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Action on patient safety can reduce health inequalities

Providers and health systems should use ethnic differences in risk of harm from healthcare to reimagine their role in reducing health inequalities, write **Cian Wade and colleagues**

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Health inequalities are widening in many high income countries and have been thrown into focus by the covid-19 pandemic.¹⁻⁴ Not only have black, Hispanic, Asian, and other marginalised ethnic groups in many high income countries had disproportionate death rates from covid-19, but non-covid health outcomes have also worsened.⁵⁻⁷ These unfair and avoidable differences in health between population groups are driven by a range of social determinants such as education, poor housing, and unemployment that contribute to social exclusion and disadvantage.¹

When people already negatively affected by unfavourable social determinants of health seek care, healthcare itself may exacerbate health inequalities rather than mitigate them.⁸ One way in which this occurs is when patients experience disproportionate levels of harm from the healthcare they receive. For example, a 2022 review in the UK found that ethnic minority women's experiences of poor communication and discrimination during interactions with healthcare staff may explain some of the stark inequalities observed in maternal health outcomes.⁹ Healthcare may therefore be less safe for some patients than others.

Patient safety is the science and practice of minimising harm and error experienced by patients while receiving healthcare.¹⁰ Harm typically centres on a "patient safety incident" in which a failure in healthcare causes physical or psychological injury to a patient.^{11,12} Most clinicians would recognise patient safety incidents such as administering a drug to the wrong patient as potentially extremely harmful and preventable (box 1), but it is less clear whether the concept of harm should encompass population level health inequities such as more severe diabetic complications in one group compared with another. We focus here on patient safety incidents to emphasise that the responsibility for their avoidance lies directly with the healthcare system and its workforce.

Box 1: Examples of harm from healthcare: patient safety incidents

- Postoperative complications: infection, deep vein thrombosis, pulmonary embolism, haematoma, pressure ulcer
- Adverse events related to medications: administering to the wrong patient, failure to check allergy status, wrong dose, wrong site of administration
- "Never events": wrong site surgery, retained foreign object post-procedure, transfusion of ABO incompatible blood components

- General harms: dehydration, falls, hospital acquired infection, delayed detection and response to clinical deterioration
- Psychological harm: restraint of patients, inadequately treated pain, other negative patient experiences of healthcare

Patient safety incidents are experienced unequally

Evidence is growing that patient safety incidents are experienced unequally. Inpatient safety data from the US indicate that adjusted rates of perioperative pulmonary embolism and sepsis among black patients are 28% and 24% higher, respectively, compared with white patients admitted to the same hospital.¹³ These data add to evidence from a range of high income settings that patients from ethnic minority communities are at increased risk of hospital acquired infections, adverse drug events, and pressure ulcers.¹⁴⁻¹⁶ Socioeconomic disadvantage has been associated with higher rates of death from avoidable causes such as delayed healthcare interventions, as well as delays in promptness of resuscitation after in-hospital cardiac arrest.^{17,18} In addition, patients with learning disabilities have been shown to experience harmful delays in the timely diagnosis of sepsis.¹⁹ Such failures in patient safety lead to higher levels of harm for these patients.

We hypothesise that disproportionate harm from healthcare further compounds the existing social or economic disadvantage of these patient groups, thereby exacerbating health inequalities. Viewing health inequalities through the lens of patient safety presents an avenue for tangible action on health inequalities for which healthcare professionals and systems have a clear responsibility.

Although many patient groups may experience disproportionate harm from healthcare, we focus on harms affecting marginalised ethnic groups across community and hospital care settings in high income countries with a majority white population. This includes, but is not limited to, patients from black, Hispanic, and Asian ethnic backgrounds. The availability of evidence relating to these patient groups enables us to build a compelling case for urgent action that may benefit other patients who experience disproportionate harm from healthcare.

Harms from healthcare exacerbate health inequalities

People from marginalised ethnic backgrounds are more likely to be harmed by healthcare because of interpersonal and structural factors that shape their

care experiences. These factors include ineffective communication during clinical care, implicit biases among healthcare providers, and medical educational and clinical treatment approaches designed around white patient populations as the norm.

Ineffective communication between clinicians and patients can cause harm to any patient. However, those with poor proficiency in the dominant language of the healthcare system, including migrants, are at heightened risk of harm because of medication errors and misunderstanding verbal advice.²⁰ Whereas digital tools could augment written healthcare communication, some may lack access to privacy for video consultations. Negative healthcare experiences and poor communication from providers can deter marginalised ethnic groups from seeking timely medical attention, thereby increasing their risk of deterioration while at home.²¹

