The Bias Time Out: A practical tool for advancing DEIB in the healthcare space

Received (in revised form): 23rd January, 2023

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Abstract 'I know my own mind. I am able to assess others in a fair and accurate way'. In the book *Blindspot: Hidden Biases of Good People*, the authors (Banaji and Greenwald) challenge us to accept the reality that bias is universal (Banaji, M. R., Greenwald, A. G., (2013), 'Blindspot: Hidden Biases of Good People', Delacorte Press, Excerpt on book cover, 272 pp). Even when fully aware of our biases, they cannot be eliminated. This paper posits that the focus is less about eliminating bias and more about increasing self-awareness and learning about ourselves and the biases we hold but cannot see. Addressing negative bias in healthcare is about adapting our behaviours and decisions to minimise and control the harmful consequences of bias. In this paper, the authors provide examples and scenarios demonstrating bias and strategies to increase self-awareness and focus on behaviours, institutional practices, policies, systems and structures that perpetuate and reinforce bias and its adverse effects. They discuss how to mitigate and manage these biases by utilising the Bias Time Out. The Bias Time Out is a framework that provides a stepwise method that lends itself to easy adoption, application and translation while establishing a process to manage and control bias in real time. Healthcare organisations, systems and oversight bodies all play an important and central role in improving and transforming health, equity and the lives of patients, communities and the nation. Recognising and accepting this role is crucial in managing the negative and deleterious outcomes of bias and the structural and institutional forms of discrimination lurking just beneath the surface.

KEYWORDS: bias, healthcare, equity, inclusion, time out, induction

INTRODUCTION

Bias left unchecked leads to racism and can be deadly, a sobering reality, especially for the healthcare industry, where we expect our end output to be health. Bias is a predisposition to see events, people or items in a positive or negative way.[1] With explicit or conscious bias, feelings and attitudes are clear, and related behaviours are conducted with intent.[2] The danger in implicit or unconscious bias is that we are on autopilot, acting upon attitudes and beliefs outside our awareness and perhaps in direct contradiction to our espoused beliefs and values.[3] In the book *Blindspot*, authors Mahzarin R. Banaji and Anthony G. Greenwald challenge the self-perceptions we all have and explore these hidden biases that we all carry from a lifetime of exposure to cultural attitudes about age, gender, race, ethnicity, religion, social class, sexuality, disability status and nationality.[4] They question and explore the extent to which our perceptions of social groups — without our awareness or conscious control — shape our likes and dislikes and our judgements about people's character, abilities and potential. We are all biased to some extent.

Bias is present in every discipline of medicine and is perpetuated by our academic institutions in the education and training of our students, trainees and faculty. It is embedded in our delivery organisation structures, systems and policies. It is woven into our patient care activities, education/curricula, research and interaction with our communities. It is part of our lexicon and how we communicate, in algorithms, blood testing, how we define, discuss, diagnose, make decisions and treat (or not) certain patients.

The Institute of Medicine (IOM) report on racial and ethnic health disparities, *Unequal Treatment*, found evidence of poorer quality of care for minority patients in studies of cancer treatment, treatment of cardiovascular disease, rates of referral for clinical tests, access to a kidney transplant wait list, black children's receipt of medication, mental health assessment and services, diabetes management, pain management and other areas of care.[5] The IOM report defined *discrimination in healthcare* as 'differences in care that result from biases and prejudice, stereotyping, and uncertainty in communication and clinical decision-making'.[6] Discrimination in healthcare may be driven by implicit attitudes and stereotypes and may represent one more form of error in medical decision making.

We recognise that there are many definitions, terms and types of bias (explicit bias, discrimination, stereotype, race, ethnicity, racism, institutional racism, etc) that accompany the discussion around implicit bias. We also acknowledge that the ways in which bias appears is shaped by individual, cultural and environmental influences. In this paper, we will focus on the effect and mitigation of bias within and by systems and organisations engaged in advancing health.

