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Social bias, discrimination and inequity in healthcare: mechanisms, implications and recommendations

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Learning objectives

By reading this article, you should be able to:

- Explain the central concepts underlying social biases and their negative effects on healthcare outcomes.
- Describe approaches to the reduction of explicit and implicit social biases and their associated risks.
- Apply an understanding of social biases to your personal interactions with colleagues and patients.

Key points

- Social bias is at the core of racism, misogyny and other forms of discrimination based on sexual orientation or religion.
- Social bias can be defined as discrimination for, or against, a person or group, or a set of ideas or beliefs, in a way that is prejudicial or unfair.
- Social bias may operate consciously, which is known as explicit bias, and unconsciously, which is known as implicit bias.
- Healthcare outcomes are substantially influenced by social biases despite many of the best intentions of healthcare practitioners, as social bias often operates unconsciously.
- Education can be effective against explicit social biases, but counteracting implicit biases requires a more long-term reflective approach and supportive systemic structures.

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In high-intensity work domains, such as anaesthesia and intensive care, high-quality decision-making is critical for achieving good outcomes for patients. In a previous article in this journal, we considered how cognitive biases influence clinical reasoning and decision-making during technical tasks, such as diagnosis.[1] In this paper, we consider social bias and the effects of discrimination in healthcare. We define *social bias* as discrimination for, or against, a person or group, or a set of ideas or beliefs, in a way that is prejudicial or unfair. Social bias often involves consciously or unconsciously stereotyping others and behaving in a way that disadvantages a person or group or advantages another. Social bias, both implicit and explicit, is at the core of racism, misogyny and

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discrimination based on sexual orientation or religion, and such biases may operate between individuals or at the level of the institution.

'If people are not aware of inequity and do not act to constantly resist oppressive norms and ways of being, then the result is residual inequity in perpetuity'.[2] A first step in addressing the problem of social bias is acknowledging its existence and reflecting on one's own position and potential biases. Therefore, in this overview, we consider the impact and nature of social bias, with an emphasis on the aspects relevant to the everyday practice of individual healthcare practitioners, including strategies to manage and reduce it and thereby promote culturally safe practice.[3–8]

Impact of social bias in healthcare

At the level of healthcare systems, structural racism has led to organisational and political constructs that have disadvantaged racial or ethnic groups both historically and in the present day, creating and maintaining inequities in health.[9] At a personal practitioner level, social biases include discrimination on the grounds of ethnicity, culture, religion, gender, sexual orientation, age or body habitus.[10,11] See Box 1 for examples of social and institutionalised bias.

Social bias affects relationships and interactions at many levels within the healthcare environment, between co-workers in multidisciplinary healthcare teams, between trainees and supervisors and between clinicians and patients.

Box 1
Examples of discrimination relevant to healthcare.

In New Zealand, Māori people experience significant inequalities with lower life expectancy at birth, 7.3 yrs less than non-Māori people. Māori people have less access to and poorer care throughout all healthcare services, which is reflected in lower levels of investigations, interventions and medicine prescriptions.[8]

Māori patients are less likely to get understandable answers to important questions asked of health professionals, have health conditions explained in understandable terms or feel listened to by doctors or nurses.[8]

A study by Files and colleagues analysed how 321 speakers were introduced during grand rounds at the Mayo Clinic. They found that when women introduced speakers, nearly all used professional titles for both men and women. However, when men introduced speakers, there was only a 50:50 likelihood that a female speaker would be introduced as a doctor.[12]

A survey of anaesthesia trainees in Australia and New Zealand showed that male trainees were more likely to have performed a greater number of procedures for their training level and perceived themselves as requiring only remote supervision compared with their female counterparts. This result suggests a potential bias against women in gaining access to procedures.[13]

Black and Hispanic patients are significantly less likely than Whites to receive pain medications, even for acute injuries, such as bone fractures. When they do receive analgesics, they are at lower dosages than White patients despite having higher pain scores.[14]

Social bias between health practitioners may mean some members of the team are privileged or disadvantaged in terms of opportunities for leadership, gaining experience or career advancement. In clinical decision-making, some members of the team are listened to whilst others are ignored. Within teams, where effective teamwork requires mutual trust and respect, social bias can impede team function, for example where some members are not heard or are discouraged from speaking up with their concerns. In extreme cases, social biases may result in workplace harassment, racist abuse or other overt discrimination. When such social biases become commonplace or normalised within an institution or workplace, they comprise institutionalised bias, at which time such biases have wider implications, influencing policy formation, operational decisions and everyday institutional functioning.

