A2: How action on patient safety can reduce health inequalities

International Forum on
QUALITY & SAFETY
in HEALTHCARE
COPENHAGEN

Adapting to a changing world: equity, sustainability and wellbeing for all

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Action on patient safety can reduce health inequities

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1. Context of this challenge
2. Review evidence for inequities in patient safety
3. Symposium's experiences of these challenges
4. Review of the underlying mechanisms
5. Symposium brainstorming of mechanisms
6. Review of possible solutions
7. Symposium brainstorming of solutions
8. Summary and Q&A

Audience input

Contributors

With thanks to the many individuals and groups who have contributed to this work so far

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Individuals affiliated with the following organisations

- NHS England's Voluntary, Community and Social Enterprise, Health and Wellbeing Alliance
- Academy of Medical Royal Colleges' patient and lay committee and stakeholder reference group
- NHS England patient safety partners
- Members of the Inequalities in Health Alliance (hosted by the Royal College of Physicians)

Differences in risk of harm from healthcare is a vastly under-explored driver of health inequities

Definitions

Harm is where a failure of healthcare results in avoidable physical or psychological injury

Patient safety is the practice of minimising harm experienced by patients while receiving healthcare

Inequities in patient safety is therefore the difference in risk of harm from healthcare experienced between patient groups

Healthcare itself is an important **contributor to health inequities**

This is additive to the widely acknowledged impact of the social determinants of health on inequities

Patients' ethnicity, socioeconomic background, and other personal characteristics can **increase their risk of experiencing patient safety events**

Viewing health inequities through the lens of differences in patient safety **identifies actions** for which healthcare systems and workforce have a clear responsibility

Health inequity in patient safety is a complex, adaptive problem requiring an inter-disciplinary response

What makes this a ‘wicked’ problem

1 Multiple stakeholders
– Requires input from medicine, politicians, patients, managers, academia, industry

2 Disagreement on the issues
– Paucity of evidence on size and causes of the problem

3 Competing priorities
– These issues are often deprioritized due to resource constraints

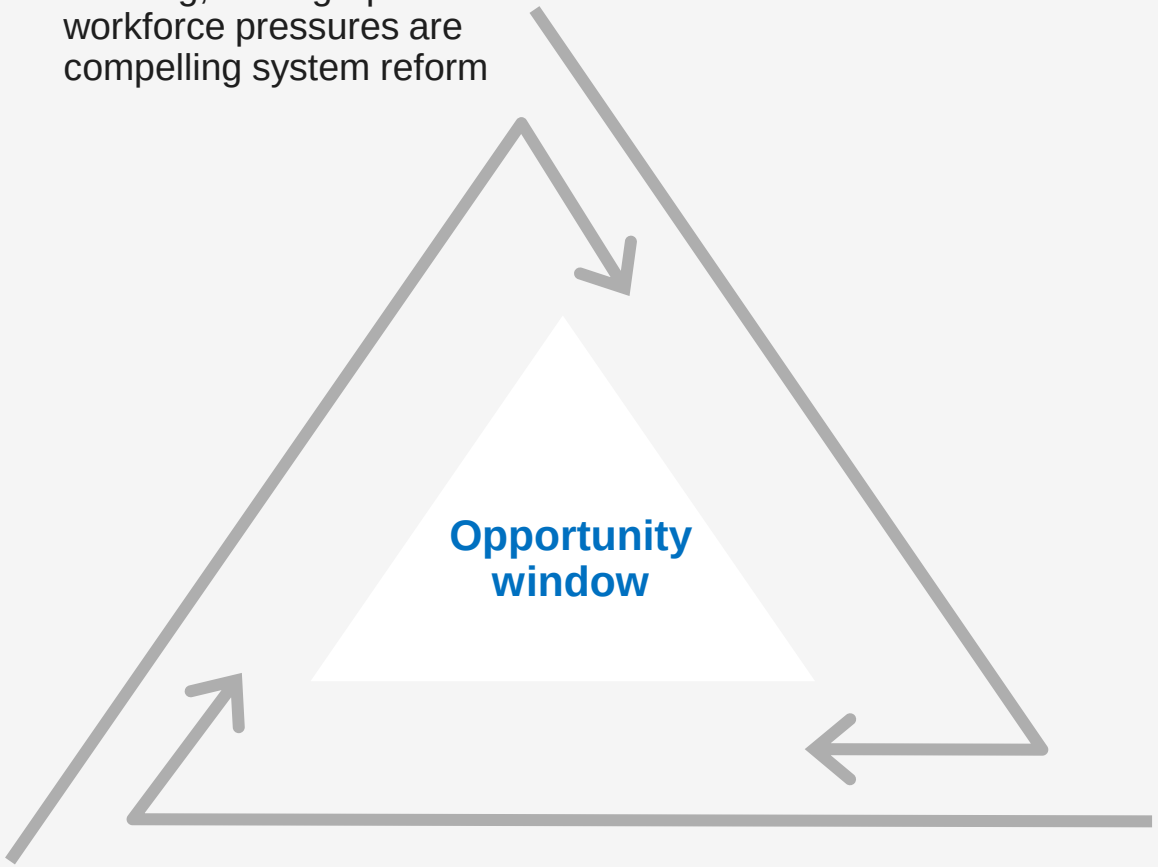
4 Complexity of the solutions
– Requires fundamental changes in the way that healthcare is deployed

5 Sensitive topic
– Emotive area that challenges conventional thinking and behaviour

An unprecedented window of opportunity has opened for meaningful action

Health system disruption

– Funding, demographic and workforce pressures are compelling system reform



Technological innovations

– New technologies are enabling effective analysis and scrutiny of solutions to these challenges

Political & public attention

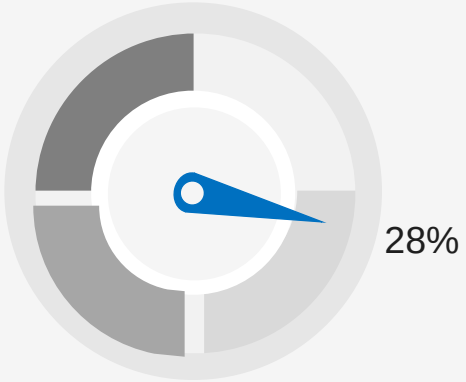
– COVID-19 and broader social justice movements are fuelling the impetus for change

