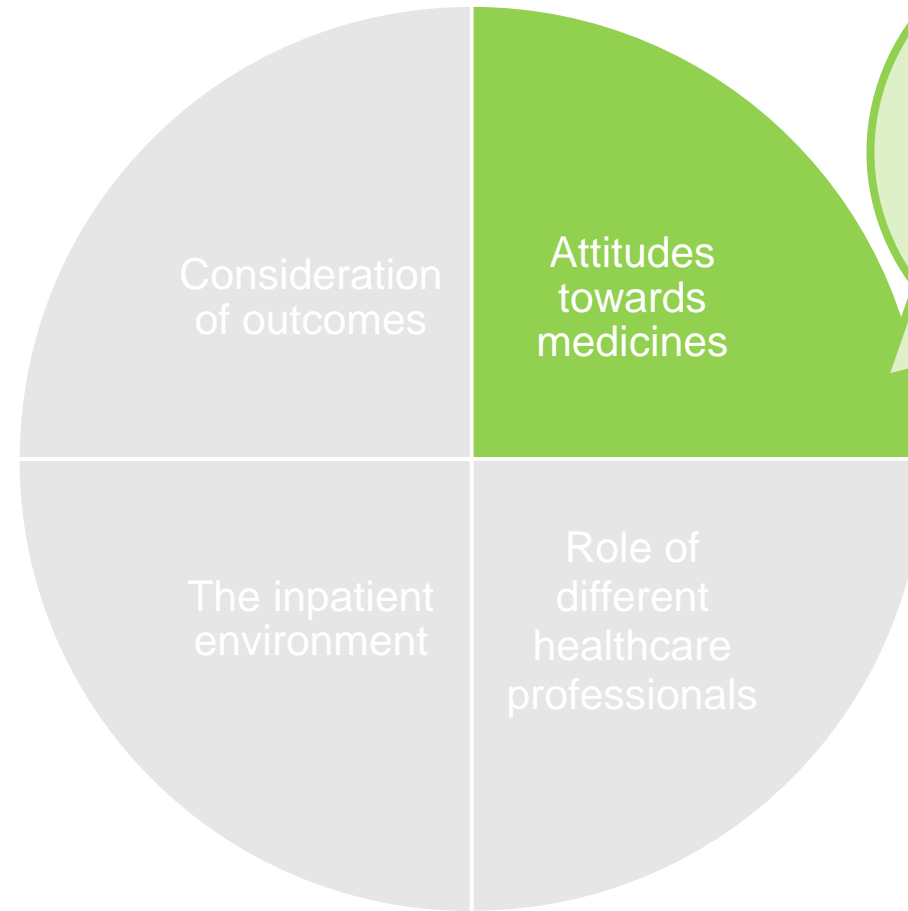
Prioritised TDF domains for targeting

Thematic analysis

Thematic analysis