Across the corporate landscape there have been several 'first movers' who have proactively sought to unpack and address bias within their organisations through thoughtful diversity, equity, inclusion and belonging (DEIB) practices and have reaped positive financial outcomes in return. A study published in 2014, examining best practices in diversity and inclusion among six global companies noted that, over a ten-year period DiversityInc's Top 50 Companies outperformed the Dow Jones Industrial Average by 22 per cent.[7] Furthermore, the landmark report 'Diversity Wins', released by McKinsey, showed that the higher likelihood of diverse representation was positively correlated with outperformance.[8] This report, however, also emphasised that there is a wide chasm between firms that lead in this lucrative area and those that are low performers.[9] Addressing bias must be an intentional and informed endeavour to reap the maximum return on investment.

More than any other industry, it is incumbent on healthcare to meaningfully address bias — our mission and need to address reduced workforce productivity; impaired health of patients; and expectation of environmental, social and governance effects require the mitigation of bias if our industry is to thrive. Mitigating bias within our systems is a feasible, attainable and necessary goal. We offer a practical solution built on the foundation of the Bias Time Out,[10] a readily implementable tool that can be used in many settings to actionably address the bias that undercuts the ability of the healthcare industry to flourish.

We strongly urge the use of any evidence-based tool to apply and amplify the effect of the learning from bias training. The Bias Time Out, however is simple, built on the framework of the procedural time out, and developed by practitioners with over a century of experience as clinicians, researchers, executive leaders, faculty, conveners and change agents. Our deep and varied experiences in the field have led us to develop a tool that can be leveraged to transform not only individual practice but also organisational practice and redesign

enduring structures and systems. We invite organisations to adopt the Bias Time Out, refine it to meet their specific needs and share in collective learning to improve outcomes and performance metrics by effectively driving DEIB.

THE BIAS TIME OUT: DEFINITION AND LEVELS OF EFFECT

In a 2020 study of companies leading in DEIB in their industries compared with companies that are at the mean or lagging in this space, McKinsey demonstrated outsized financial performance by the leaders and the ability to outmanoeuvre their competitors strategically.[11] This burning platform for change is even more imperative in healthcare where our performance relative to our strategies easily translates into lives saved, healed and birthed. While many industries have been working on equity initiatives for decades, in health care, we are still looking for ways to live out our aspirations and our commitments to full inclusion and belonging. The space that must claim our attention and our encouragement to all organisations to address is the space of unconscious bias. It is important to understand the underlying basis of bias, the fact that we all have biases, and how those biases may create unintended but adverse outcomes, outcomes that in healthcare can be deadly. As we discuss this proposed tool in depth, we want to highlight the need for bias training. That training must be the first step in being able to mitigate bias. In the same way, a procedural time out must be led by trained clinicians; the Bias Time Out must be led by those trained to identify and mitigate bias. There is also a need for understanding how bias works and how it can be mitigated. Finally, it requires shared accountability among clinicians, management and boards for supporting the identification and mitigation of bias.

The Bias Time Out is a purposeful pause, prior to interactions and decisions, to identify and mitigate bias. It can be formally integrated into any checklist and implemented in a variety of settings, including performance reviews, selection committees, job description, development and internal and external communications and marketing. Just as bias can occur at every level within the healthcare system, so can the Bias Time Out be implemented to mitigate the effect of biased behaviour. Individual actions, caregiver interactions, team member interactions and meetings stand to greatly benefit from the use of the Bias Time Out. At each level of accountability and impact (Figure 1), the Bias Time Out can be used to affect change. For example, if bias intervention is needed at the level of a single clinician–patient interaction, a behavioural solution related to that relationship may suffice. It is rarely the case, however, that biased attitudes and behaviour are isolated to one dyad and one interaction; rather they