Unsafe interactions between providers and patients because of discriminatory clinical care also occur more often among patients from marginalised ethnic groups. Discriminatory care is underpinned by implicit biases of healthcare providers and is perpetuated by structural racism.²²⁻²⁴ For example, a large retrospective cohort study in the US found that black patients were nearly half as likely as white patients to be prescribed appropriate opioid pain relief for conditions such as abdominal and back pain.²⁵ A meta-analysis of data from the UK and other high income countries indicated that black patients are also at twice the risk of compulsory psychiatric detention compared with white patients.²⁶ These examples of psychological harm corroborate the experiences of many black patients with sickle cell disease, who report that stigmatisation and implicit biases affect clinicians' interpretation of their pain and delay administration of adequate pain relief.²⁷

Implicit biases are propagated by medical school curriculums in the US and UK, which are largely designed for a default white patient population and therefore underprepare the health workforce for the diverse populations they treat. For example, dermatological signs have traditionally not been taught on darker skin thereby increasing the risk of missing potentially serious disease in these patients.²⁸ Historical under-recruitment of patients from marginalised ethnic groups into clinical trials may contribute to these problems by limiting understanding of differences in the safety and effectiveness of commonly used medications across diverse patient populations.²⁹ Examples include the greater risk of angioedema from angiotensin converting enzyme inhibitors and intracranial haemorrhage from thrombolysis in black patients compared with white patients.³⁰

Medical school curriculums also tend to consider ethnicity and race as having a clinically relevant biological basis rather than as a social construct.²⁴ This drives flawed assumptions among healthcare professionals about how race should influence clinical decision making. These assumptions are further reinforced by biased, race corrected clinical algorithms. Seeing race, rather than racism, as a determinant of disease increases risk of harm from misdiagnosis or inappropriate treatment, which in turn widens health inequalities.³¹ One example of this is the way in which correcting for ethnicity when estimating glomerular filtration rate risks inappropriately delaying dialysis and kidney transplantation in black patients.³² In these ways and more, harms stemming from implicit biases and structural racism in healthcare exacerbate health inequalities for some marginalised groups.

Adopting a patient safety lens to reduce health inequalities

Framing worsened health inequalities as a product of lapses in patient safety identifies lines of responsibility and enables healthcare providers to tap into lessons from decades of improvement in patient safety to highlight tangible actions to mitigate them (box 2).

Box 2: Selected solutions to reduce inequalities in patient safety through action by individual healthcare professionals, healthcare leaders and system level action

Individuals

- More routine involvement of advocates from patients' communities in healthcare interactions to reinforce communication and ongoing support in care
- Purposeful consideration of how the social background of a patient may dictate risk of harm from healthcare, and adjust management and follow-up plans accordingly
- Use of culturally and linguistically appropriate shared decision making tools to empower involvement of marginalised patient groups in their care and safety

Healthcare leaders

- Support a diverse healthcare leadership that pushes these issues into the consciousness of the workforce and mobilises the system towards meaningful action
- Race conscious approaches to healthcare education with greater emphasis on racism and discrimination (rather than race) as determinants of disease
- Systematised co-design of clinical services and clinical information with members of marginalised patient communities

System level action

- Avoid using systematically biased clinical prediction tools and algorithms unless clear empirical justification for race adjustment has been established
- Strengthen capabilities for stratified analysis of patient safety event reports according to important patient characteristics and the translation of these data into tangible action
- Clinical trials must recruit an appropriately diverse cohort, report relevant social determinant characteristics, and conduct relevant stratified analyses that determine effectiveness and safety of drugs and devices

Identify a clear line of accountability for unequal harms

The first way in which a patient safety lens can help reduce health inequalities is by highlighting chains of responsibility for action. As individuals engaged in clinical decision making, healthcare professionals have the power to make a difference by adjusting their clinical practice to help achieve equal patient safety for all. Meta-analysis of predominantly US data shows that the experience and quality of care among socially disadvantaged patients is particularly enhanced by effective shared decision making interventions.³³ Healthcare professionals should ensure they use culturally sensitive and linguistically appropriate patient decision aids, as these have been shown to significantly improve the effectiveness of diabetes control among marginalised ethnic groups.³⁴ They could also use materials from global patient safety initiatives that aim to empower patients to be active partners in improving their safety during potentially risky healthcare events such as surgery or taking medications.³⁵ Qualitative data from the Netherlands indicate that elements of safety, such as earlier detection of deterioration, could be enhanced by more routine

involvement of relatives or other advocates in clinical care of patients from marginalised ethnic groups.³⁶

Beyond actions at an individual level, we require a strong and diverse healthcare leadership to clearly communicate the message that delivering unequal safety of care represents a failure of a healthcare system. This will generate the impetus and resources necessary to establish evidence based policy that improves the safety of marginalised groups. The Institute for Healthcare Improvement is an example of an international organisation that has prioritised issues relating to inequalities in patient safety and produces actionable recommendations for healthcare providers.^{37 38}

Healthcare leaders must also ensure that health inequalities and implicit bias training are a continuous vertical element of workforce training curriculums so that providers can anticipate and mitigate elements of their practice that may be biased against marginalised groups.³⁹ Decolonising medical school curriculums will promote transformation from a white dominant model of medicine to one that is conscious of how entrenched system biases increase vulnerability to poorer health outcomes among marginalised ethnic groups.²⁴