Global evidence points to differences in risk of harm from healthcare

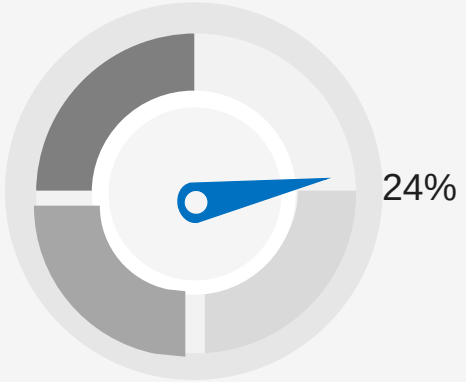
Other patient groups impacted include:

- Other ethnic minority groups
- Socioeconomically disadvantaged
- Learning disabilities
- LGBTQ+
- Elderly

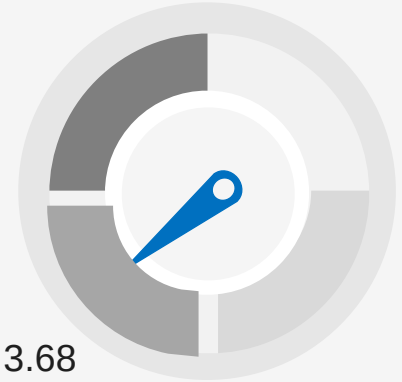
Black patients' increased risk of harm versus white patients



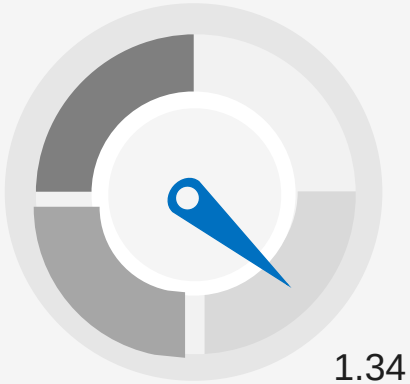
Increased incidence of perioperative PEs



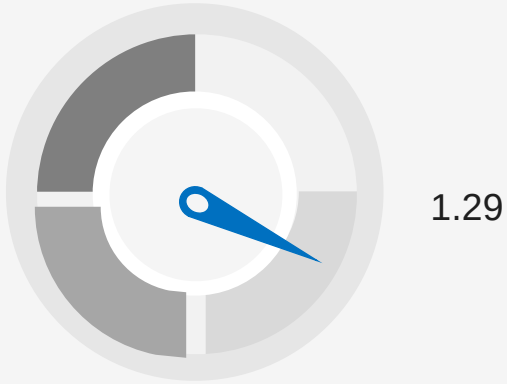
Increased incidence of perioperative sepsis