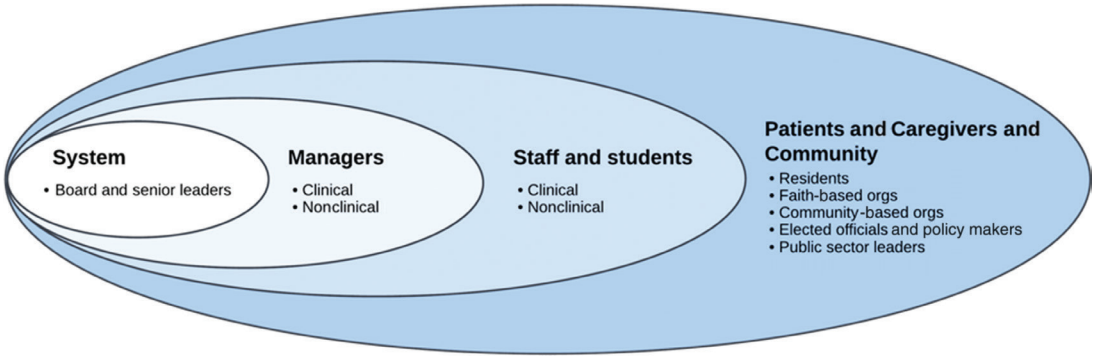

Figure 1 Circles of accountability and impact

are situated in a culture of biased thoughts and processes that need to be explored, identified and addressed at every level of the system. For this reason, the Bias Time Out should not be considered complete until the reflection and debrief in step six considers where the identified bias shows up across the system and what anti-bias intervention may be needed at each level of accountability and effect.

Recognising that optimal implementation of the Bias Time Out requires constant cultivation of an environment that invites improvement, we propose the following, actionable steps (Figure 2):

Is there potential for bias? If yes, begin Bias Time Out

1. Pause (set intention, expect discomfort, invite feedback).
2. What biases may be at work in this situation and where?
3. Who or what might be affected by these biases?
4. What actions can be taken to mitigate the effect of these biases?
5. Take action.
6. Reflect and/or debrief.

The use of the Bias Time Out begins at any important decision point and can be applied in an infinite number of settings at each level of accountability. For example, a rounding team is in discussion regarding a patient ready for discharge, and a team member makes reference to the patient's likelihood of compliance with discharge recommendations. It begins with the important question 'Is there potential for bias?' This question empowers team members, regardless of formal title, to move the group into a space of accountability. Once the potential of bias is identified, the first step of the Bias Time Out is a

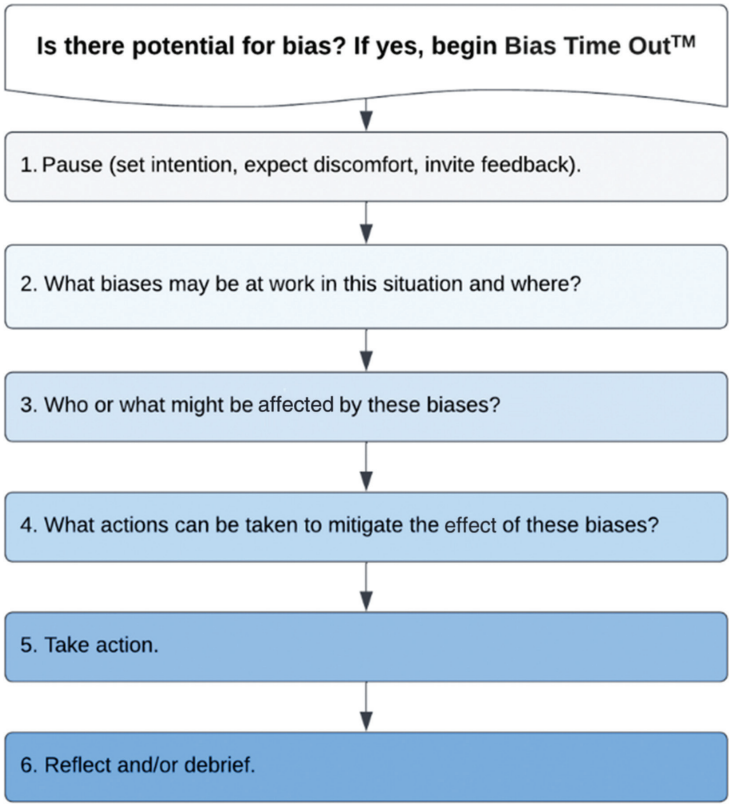

Figure 2 The Bias Time Out™

purposeful pause where the team revisits the principles needed for meaningful change. This includes intention, expecting discomfort and inviting feedback. As these basic principles should be a part of the cultural fabric of the institution, this should be a purposeful but not prolonged step. This is followed by assessing what biases may be at work and where. Understanding the effect of the identified bias(es) and mitigating actions are separate steps that allow for full assessment and the development of a plan, ideally with measurable outcomes. This is followed by rapid implementation of the collaborative plan and, finally, a space to reflect, process and debrief.