Improve how patient safety incident data are analysed and used

Understanding of the unequal risks of harm from healthcare across different patient groups—and thus the ability to intervene—is limited by the availability of robust national and local patient safety reporting systems that disaggregate data by characteristics such as ethnicity and socioeconomic status.⁴⁰ Furthermore, studies (including those drawn on here) often aggregate diverse ethnic groups into single categories such as “black patients.” This obscures the heterogenous sociocultural experiences of distinct communities that may influence their experience of healthcare, and therefore limits understanding of the safety issues they face.⁴¹

Although disaggregating data may improve insight into these issues, health systems must still be capable of enacting measurable improvements. The World Health Organization’s global patient safety action plan explains how this could be achieved through innovation in digital infrastructure, including by using patient safety incident data to build risk prediction models that identify the patients at greatest risk of harm.⁴² Risk prediction models linked to electronic medical records could support healthcare professionals to identify patients at risk and modify their practice to mitigate heightened risk of harm. For example, in one large teaching hospital in the UK, including maternal ethnicity in the first trimester risk assessment for placental dysfunction (with high risk patients given aspirin, serial growth scans, and offered induction of labour at 40 weeks) was associated with a decline in perinatal death rate among black, Asian and other ethnic minority women from 7.95/1000 births to 3.22/1000, which was not statistically significantly different from the rate in white women (2.55/1000 births).⁴³

Lessons from global movements in patient safety

Patient safety has seen substantial progress over the past two decades, largely because of patients highlighting unsafe care and advocating for system improvements.^{44 45} However, this forewarns of potential barriers that must be overcome as we seek to address the challenge of inequalities in patient safety. Marginalised ethnic groups are more likely to have implicit distrust of healthcare systems, and this may reduce their likelihood of raising safety concerns.^{46 47} Consequently, there can be a systematic tendency for patient safety investigations to be blind to the mechanisms of harm that disproportionately affect these patients. In the same way,

subsequent recommended changes could be less effective in reducing the actual risk of harm.

Equity in patient safety will therefore require systems to empower all patients with the information and means to speak up on safety issues encountered both in hospital and while self-managing disease in the community. This could be aided by healthcare organisations recruiting people with lived experience as patient safety advocates to provide mentorship and a voice to patients from marginalised ethnic groups.⁴⁸

Conclusions

Risk of harm from healthcare is experienced unequally and compounds existing vulnerabilities to poor health outcomes, ultimately exacerbating health inequalities. Understanding health inequalities as failures in patient safety may help assign accountability for mitigating these inequalities and provides a body of experience from which to draw lessons. Resource constraints, doubts around technical feasibility, and concerns regarding the capacity of the workforce to improve their practice may be barriers to progress. Indeed, despite years of acknowledgment of racial disparities in quality of healthcare, little progress has been made.⁴⁹

Inequalities in healthcare are partly determined by widespread structural racism across many institutions, so solving these issues will rely to some extent on achieving progress on equality across the whole of society.⁵⁰ However, recent intense public scrutiny of racial social injustices may have opened an opportunity to deliver meaningful change.⁵¹ Although we have focused on marginalised ethnic groups, many of these findings are likely to be applicable to other marginalised groups and enable improvements in safety for all. Improving patient safety represents a real opportunity to reimagine the role that healthcare can play in reducing health inequalities.

Key messages

- Patient safety incidents experienced disproportionately by marginalised patient groups exacerbate health inequalities
- Biases embedded in the healthcare system, its workforce, and medical practice drive these differences in risk of harm and can be used as an entry point for solutions to these issues
- Viewing health inequalities through the lens of patient safety identifies an additional line of action for which healthcare professionals and systems have a clear responsibility

Contributors and sources: CW leads national strategic work on understanding and reducing health inequalities in patient safety. AMM is an academic trainee working on the role of the healthcare sector in improving population health and tackling health inequalities. PM has extensive experience of patient safety advocacy and is a member of the patient advisory forum at Health Education England. CV has over 35 years of experience researching the causes of patient harm and methods to improve healthcare safety. AF is national director of patient safety in England, with overall national responsibility for patient safety. All authors participated in discussions on the conceptual framework of the article. CW, AMM, and PM performed the consultations with patient groups, health and social care organisations, and leaders that informed elements of the article. All authors wrote and reviewed the article. CW is guarantor.

Patient and public involvement: PM contributed as an author. This article also involved extensive consultations with stakeholder groups that included patient groups and individuals who had experienced harm. These involved representatives of patient groups who may experience health inequalities, including those from inclusion health and marginalised ethnic backgrounds. These consultations informed our analysis of the causes of disproportionate harm and potential solutions highlighted in this article. The groups are listed in the acknowledgments.

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