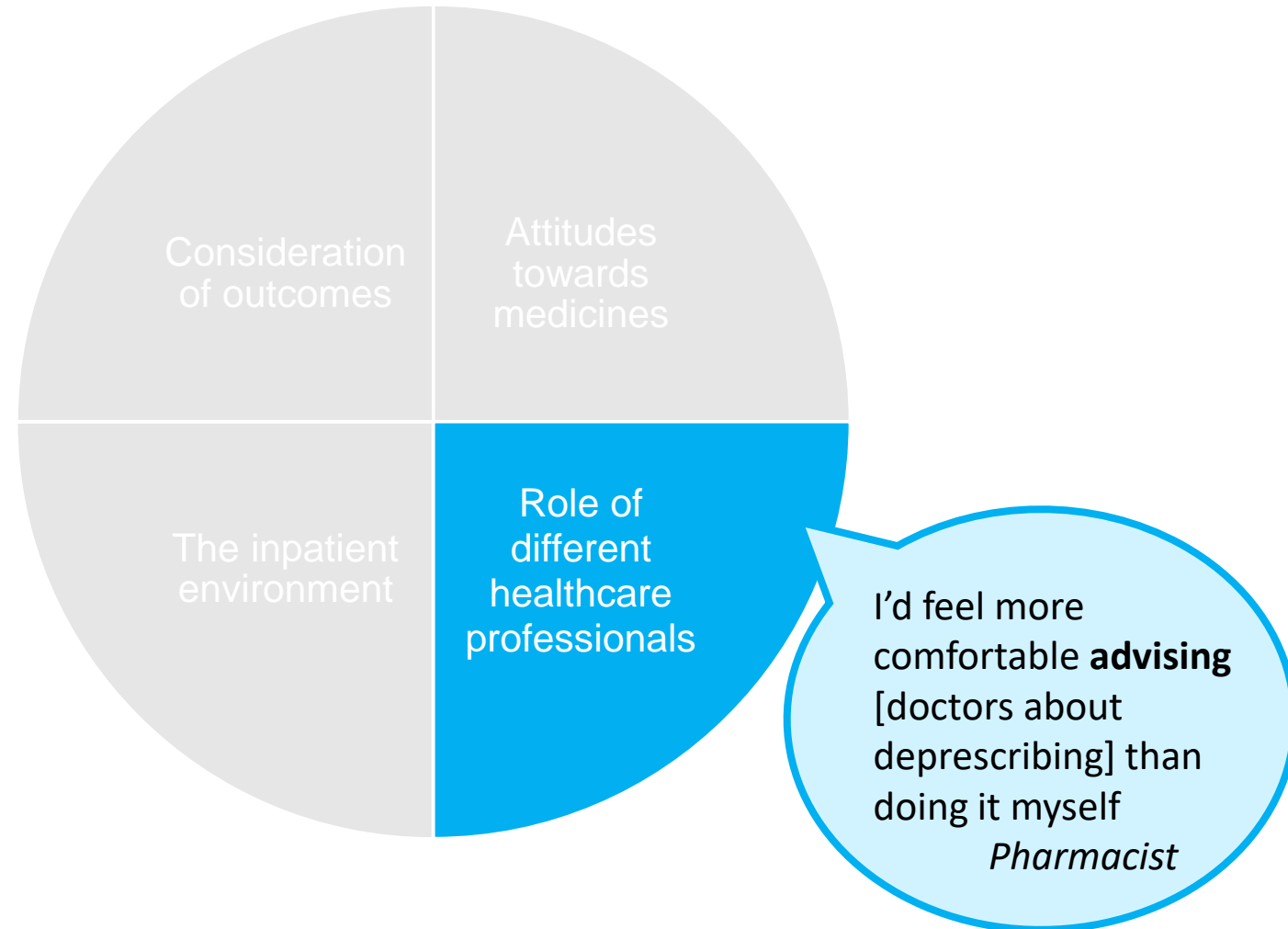
Thematic analysis



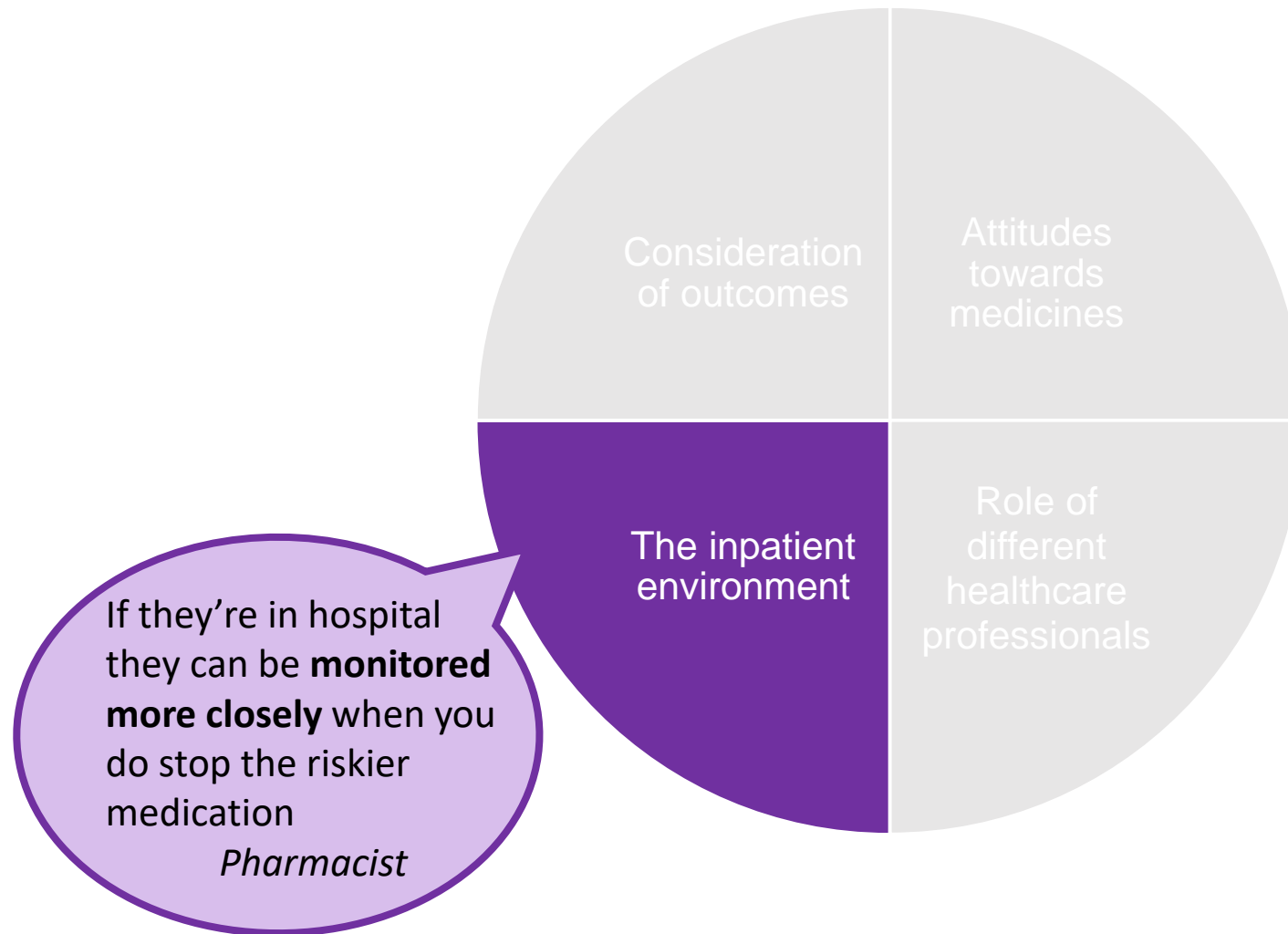
How many patients say:
“I’ve been taking these
for years I have had no
problem **why do we
need to change it now?**”
Geriatrician