We encourage use of the Bias Time Out to proactively identify potential bias in interactions, processes, decisions, policies, initiatives and more. The Bias Time Out can be formally integrated into practices and workflows, including meeting agendas, electronic health record best practice alerts, and other decision support tools. Depending on the situation, the bias analysis may apply to an individual, to a collective, to an organisation or other system. As an early step in the Bias Time Out, it is important to thoughtfully consider where the bias may lie as well as what the bias is. This step will help further illuminate how far-reaching the effects of the bias can be. The circles of accountability and effect (Figure 1) can be used as a checklist to understand the potential points of effect. Depending on the situation there could be both direct and indirect effect. It is important, at a minimum, to assess for direct bias and ideal to assess at both levels. Determining the actions that can be taken may require deeper exploration and inclusion of other stakeholders. It is recommended that as often as is possible, those affected are included in determining the actions to be taken. Moving forward to act is important and reflecting on and debriefing those measures are just as crucial. Where the steps to mitigate bias are undertaken by an individual, it is recommended that an accountability partner be engaged to collaborate in the debrief. This can be someone who could be directly or indirectly affected by bias or anyone else committed to mitigating bias and its effects. This step also allows for necessary redirection, refinement and translation of the actions taken based on their effectiveness at mitigating bias. The debrief may also bring to focus additional steps that are necessary.

The Bias Time Out: Examples of application

Scenario 1: Bias Time Out in patient care

A clinician is changing shift and signing over their patients to the incoming clinician and care team who will assume and continue patient care. The clinician provides report for one patient, an elderly man, who happens to be black, who came to the emergency department (ED) complaining of dizziness for several days. He has a history of Type 2 diabetes mellitus and high blood pressure, but no other known significant problems. He lives alone and has family who lives out of state. When he arrived at the ED, his blood pressure was elevated, and labs showed his blood glucose also to be elevated. He is being treated for uncontrolled hypertension and diabetes with the hope of discharging him to home. The clinician makes a comment that the patient is noncompliant with respect to his medications and does not follow up as he should with his doctor. This has all been documented in the electronic medical record (EMR).

Is there potential for bias in this scenario? Yes.

1. Pause (set intention, expect discomfort, invite feedback)

   Recognise that the hospital is a fast-paced environment where quick decision making occurs and associations and assumptions are made. In this context, someone from the healthcare team speaks up about the noncompliance comment as a potential for bias.

2. What bias may be at work in this situation and where?

   An assumption may be made that the patient is not cooperative or not interested in his own care. It may be implied that it is his fault that he is sick. The bias is the automatic (unconscious) assumption that certain patients, in this case an elderly black patient, are more likely to be noncompliant with following medical advice, taking medications, attending follow-up visits and other aspects of their care.
3. Who or what might be affected by these biases?

   First and foremost, this patient is affected by the bias. His medical care and treatment may be suboptimal as a result of the bias. He may not receive additional testing or made aware of other conditions that he could be at risk for owing to his uncontrolled hypertension and diabetes, eg heart attack, stroke, kidney disease and eye disorders. The treating team may wonder (consciously or subconsciously) if it is worth making the typical referrals for speciality care if he is noncompliant and (presumably) unlikely to keep his appointment. The effect of this bias is also evident in the team's lack of recognition that there may be underlying reason(s) for the patient's perceived noncompliance, further perpetuating the bias. In addition, if it is documented in the EHR that the patient is 'noncompliant' and fails to follow up on his care, these statements may be further perpetuated in the medical record and transmitted between clinicians, thus setting up the potential for ongoing suboptimal care within this healthcare system. He may be viewed as noncompliant and may therefore receive less attention from providers and be provided suboptimal care, thus resulting in potentially worsening outcomes.
4. What actions can be taken to mitigate the effect of these biases?