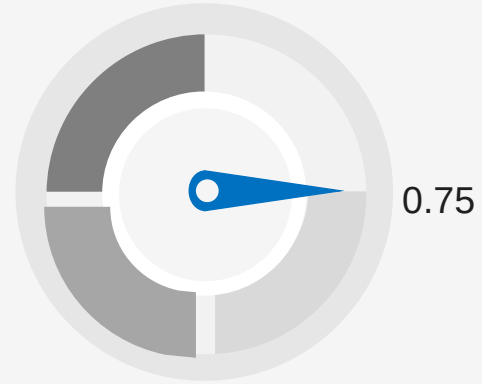
Relative risk of maternal mortality



Odds ratio of Nosocomial infections



Odds ratio of Adverse Drug Event

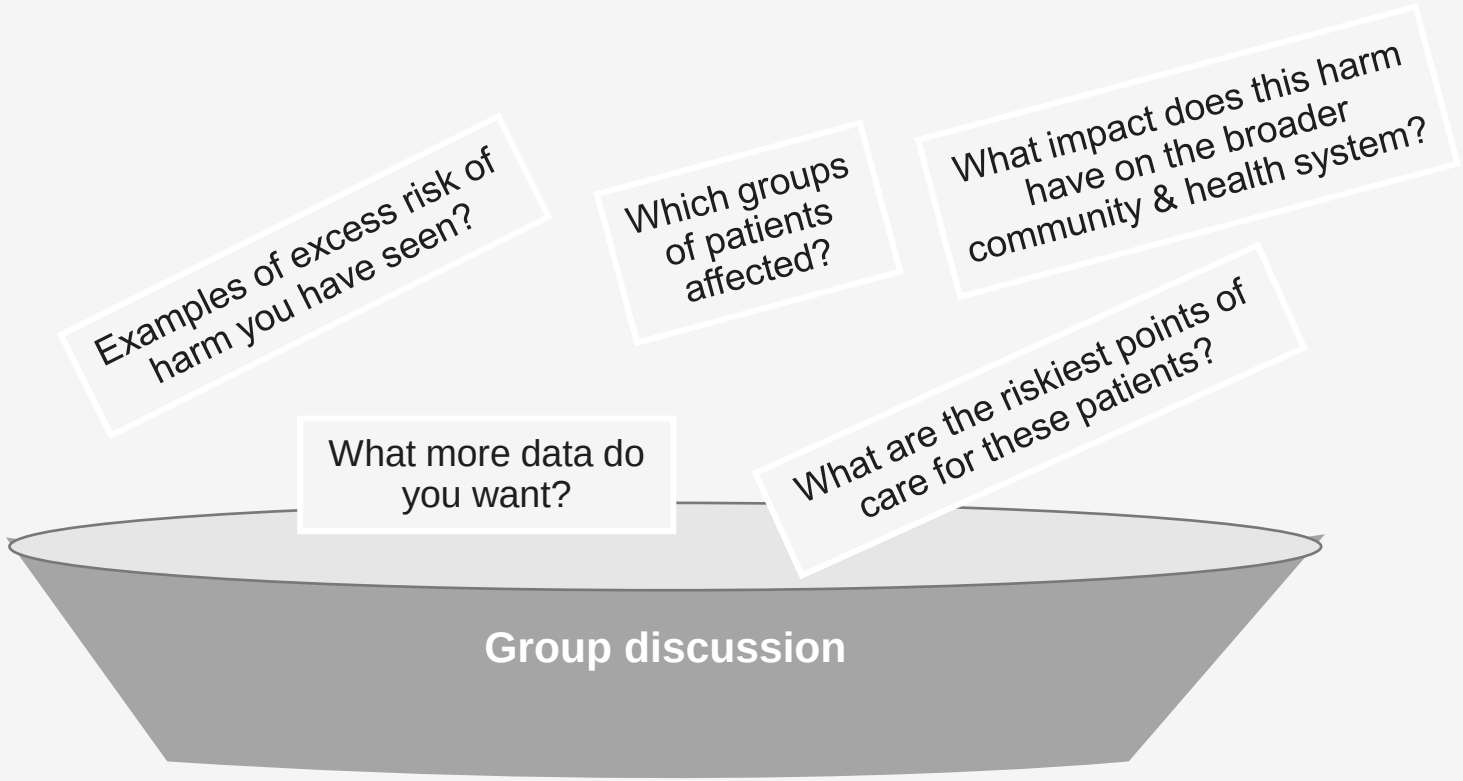


Odds ratio of receiving bystander CPR

Source: Gangopadhyaya A, Do Black and white patients experience similar rates of adverse safety events at the same hospital? Urban Institute, 2021.
Garcia RA et al Racial and Ethnic Differences in Bystander CPR for Witnessed Cardiac Arrest. N Engl J Med. 2022 Oct 27;387(17):1569-1578.
Ly DP et al. Inequities in surgical outcomes by race and sex in the United States: retrospective cohort study. BMJ. 2023 Mar 1;380:e073290. doi: 10.1136/bmj-2022-073290.
Metersky ML, et al. Racial disparities in the frequency of patient safety events: results from the National Medicare Patient Safety Monitoring System. Med Care. 2011 May;49(5):504-10.
MBRRACE-UK 2022
1. Absolute percentage points of higher odds

This symposium's experiences of health inequities being driven by differences in risk of harm