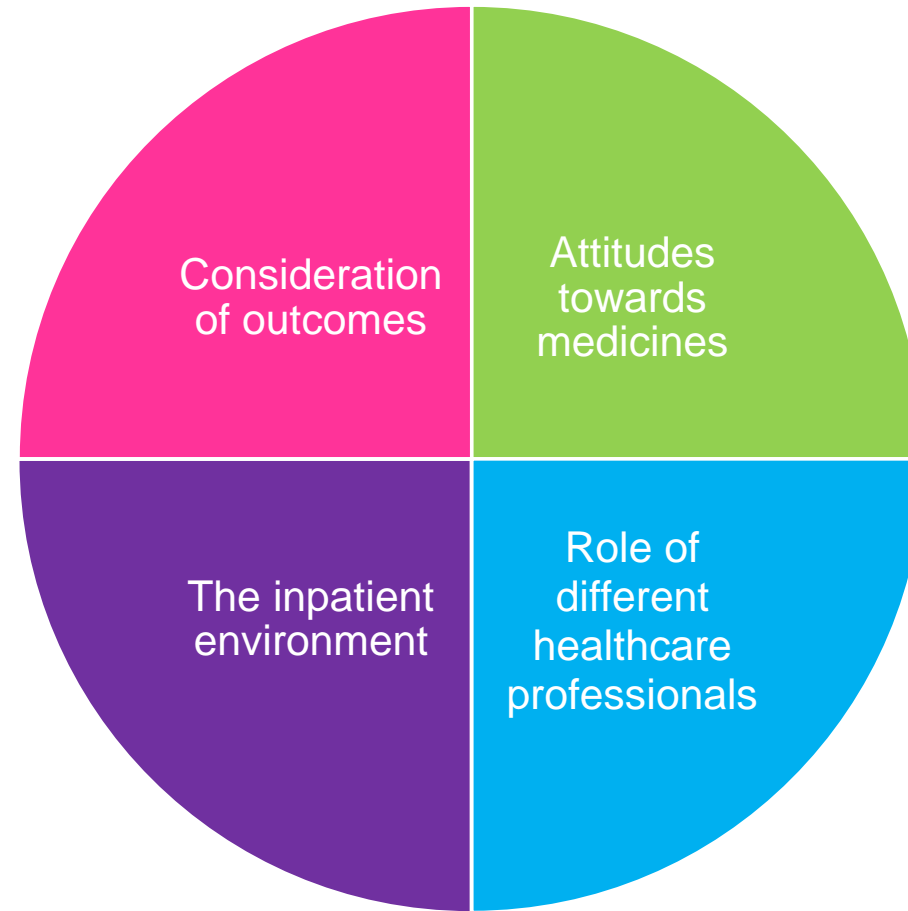
Thematic analysis



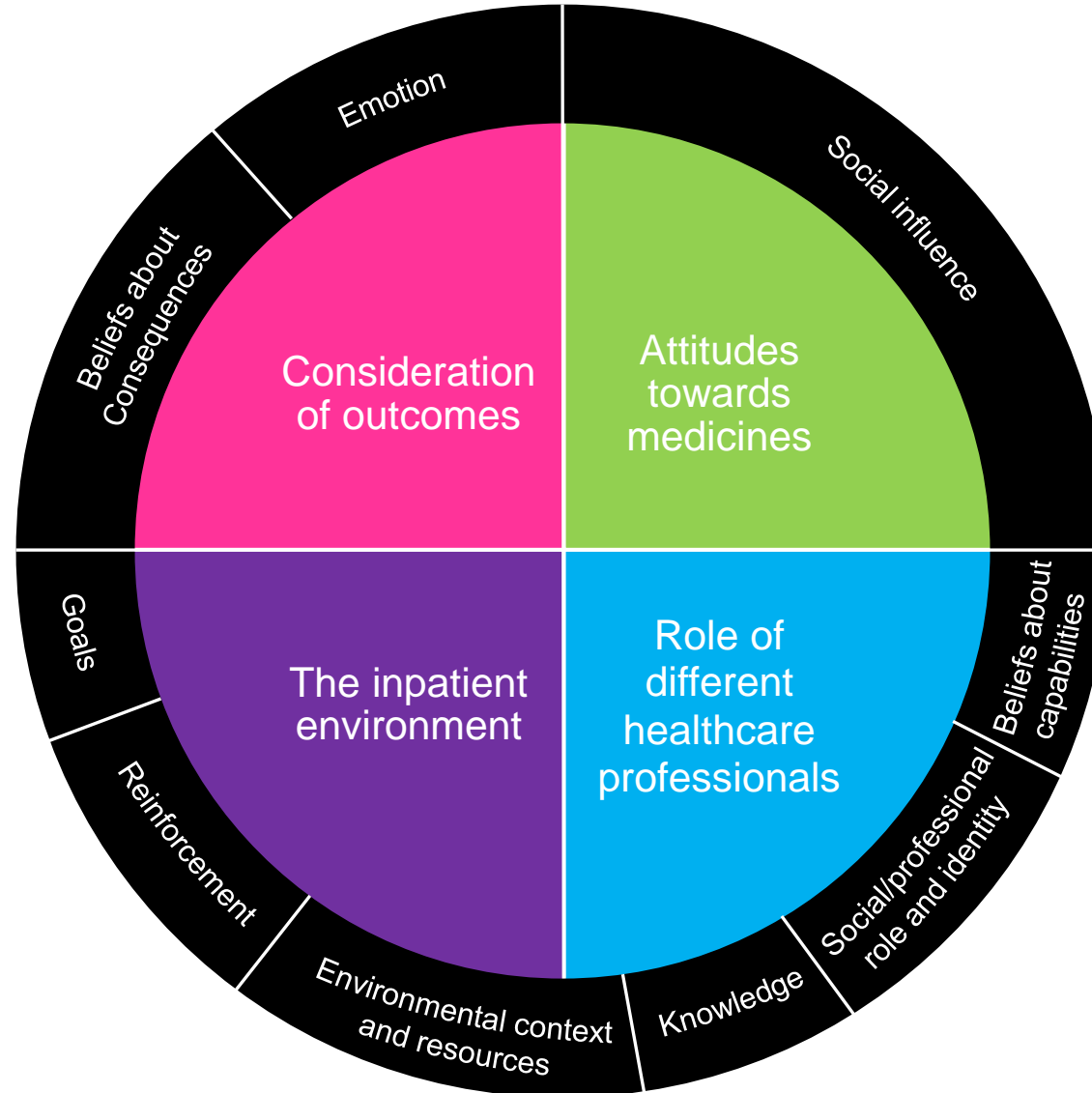
Thematic analysis



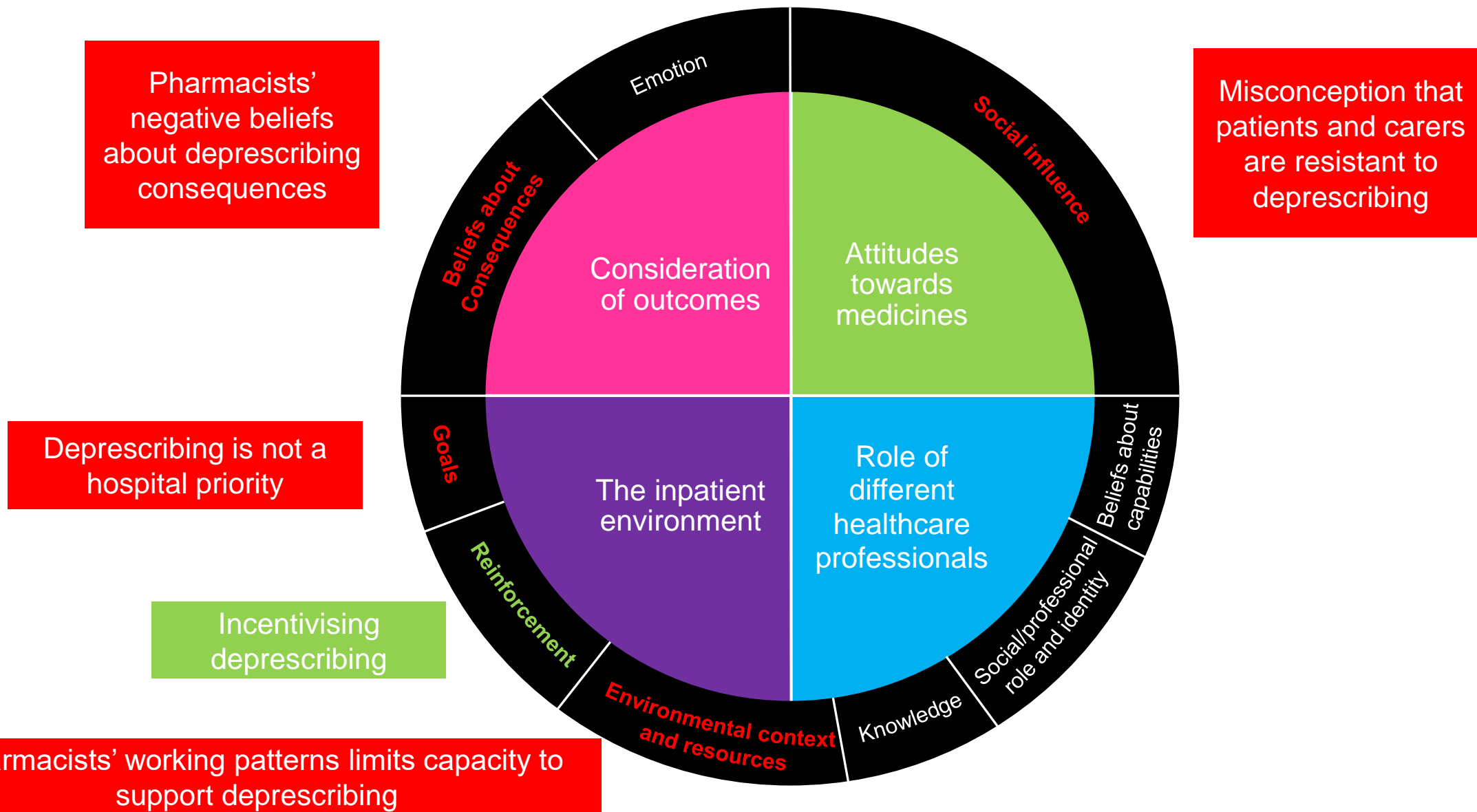
Thematic analysis