In the interaction between healthcare practitioners and their patients, social bias, both unconscious and conscious, can influence the quality and effectiveness of the care provided. Clinical reasoning and decision making may be influenced by implicit racial stereotyping and prejudicial assumptions. Unconscious prejudicial or negative stereotypes may be expressed as off-hand remarks, banter or casual racism. To people on the receiving end, these remarks are neither unconscious nor casual and can be substantially harmful. Patients who experience such discrimination are likely to disengage from the healthcare system, creating further barriers to access and care. The result is differential healthcare, health inequities and poorer outcomes for certain groups of patients.[8]

Nature of social bias

Corresponding to the unconscious and conscious cognitive processes of the human brain, social biases are divided into implicit biases and explicit biases, respectively.[15] Implicit social biases involve fast unconscious, emotive and automatic responses, often relying on pattern recognition. Although the human brain has an innate ability to differentiate similarities and differences in the world, the negative associations involved in implicit social bias are not innate and can be changed by positive experiences.[1] Explicit social biases involve conscious attitudes, beliefs and knowledge, and although such explicit biases may be reinforced by our experiences, we are also able to consciously resist such stereotypical thinking.

One well-known attempt to quantify implicit social bias is the Implicit Association Test (IAT). Developed in 1998 by Drs Mahzarin Banaji and Anthony Greenwald, the IAT is intended to provide feedback on an individual's biases for the purposes of self-reflection (available from https://implicit.harvard.edu/implicit/).[16] Several versions of the test are available for different domains of implicit social bias, including mental illness, age and weight, but perhaps the most extensively studied is the IAT on race. To determine implicit race bias, the IAT asks a test participant to select pairs from pictures of White and Black people and 'good' or 'bad' words, then alternates the pairings whilst measuring reaction times. For example, in one part of the test, participants must associate good words with White people and bad words with Black people, then good words with Black people and bad words with White people.[17] The test works by taking advantage of the way the brain processes different information at the conscious and unconscious levels. Pairs that are

unconsciously associated for the participant can be rapidly selected using the brain's unconscious processing, whilst selection of those pairs that are less well associated requires slower conscious processing to complete. The participant's unconscious associations can be detected by the IAT even in individuals who purport egalitarian views. The IAT on race has been completed more than 4 million times, and approximately 75% of participants demonstrate a White preference, that is, an association of White people with goodness and Black people with badness. The creators of the IAT are careful to point out that a biased IAT score need not imply that the person acts in a biased way towards others because of the ability of the conscious mind to override stereotypes. However, such results do appear to yield insight into why eliminating bias from healthcare may be so difficult despite high levels of conscious motivation and egalitarian values reported by healthcare practitioners.

Social bias and health outcomes

Many current events around the world continue to be influenced by explicit social biases and discrimination based on race, sex, sexual orientation or religion. Education is often aimed at reducing such biases, and there is strong evidence that in certain domains, education has been successful in reducing rates of explicit social bias, including in healthcare. For example, university medical schools are typically leaders in the ethical and equitable provision of healthcare, primarily through the supply of graduates instilled with these values, and at least in modern times, equity has featured as an overt and strategically important element of medical school curricula.[18] Over the years, societal norms in many countries have also become more progressive, as have the policy guidelines of professional healthcare colleges.[19] A consequence of such formal and informal education may be seen in the results of surveys of US physicians, in which opposition to homosexual applicants to medical school was shown to reduce from 30% in 1982 to 0.4% in 2017, whilst discomfort with referring patients to homosexual physicians reduced from 46% to 2% over the same period.[20] As explicit social biases involve conscious cognitive processes based on knowledge and beliefs, it is perhaps not surprising that education can be effective in reducing them.