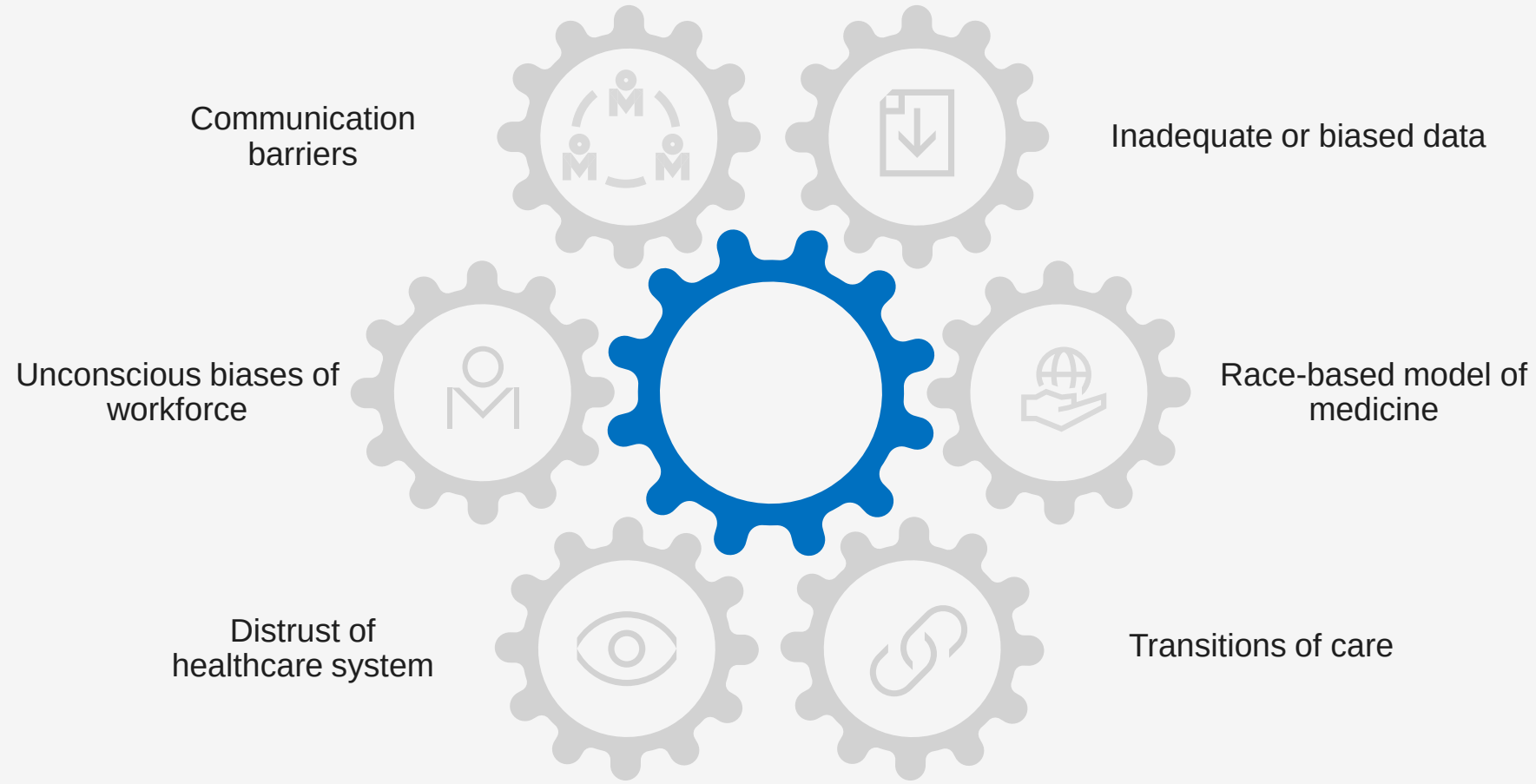
Key questions for audience discussion



Audience discussion → **Feedback to symposium**

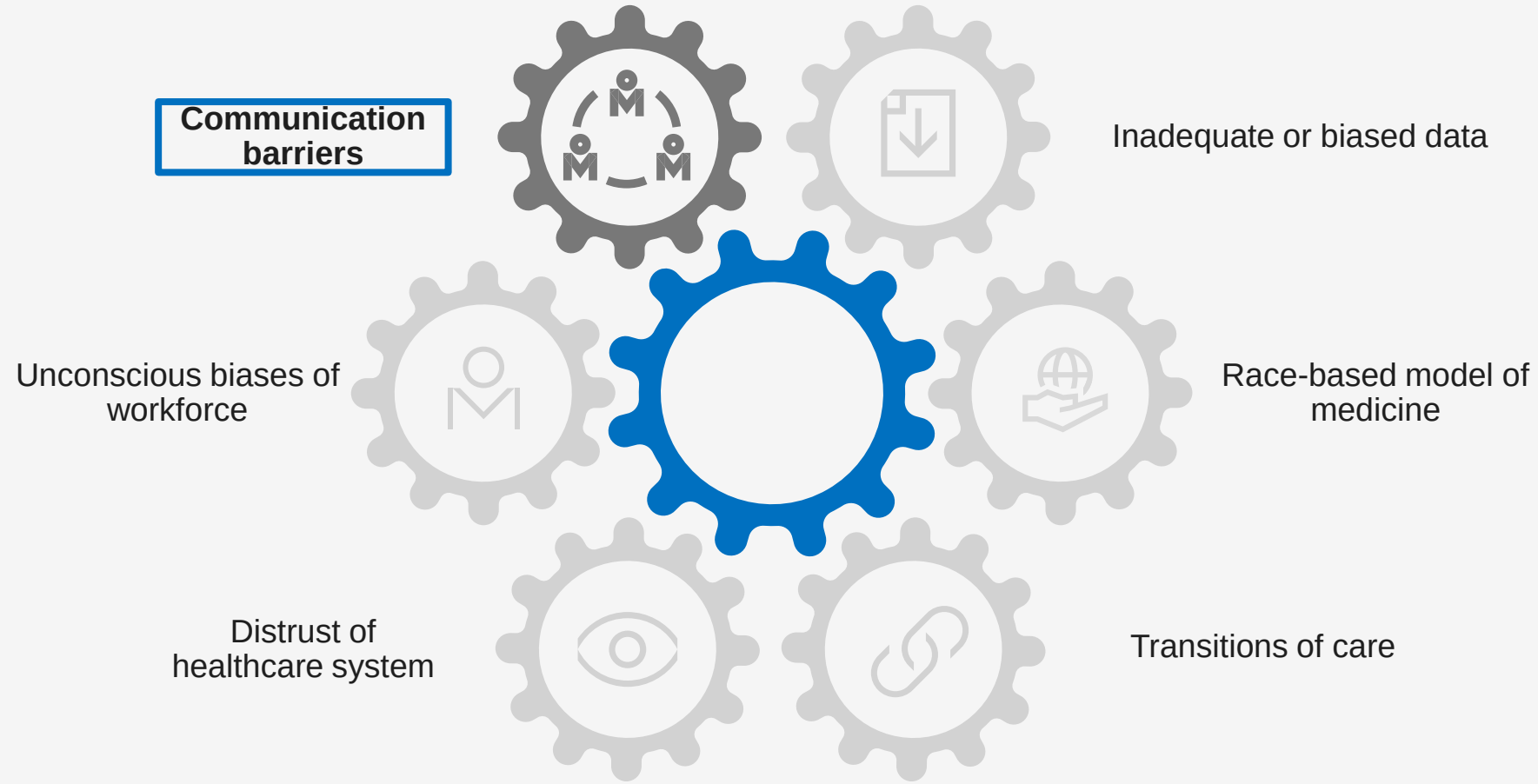
Systematic biases in the design and practice of medicine underpin many of these inequities in patient safety

Mechanisms driving inequities in patient safety



Communication barriers underpin many of these inequities in patient safety

Mechanisms driving inequities in patient safety



Communication barriers represent a clear source of risk of harm for some patients

Hispanic parents with poor English proficiency committed greater dosing errors compared to parents with good English proficiency in paediatric clinics (OR 2.2 [1.7-2.8])

Parents with poor health literacy (but proficient in English) are more likely to commit dosing errors compared to parents with good health literacy (OR 1.4 [1.1-1.9])

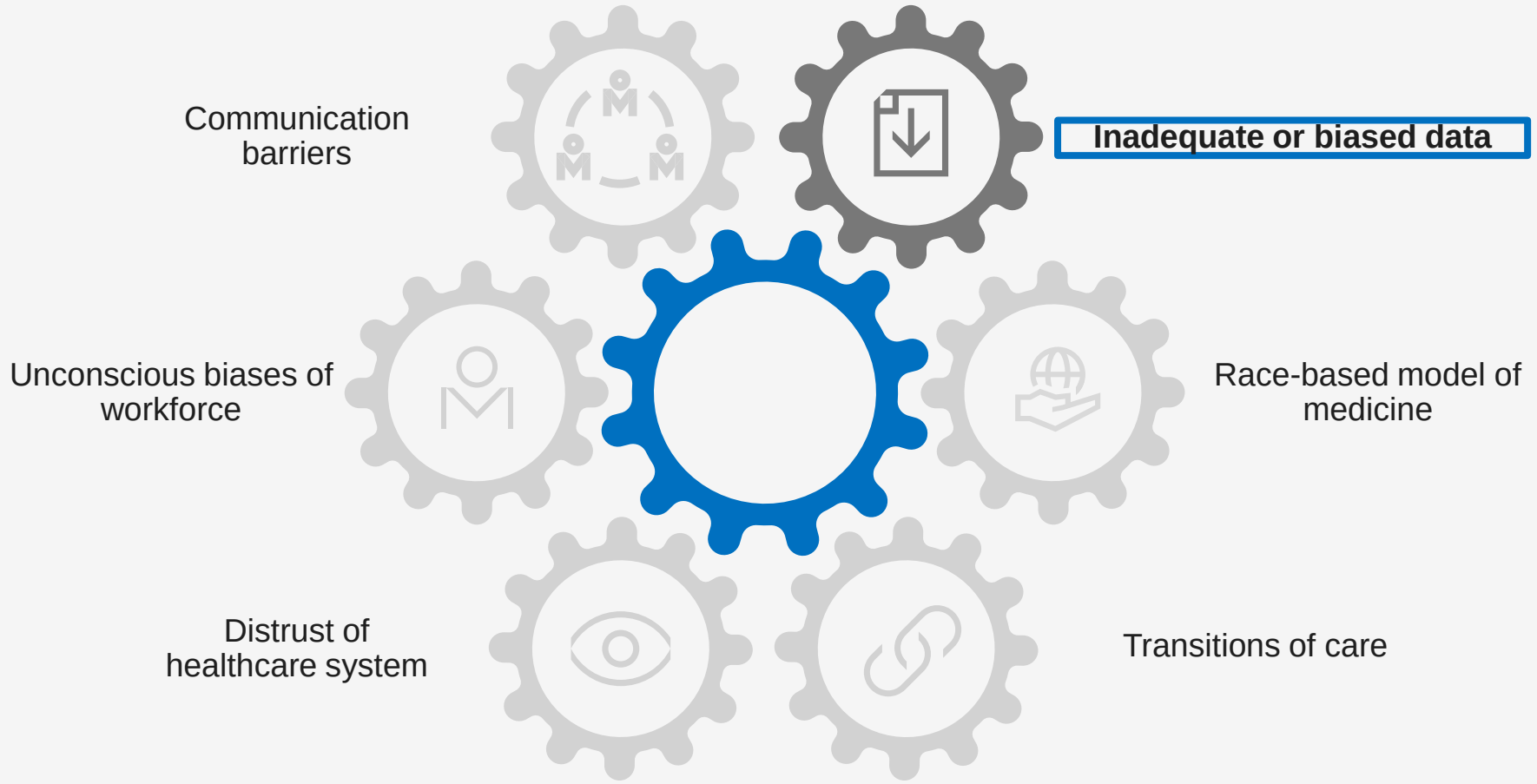
Qualitative review of patient safety events impacting ethnic minority patients in the Netherlands revealed a lack of appropriately translated patient information leaflets was a causative factor