TDF mapping



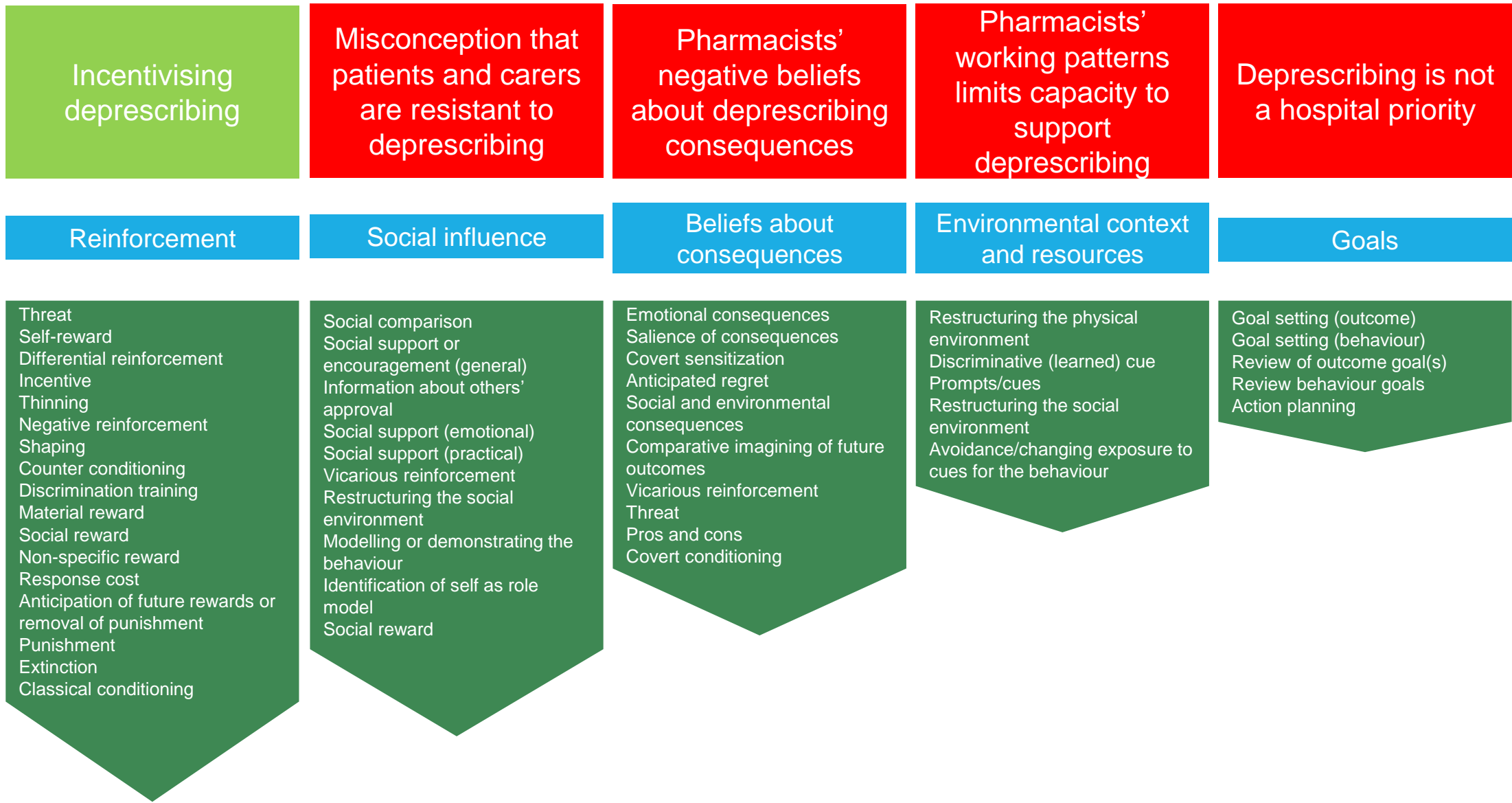
TDF domain prioritisation



Aims

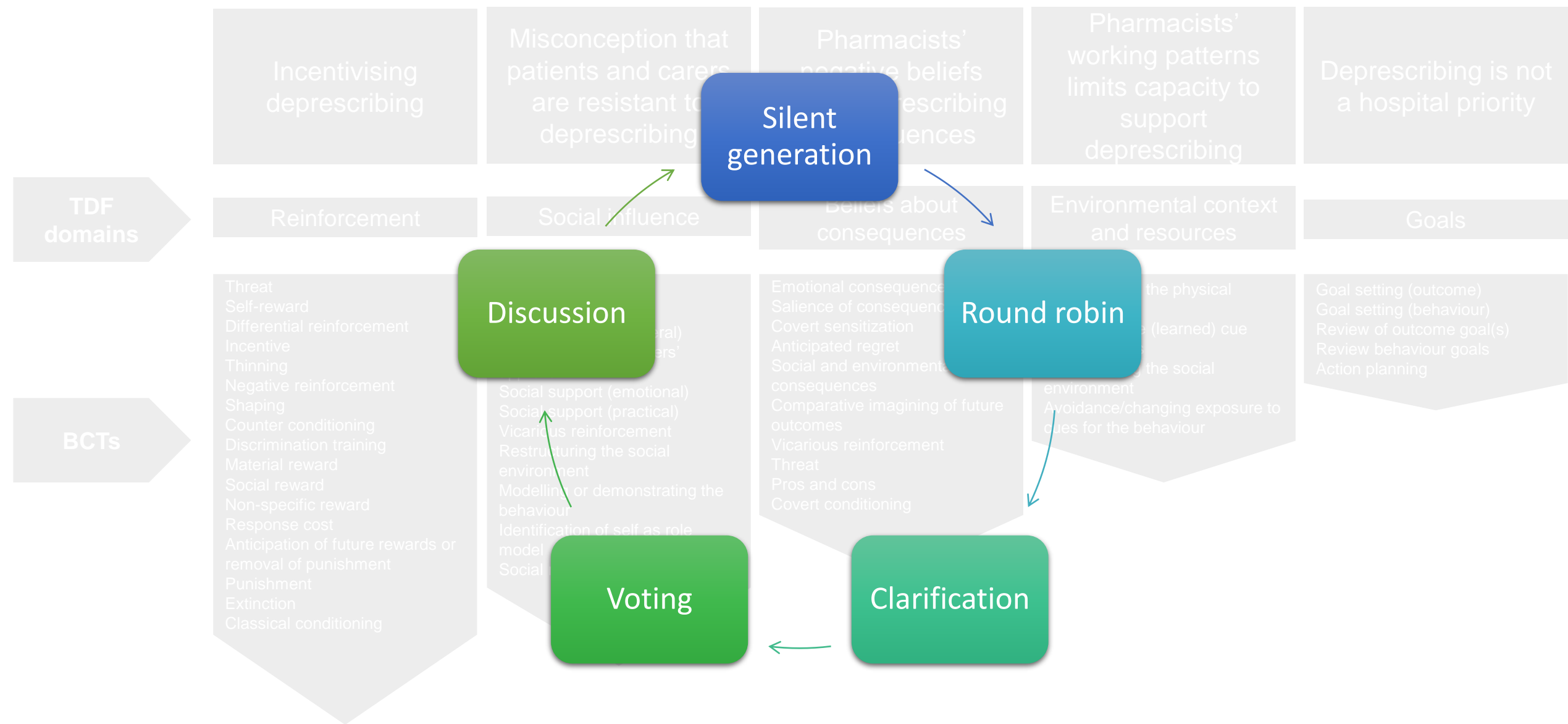
- Understand geriatricians' and pharmacists' the barriers and enablers to proactive deprescribing in hospital
- Identify Behaviour Change Techniques to address barriers and enablers





Scott, S., Twigg, M. J., Clark, A., Farrow, C., May, H., Patel, M., Taylor, J., Wright, D. J., & Bhattacharya, D. (2020). Development of a hospital deprescribing implementation framework: A focus group study with geriatricians and pharmacists. *Age and Ageing*