However, education alone is much less effective in changing implicit social biases because such biases operate unconsciously. For example, when asked, healthcare practitioners are likely to claim that they treat all their patients equally and may believe that their behaviour is unaffected by negative stereotypes.[7] Despite this claim, a 2002 national survey in the USA found that, in comparison with White Americans, Hispanics and African Americans were 14 times more likely to believe that they would receive better healthcare if they were a different ethnicity, and they were nearly twice as likely to believe that they had been treated with disrespect during a healthcare visit.[21] Neither are the effects of social bias limited to patients. A recent survey of 19,044 healthcare staff in the UK found that at the time of the survey, 71% of White staff had taken up the COVID-19 vaccination compared with only 37% of Black staff; this finding is despite the fact that healthcare staff are actively encouraged to be vaccinated and should have few, if any, difficulties in accessing the vaccine.[22] Although the mechanisms underlying vaccine hesitancy are complex, evidence suggests that hesitancy largely results from a lack of trust and the effects of disinformation, even among healthcare workers. Open communication about the risks in a non-stigmatising way from members of the same cultural or religious group as those members who are hesitant can be effective in improving vaccination rates, and it also demonstrates that overcoming hesitancy is not simply about facts but is also about group identity.[23] The unconscious nature of implicit social biases means that healthcare practitioners may be unaware that these biases are affecting their daily interactions with fellow staff and patients, with real consequences for patient care.

There is considerable variability in healthcare outcomes across whole populations throughout the world, with some of the poorest outcomes typically occurring in minority groups. A recent large-scale study of 22 million healthcare encounters across 18 states in the USA compared the top and bottom deciles of a variety of healthcare outcomes. It demonstrated a 2.1-fold difference in mortality rates overall and a 2.3-fold difference in mortality rates for inpatient acute myocardial infarction, after patient-based risk adjustment.[24] These rates of variability in outcome exceed the widely publicised variation in healthcare costs between US healthcare providers.[25] Whilst such findings from the USA are some of the best known, similar results on variability and adverse events have been reported in many countries. In New Zealand, 12.9% of patients in hospital experience an adverse event, 35% of which are considered highly preventable and 15% of which lead to permanent disability or death.[26] These figures are concerning, but Māori patients in New Zealand hospitals experience significantly higher rates of adverse events during their care than non-Māori patients (14% *vs* 11%, respectively; $P=0.01$), and this effect persists after controlling for age and socio-demographic factors.[27] However, whilst these unacceptable disparities in healthcare outcomes are widely acknowledged, the problem remains. Ultimately, providing equitable treatment to all patients will not only increase the quality of healthcare, but also, by reducing suboptimal outcomes and the need for further treatment, improve the efficient use of limited healthcare resources.[24,28]

Recommendations to reduce social biases in healthcare

Although considerable data exist that document the deficits in healthcare delivery, there is less evidence available to guide remedies or to judge their effectiveness. However, drawing on four evidence-based reviews, we have synthesised the primary types of interventions recommended to reduce social bias in healthcare (Table 1).[4–7] The recommendations in Table 1 span from individual-level initiatives to policy-level initiatives. Educational initiatives do appear at the individual level, which are known to be more effective against explicit social biases than implicit ones. However, it is also worth noting Initiative 3 in Table 1, which suggests consciously practising egalitarian values when engaging in clinical encounters with underprivileged groups in order that these values become habitual. Once habitual, such a way of interacting with patients could potentially counter or overwrite implicit social biases and counter explicit ones. Table 1 also contains some examples of how such approaches may be applied in anaesthesia and healthcare, although these examples are by no means exhaustive.

Unlearning dominant discourse or challenging the prevailing influential views around how and why inequities exist, and inviting input from, and partnership with, the groups

Table 1 Interventions intended to reduce social bias at multiple levels within healthcare. Synthesised from reviews by authors Hassen and colleagues,[4] Zestcott and colleagues,[5] Byrne and Tanesini[6] and Marcelin and colleagues.[7] *These examples are not exhaustive.