Poor communication is cited by national reports as one cause of the disproportionate harm observed during childbirth for Black versus white mothers

Source: Harris LM et al. Liquid medication dosing errors by Hispanic parents: Role of health literacy and English proficiency. *Acad Pediatr.* 2017 May-Jun; 17(4):403-410
Suurmond J et al. Explaining ethnic disparities in patient safety: a qualitative analysis. *Am J Public Health.* 1010;100 Suppl 1: S113-S117
Kapadia D, Zhang J, Salway S, et al. Ethnic inequalities in healthcare: a rapid evidence review. NHS Race and Health Observatory, 2022.

Inadequate data obscures the size of the issue and can itself drive many inequities in patient safety

Mechanisms driving inequities in patient safety



Inadequate visibility of relevant primary and secondary data exacerbates the issue

Examples

1. Higher risk of intracranial haemorrhage from thrombolysis in black compared to white patients[1]
2. Patients with learning disabilities face barriers to raising concerns around the safety of their care[2]
3. Distinct sociocultural approaches to healthcare by ethnic group breakdown impacting their patient safety

Iceberg effect of patient safety inequity data

Visible, primarily retrospective data

Invisible data

1 Insufficient research cohort diversity

Incomplete knowledge on treatment effectiveness & side-effect profile in diverse populations

2 Under-reporting of safety incidents

Low levels of safety incident reporting in vulnerable populations obscures the true extent of the issue

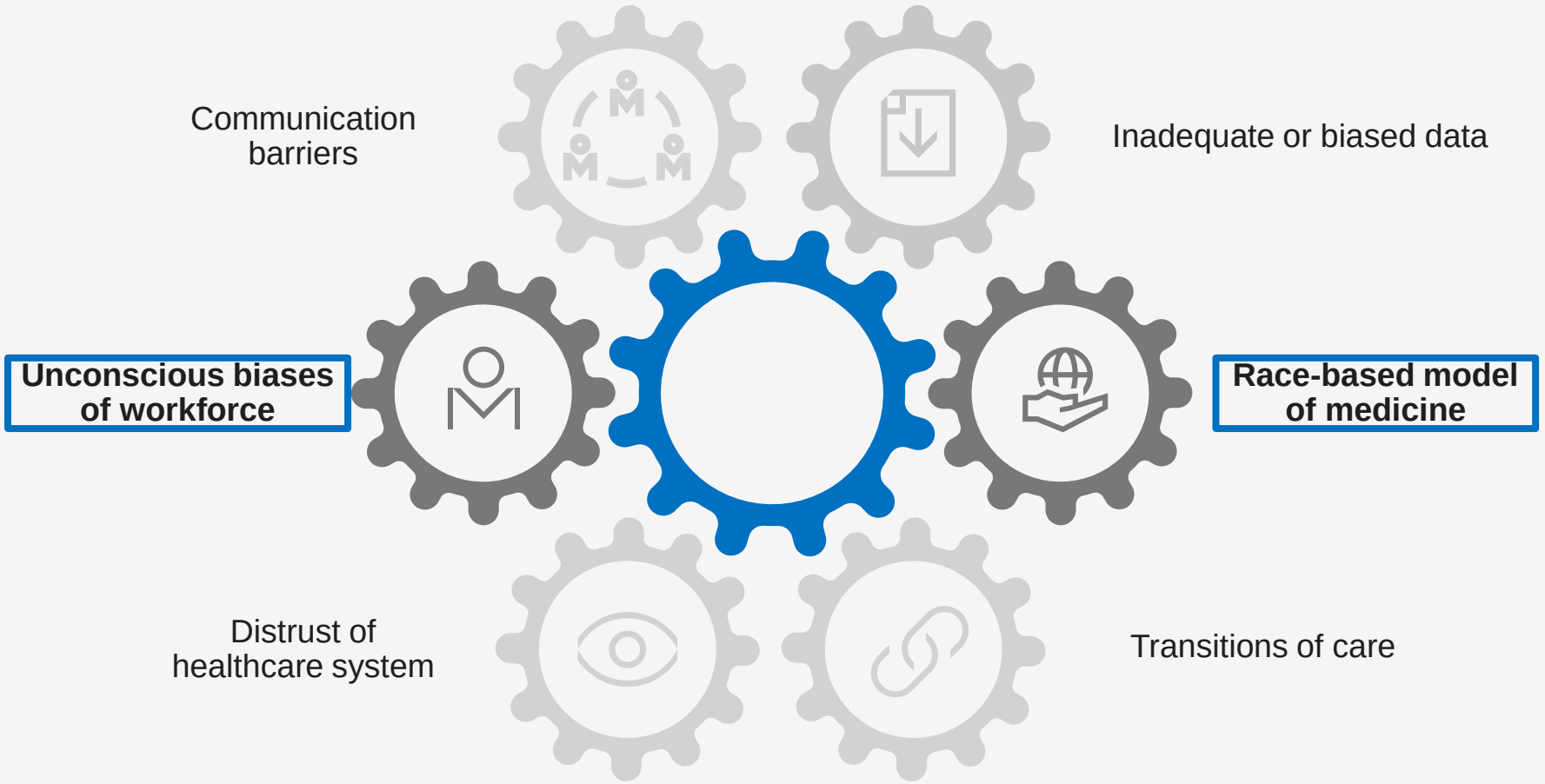
3 Excessively aggregated data sets

Currently collapse distinct characteristics into a single, insufficiently heterogenous group