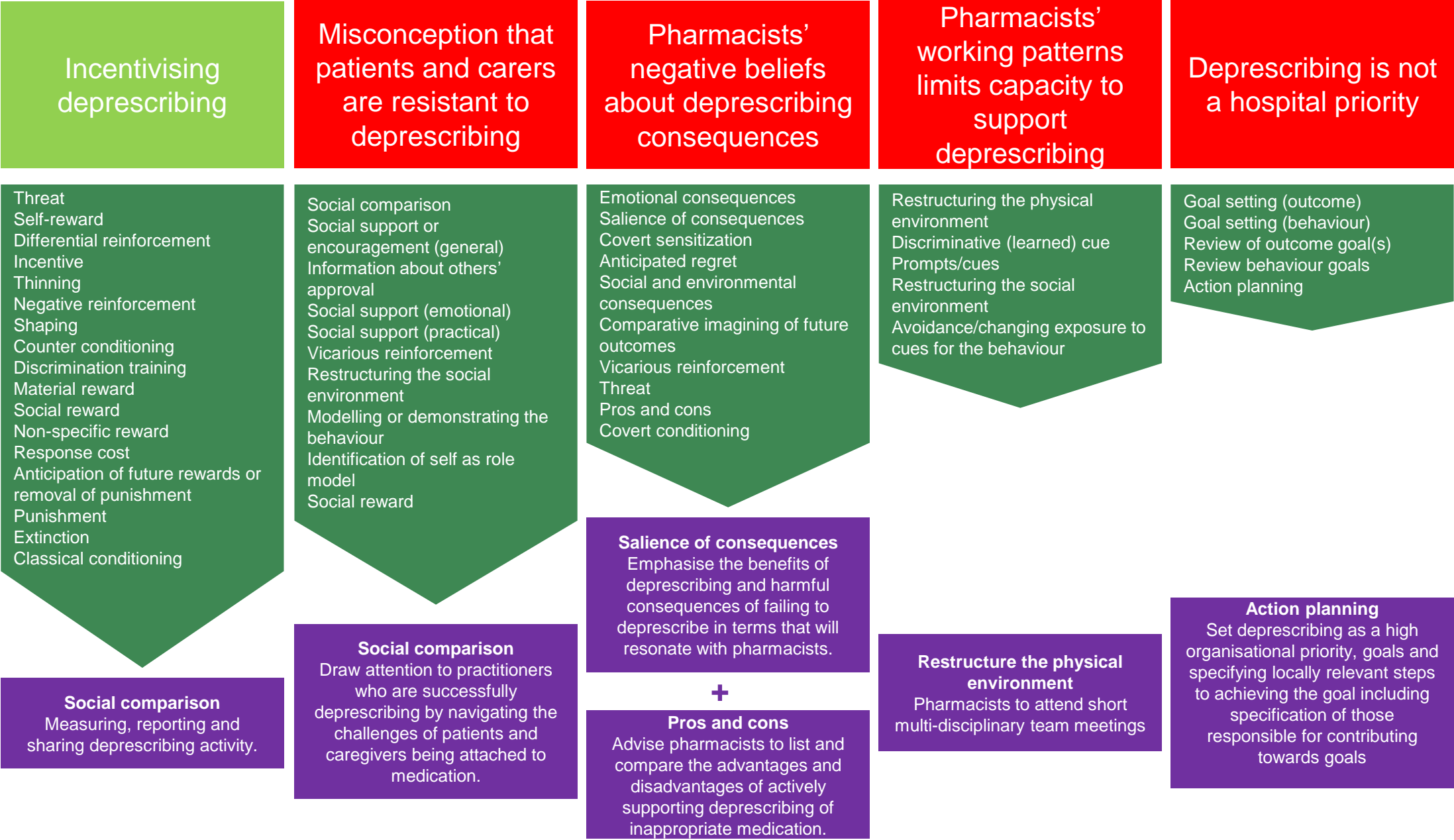
Scott, S., May, H., Patel, M., Wright, D. J., & Bhattacharya, D. (2020). A practitioner behaviour change intervention for deprescribing in the hospital setting. *Age and Ageing*



Scott, S., Twigg, M. J., Clark, A., Farrow, C., May, H., Patel, M., Taylor, J., Wright, D. J., & Bhattacharya, D. (2020). Development of a hospital deprescribing implementation framework: A focus group study with geriatricians and pharmacists. *Age and Ageing*

Scott, S., May, H., Patel, M., Wright, D. J., & Bhattacharya, D. (2020). A practitioner behaviour change intervention for deprescribing in the hospital setting. *Age and Ageing*

BCTs



Scott, S., Twigg, M. J., Clark, A., Farrow, C., May, H., Patel, M., Taylor, J., Wright, D. J., & Bhattacharya, D. (2020). Development of a hospital deprescribing implementation framework: A focus group study with geriatricians and pharmacists. *Age and Ageing*

Scott, S., May, H., Patel, M., Wright, D. J., & Bhattacharya, D. (2020). A practitioner behaviour change intervention for deprescribing in the hospital setting. *Age and Ageing*

1

Selecting patient outcomes and exploring trial design features for collecting outcomes in a modified Delphi study

2

Developing the intervention package with codesign workshops with target audience and local implementation stakeholders

3

Feasibility testing intervention and trial procedures and use the arising data to undertake pre-trial modelling of the intervention and refine trial procedures

4

Internal pilot and definitive trial cluster randomised control trial

5

Impact and dissemination throughout the programme and development of an implementation strategy for wider adoption



Behavioural science applied to medicines optimisation challenges: Implementing deprescribing

Curated Q and A



Thank you!



Debi Bhattacharya
Professor of Behavioural Medicine
d.bhattacharya@uea.ac.uk



Sion Scott
Lecturer in Behavioural Medicine
s.scott@leicester.ac.uk

- What medicines optimisation challenges need behavioural science
- How would you like to take this forward?
- How can the ARC support you in making this happen?