Level of intervention	Strategy	Examples relevant to anaesthesia and intensive care*
Individual	Ongoing training on cultural safety, minimisation of stereotyping and implicit bias; critical reflection on knowledge, attitudes, beliefs and practice as it pertains to diverse patient care	Sit down with patients to flatten hierarchies before engaging in respectful communication and practised listening
Interpersonal	Take opportunities during clinical encounters with underprivileged or stereotyped groups to practise egalitarian values such that these values become habitual; intentionally diversify experiences with cultural humility and curiosity; develop and implement guidelines on how to address racist or prejudicial comments; seek mentorship and collaboration with underprivileged or stereotyped groups	Checking whether patients have understood care instructions should go beyond simply asking if they understand; it should also consider whether, in their particular circumstances, the patient is happy and able to follow instructions; if difficulties are discovered, care may need to be negotiated
Community	Develop ongoing, meaningful collaborations with underprivileged or stereotyped groups in the community; strengthen links for such groups to primary and further care facilities	Arrange visits to the hospital for local high school students who may not have considered a career in anaesthesia or healthcare, to introduce them to clinical roles and technology and to provide an opportunity to participate in simulation
Organisational	Leadership commitment to culture change within organisation, including appropriate resources; develop guidelines on how to address racist or prejudicial comments, and implement throughout organisation; ensure core leadership demonstrates and supports diversity; meaningful engagement and training for change; incorporate anti-bias efforts into quality improvement initiatives	Whether the institution is performing adequately in terms of serving the community should be judged by representatives of the community, not by hospital committees or management; consider equity during quality and safety reviews – how can the larger negative effects in minority groups be actively countered?
Policy	Recruit and retain diverse staff; involve diverse staff in policy and decision-making; develop a long-term plan for change	Assure racial and sex (and other) diversity on anaesthesia trainee selection committees; reducing bias, this approach will provide role models for new applicants

against whom social biases are perpetuated may help to navigate pathways forward together. Individuals may be powerless to deliver equitable care if all the systems they work in are designed for and advantage the dominant culture.[29] For initiatives at the individual and interpersonal levels to be maximally successful and sustainable, they need to operate within a system that supports and reinforces them at the community, organisational and policy levels.

In recent years, the approaches outlined in Table 1 have become known collectively as the 'cultural safety' approach, which attempts to promote healthcare in a way that does not bias against minority groups. Cultural safety in healthcare requires clinicians to examine their own biases and to deconstruct the power differentials that exist between clinicians and patients that may undermine genuine connection and engagement.[30] Importantly, cultural safety should be seen as distinct from the earlier concept of cultural competence—the primary distinction being that when using cultural safety, the adequacy (or competence) of care is determined by people who receive the care, not by the people who provide it.[8] 'Cultural safety is an outcome of health practice and education that enables safe service to be defined by those who receive the service'.[19] Becoming aware of personal biases and addressing them in terms of the way you interact with others can be a lengthy and ongoing reflective process, largely because being a member of a dominant culture can effectively blind you to the privileges and power differentials that are part of that cultural group. Jowsey has described this reflective process in terms of a journey through three distinct zones of increasing depth (Table 2).[3] The first, surface-level zone, is where individuals and healthcare organisations typically start, and it is also the zone most consistent with a cultural competence approach. Failing to consider what lies beyond the first zone risks reinforcing stereotypes, as the first zone may focus on superficial differences and may do so without examining the underlying causes of inequity.[3,8] Cultural safety asks us to continue the journey into the deeper zones. However, it does not require practitioners to become 'competent' in the culture of others, as in a cultural safety approach the concept of competence is not defined by those in power but by those in the minority group in question. Table 2 describes the remaining stages along the journey of cultural safety in healthcare and may be used as a kind of road map for this process. Table 2 also contains the common risks at each stage of this journey, which should be considered pitfalls to avoid. Although much work to develop and promote cultural safety has taken place in Australia and New Zealand, its concept and lessons are applicable to the reduction of healthcare inequities in any country. Therefore, in Table 3, we include a list of helpful courses, instructive videos and other

Table 2 Journey through the three zones of cultural safety, adapted from Jowsey.[3]

Depth of cultural safety	Definition	Examples	Risks
Surface cultural safety zone	Deployment of culturally specific knowledge	Provision of culturally appropriate services, such as an interpreter or prayer spaces in hospitals; greeting people in their native language; and being aware of certain taboos and cultural practices, for example, in the drawing and use of a patient's blood	May lead to overly simplistic interpretations of culture and in fact perpetuate stereotypes, hence reducing trust; surface-level approaches often do not examine underlying causes of inequity
Bias twilight zone	Supporting people to increase self-awareness of their own biases with a view to addressing health disparities	Moves away from learning specific cultural traits and uses more reflective strategies to understand the impact that individuals have on others; uses collaborative partnerships with indigenous people	With increasing ethnic and cultural diversity, biases and racism move beyond non-indigenous and indigenous paradigms; important to avoid tokenistic engagement with cultural groups
Confronting midnight zone	Realising that individuals live in relationships with others in the larger world and reflecting on the power, privilege and inequities in those relationships	Slow development of an awareness of cultural safety, which allows an understanding of existing power structures, including healthcare providers, and the effects of such power structures on the *status quo* and marginalisation of minority groups	Minority groups may find attempts at communication by those members in power to be meaningless or disingenuous; the realisations of cultural safety may also be threatening to those people in power

Table 3 Training courses, instructive videos and other resources on equity and cultural safety in anaesthesia and healthcare. *All links as accessed on November 7, 2021.