1.McDowell SE, et al. Systematic review and meta-analysis of ethnic differences in risks of adverse reactions to drugs used in cardiovascular medicine. BMJ2006;332:1177-81.
2. Learning Disability Mortality Review (LeDeR)

Biases in the way healthcare is delivered drives differences in care and safety

Mechanisms driving inequities in patient safety



Unconscious biases are driven by a race-based model of medicine and inadequate healthcare curricula

Workforce biases

Unconscious biases are extremely common and may impact individuals' practice

- e.g. Black patients are ~50% less likely to receive opioid analgesia for abdominal pain

Device biases

Safety critical medical devices may be variably effective dependent upon patient race

- e.g. evidence that some pulse oximeters under-detected hypoxia in Black patients with COVID-19

Race-based medicine

Where race is seen as a determinant of disease rather than the social or structural variables associated with race (e.g. racism)

- e.g. Adjusting interpretation of eGFR leading to delayed renal replacement therapies

Incomplete training curricula

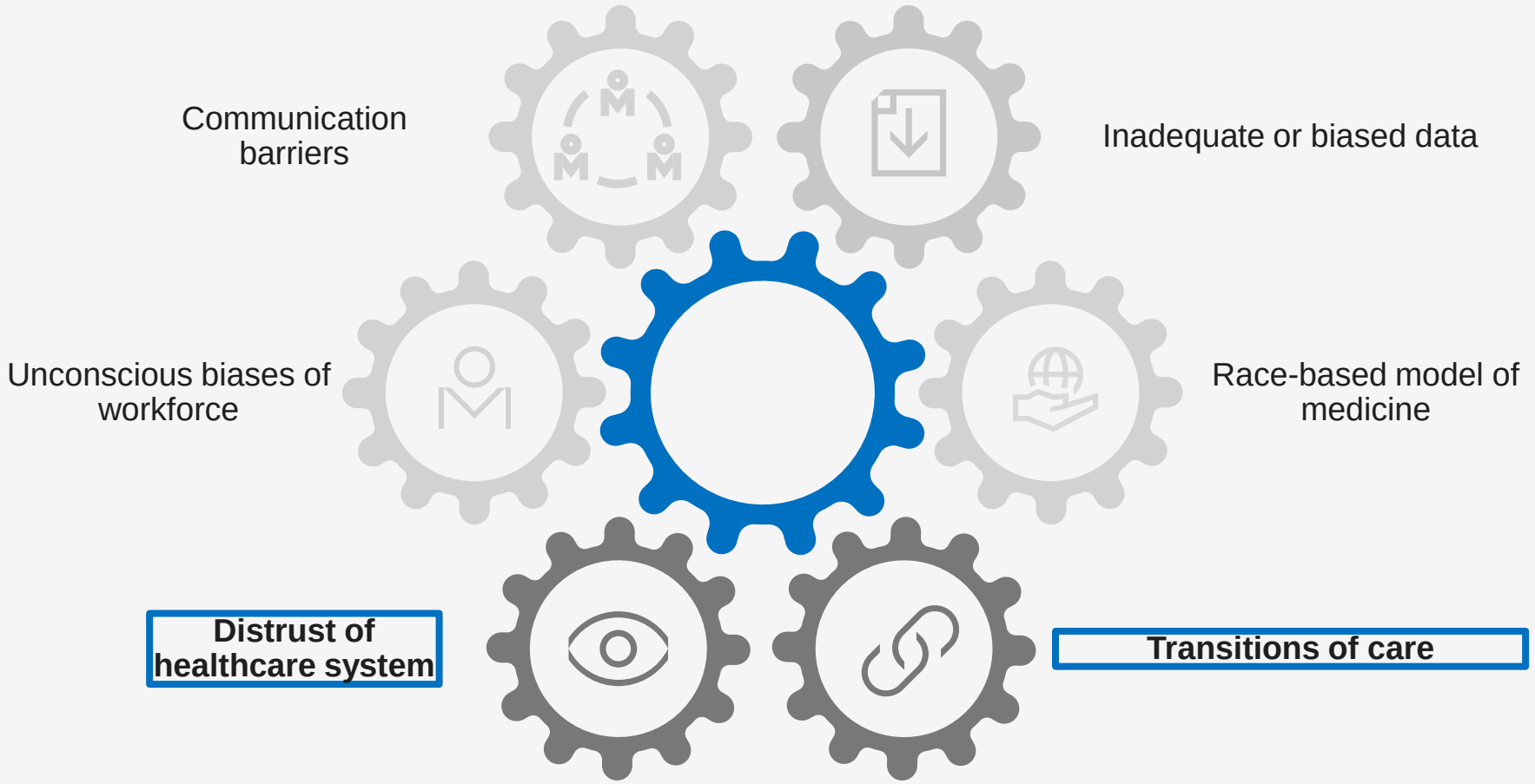
Insufficient education of healthcare professionals on different presentations relevant to a diverse population

- e.g. no images of melanoma on black skin

Sources: Grubbs V. Precision in GFR reporting: Let's stop playing the race card. Clin J Am Soc Nephrology . 2020;15:1201-2
Taylor SC. Meeting the Unique Dermatologic Needs of Black Patients. JAMA Dermatol. 2019 Oct 1;155(10):1109-1110.
Singhal A. et al. Racial-ethnic disparities in opioid prescriptions at emergency department visits for conditions commonly associated with prescription drug abuse. PLoS One 2016;11:e0159224
Sjoding MW, Dickson RP, Iwashyna TJ, Gay SE, Valley TS. Racial Bias in Pulse Oximetry Measurement. N Engl J Med. 2020 Dec 17;383(25):2477-2478.

Poor experience and sociocultural factors can lead to distrust of health systems and riskier care journeys

Mechanisms driving inequities in patient safety



Insufficiently empowering patients and earning their trust can drive disengagement from care journeys and transitions

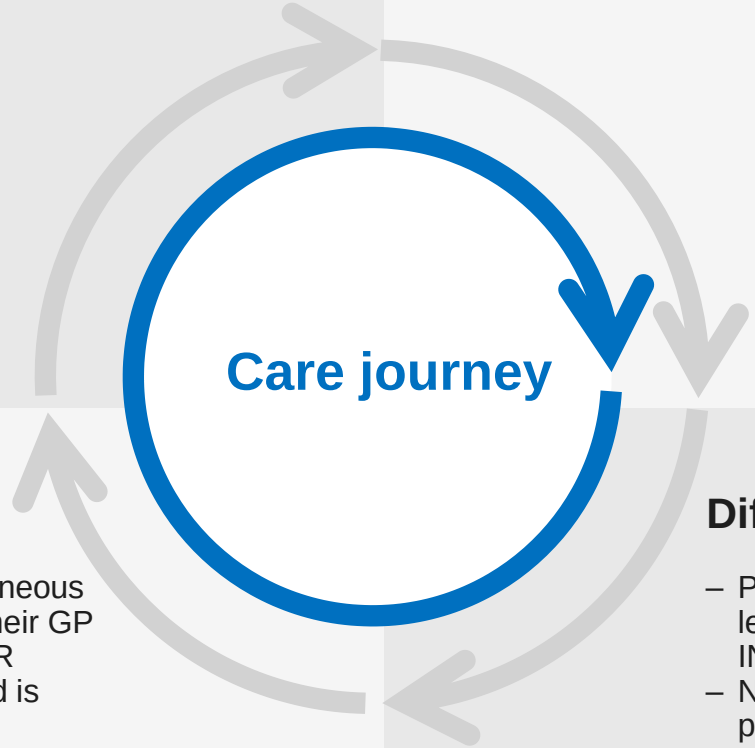
Patient background
- 75 year old male
- Low health literacy
- Newly diagnosed with AF
- Limited community support
- Previous negative interactions with healthcare system

Patient discharged from hospital

- Diagnosed with new AF and prescribed Warfarin
- Poor experience of previous care compounds his historical distrust of healthcare services

Missed INR blood tests

- Asked to arrange GP follow up for blood tests
- DNA for INR blood testing in community due to unpleasant previous blood testing experiences



Patient experiences bleed

- Unaware that their large subcutaneous bruising should lead to alerting their GP
- Undetected dangerously high INR
- Patient experiences GI bleed and is admitted as an emergency to ED

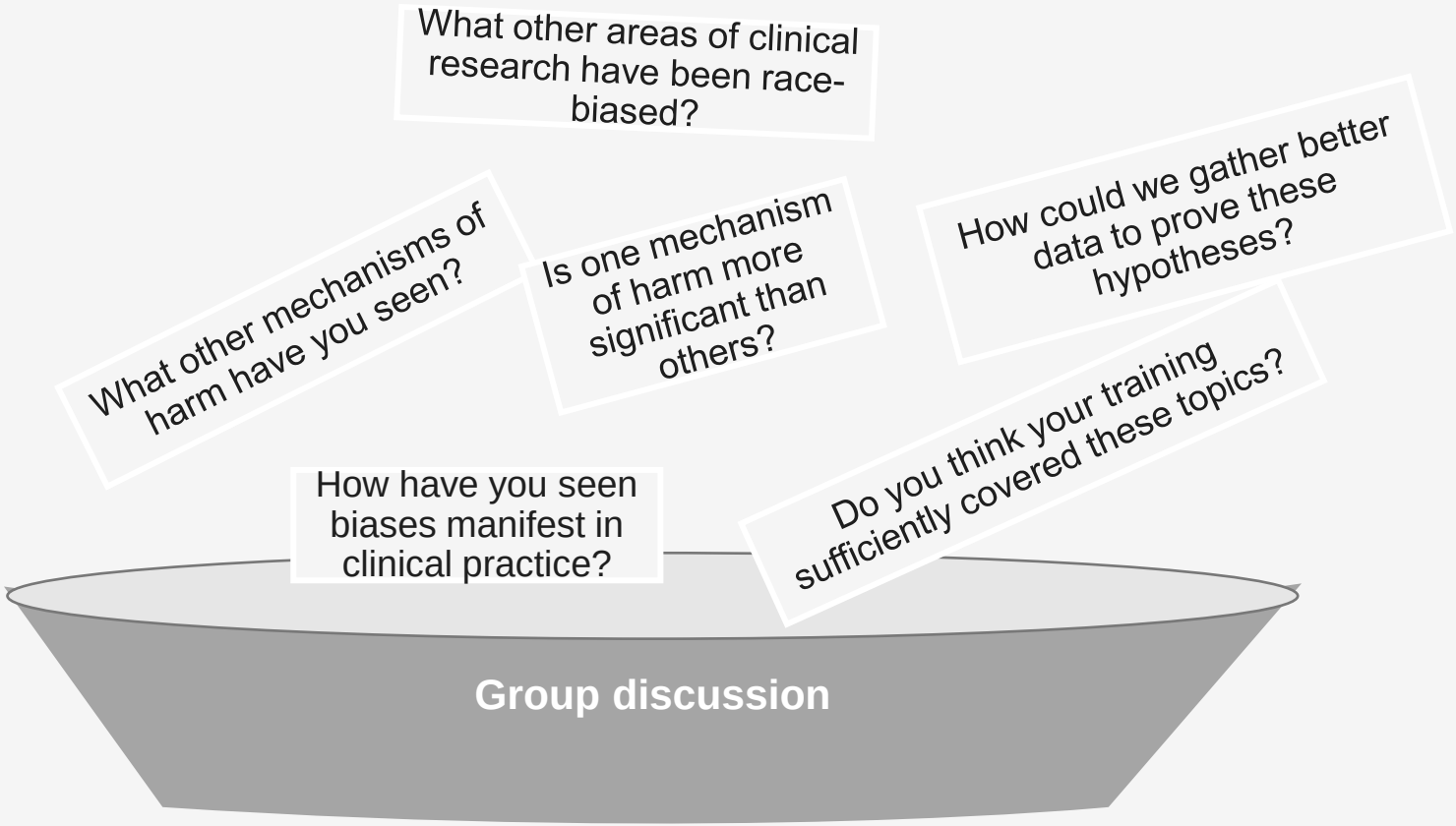
Difficulties navigating system

- Patient is unclear how to respond to a letter reminding them of importance of INR blood tests
- No support to comprehend Warfarin patient information leaflet

Source: NHS England expert group consultations

This group's experiences of the mechanisms behind inequities in patient safety

Key questions for group discussion



Audience discussion → **Feedback to symposium**

Multi-level and cross-system targeting of the driving mechanisms is needed to reduce inequities in patient safety