Resource title	Organisation	Resource link*
Building a culture of health equity at the federal level	National Academy of Medicine, US states	https://nam.edu/building-a-culture-of-health-equity-at-the-federal-level/
Equality, diversity and inclusion	Royal College of Anaesthetists	https://rcoa.ac.uk/about-college/strategy-vision/equality-diversity-inclusion
Report on health equity in England focusing on inequality between ethnic groups	Public Health England	https://www.gov.uk/government/publications/health-equity-in-england
Series of reports on achieving healthcare equity in ethnic groups in the UK	Institute of Health Equity	https://www.instituteofhealthequity.org/home
Providing patients with culturally safe care	Australian and New Zealand College of Anaesthetists	https://www.anzca.edu.au/safety-advocacy/indigenous-health/providing-patients-with-culturally-competent-care
Cultural safety and cultural competence	Health Quality & Safety Commission New Zealand	https://www.hqsc.govt.nz/our-programmes/patient-safety-day/previous-psw-campaigns/psw-2019/cultural-safety-and-cultural-competence/
Health equity and cultural safety	Royal New Zealand College of General Practitioners	https://www.rnzcgp.org.nz/RNZCGP/Dashboard/Resources/CPD_Resources/Health_equity_and_cultural_safety_?WebsiteKey=4105e6d5-9ad4-4cbf-b3d4-8a1df183be9d
Cultural safety and equity resources	Royal New Zealand College of Urgent Care	https://rnzcuc.org.nz/publications/cultural-safety-and-equity-resources/
Cultural safety training	Aboriginal Health Council of Western Australia	https://www.ahcwa.org.au/cst
Cultural responsiveness training	Indigenous Allied Health Australia	https://iaha.com.au/iaha-consulting/cultural-responsiveness-training/

resources, including from the USA and the UK, to promote healthcare equity and cultural safety in anaesthesia and healthcare.

Although cultural safety primarily involves the way clinicians interact with patients, achieving equity and diversity in clinical teams requires a related concept known as psychological safety. *Psychological safety* may be defined as a state, where team members believe it is safe to take risks in interpersonal communications without the fear of negative consequences to self-image or career.[31] Rather than authoritarian leadership, psychological safety in the workplace promotes inclusive leadership, where diverse team members are invited to provide information and contribute to team decision-making, where the team leader need not know everything and where team performance is collaborative. In the context of modern, complex and multidisciplinary teamwork, inclusive leadership typically leads to better team engagement, better team performance and better patient outcomes. Psychological safety and inclusive leadership are also consistent with the initiatives in Table 1, but in particular, those at the organisational and policy levels in terms of the recruitment and retention of diverse staff.

Conclusions

Social bias and discrimination influence healthcare delivery at the levels of interpersonal relationships, teamwork and healthcare system design. The effects can be the cause of widespread discriminatory practices and embedded health inequities. Education may be effective over time to reduce the negative impact of explicit bias and discrimination. However, the effects of implicit bias and discrimination are more difficult to counteract. Tests, such as the IAT, may allow personal insight into implicit biases, and practical steps are known, which can assist with reducing bias. However, the journey to understanding biases and their consequences is typically a long one, which should be supported at the organisational, policy and governmental levels. More fundamental approaches are needed in healthcare at multiple levels to unpack and address existing health inequities arising from implicit discrimination at the interpersonal level and at the level of embedded discriminatory practices in the healthcare system.

Declaration of interests

CSW is a minor shareholder in SAFERsleep LLC, a company that manufactures an anaesthesia record system. JMW is a member of the editorial board of the *British Journal of Anaesthesia*. ST and CT declare no conflicts of interest.

MCQs

The associated MCQs (to support CME/CPD activity) will be accessible at www.bjaed.org/cme/home by subscribers to *BJA Education*.

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