Examples of solutions

Level	Initiatives	Enablers
 Workforce	Routinely involve community patient advocates in healthcare interactions	Identify and invite relevant advocates to consultations
	Use of culturally and linguistically appropriate shared decision-making tools	Develop a broader and more evidence-based arsenal of tools
 Leadership	Race-conscious approaches to healthcare education	Recruit diverse leadership and challenge colleagues' biases
	Systematised co-design of clinical services and clinical information	Allocate resources towards these issues
 System	Strengthen the empiric basis for understanding these issues and solutions	Ensure unbiased research methodologies, rigorous QI implementation
	Create the right incentives for provider systems	Value or outcome-based healthcare approaches to outline the business case

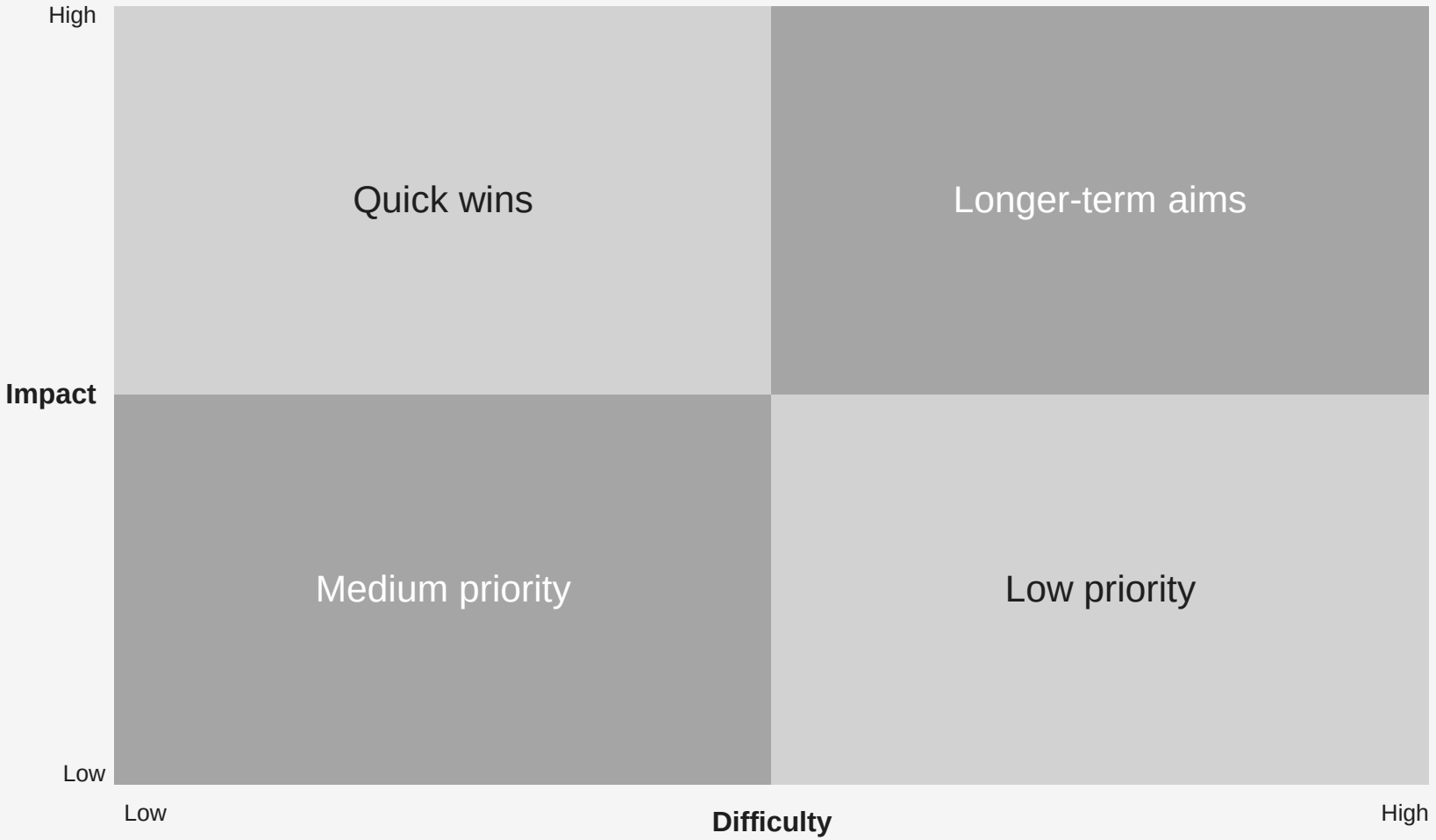
Non-exhaustive

This symposium's ideas on solutions to reduce inequities in patient safety

Questions to consider
- Which level of intervention is the initiative aimed at?
- How to operationalise?
- What resources are required?
- Size of the impact?
- Which patients will be affected?
- How will we know it worked?
- How do we maintain impact?

Impact v Difficulty matrix for solutions

Color key for initiative level	
	Workforce
	Leaders
	System



Audience discussion → **Feedback to symposium**

Patient safety provides a means of addressing all elements of this complex, adaptive problem

The ‘wicked' problem addressed by patient safety practice

1. Patient safety brings together patients, healthcar professionals, leadership and government
2. Patient safety is focused on gathering and analyzing data to inform practice improvements
3. ‘Do no harm’ is regarded as a primary duty of healthcare workers and systems
4. Patient safety regularly designs and implements creative solutions to complex problems
5. Patient safety is familiar with challenging established practices, errors, and biases

The lens of patient safety provides clear lines of action for healthcare itself to reduce health inequities

Key take homes

1. Harm is experienced disproportionately by already disadvantaged patients, which compounds the social determinants of health to widen inequities

2. The mechanisms driving differences in risk of harm include communication barriers, systematic and inter-personal biases and disempowerment of patients

3. Actions at the level of an individual worker, the healthcare leadership and the broader system can generate inter-disciplinary solutions to inequities in patient safety

4. Patient safety represents an exciting new lens through which to reimagine healthcare’s role in reducing health inequities

Opportunity for Q&A

For further follow up please email us at:

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aidan.fowler1@nhs.net

You can read more about this topic in:

Wade C, Malhotra A M, McGuire P, Vincent C, Fowler A. Action on patient safety can reduce health inequalities *BMJ* 2022; 376 :e067090 doi:10.1136/bmj-2021-067090