   In the Bias Time Out, anyone can call out the clinician's statement about the patient's noncompliance. They can make the point, and cite the literature, that black patients are more likely to be viewed as noncompliant with medical advice, taking medications, follow-up visits and other aspects of their care that can lead to poor outcomes for the patient based on provider bias. The leader of the Bias Time Out should be prepared for discomfort and respond to that discomfort by noting that we all have biases. The team can be encouraged to get more information from the patient in order to understand why the patient may not be cooperating. The physician, student, nurse and/or care coordinator should obtain a more thorough history from the patient about any potential barriers or challenges he is facing in his life and current environment. He lives alone. Is this a problem? What type of resources are available in his community? Where does he live? Are there any safety concerns? Does he have adequate access to transportation? What are some of the challenges or barriers that the patient may have in his life that could be interfering with him getting his meds? Are there financial concerns? What personal challenges might he have? Are there any psychosocial or mental health issues to consider? Is it possible for him to have a social worker visit his home and get a sense of his home life? Specific reasons for the patient's 'noncompliance' can be documented in the medical record and become part of the ongoing assessment of and care provided to this patient.
5. Take action

   Update the documentation of barriers and challenges to following medical advice in the EMR, providing additional information about the patient that may have been obtained.

To address systematic bias on the unit, the team and leadership can discuss and implement a strategy to address and mitigate bias in the care setting. Leadership can create an antibias plan for the unit and educate and train the healthcare team on a periodic basis. Importantly, training clinicians to minimise stigmatising language in the EMR may improve patient-clinician relationships and reduce the transmission of bias between clinicians.

6. Reflect and debrief

   The healthcare team should recognise and accept that we all have biases. The question is not, do we have bias? The question is, which are ours? Develop your own capacity to observe yourself.[12]

Scenario 2: Bias Time Out in induction

Your administrative unit is thrilled to have recruited a new leader who will have responsibility for all facets of physicians' and advanced practice providers' employment life cycle. The candidate connected quickly with the many future team members she met during the interview process and is already on a first name basis with most of her future colleagues. You are anxious to be sure she feels welcomed, respected and included as she transitions into the organisation. Several weeks before her start date, this newly hired leader reaches out to you, requesting that her professional title (as a terminal degree holder) be used in the workplace. You ponder how to address her request with the team where relationships and patterns of communication have already begun to be established.

Is there potential for bias in this scenario? Yes.

1. Pause (set intention, expect discomfort, invite feedback)

   Because patterns of communication and use (or nonuse) of titles have begun to be established, it is important to gain additional information about the request to assist this new team member in sharing her preference. Consider where and when formal titles are used within the current team and throughout the organisation and where this request may benefit others whose titles have been overlooked.

2. What bias may be at work in this situation and where?

   Rich literature and social media commentary exist regarding the tendency for patients and co-workers to transgress professional boundaries and address physicians with different titles, or no title, based on gender, race, degree and speciality.[13,14] This biased behaviour extends to academia, where racially under-represented female faculty are more likely to be mislabelled in professional settings; presumed to be members of a professional team's supporting staff rather than a terminal degree holder and member of the academy.[15] These behaviours, known as 'untitling' (the practice of omitting a correct title in a setting where one would reasonably expect it to be both relevant and included) and 'uncredentialing' (the differential use of academic credentials for male vs female professionals),[16] may be unconscious yet have the potential to affect the authority and legitimacy of the objects of this bias.[17,18]

3. Who or what might be affected by these biases?

   It is likely this new employee has already been affected by untitling behaviour in professional settings. By calling attention to the practice, awareness is raised throughout the organisation about the tendency to address and refer to majority and male title-holders differently from people of colour and female team members with the same credentials.

4. What actions can be taken to mitigate the effect of these biases?

   A transparent and inclusive conversation at the time of induction

provides an opportunity for clarifying titles and training and setting expectations for all members of the team. It should be presumed that all team members holding a terminal degree (MD DO, PhD, PharmD, DNP, DPT, EdD, DMin or other doctorate commonly encountered in a healthcare setting) wish to be addressed by their professional title and referred to by that title in any formal setting, including meetings and written communications. An induction conversation that explicitly discusses use of titles with all team members calls out this practice and sets the stage for accountability on the part of every member of the team. The degree holder may wish to use their first name in certain settings and should have the opportunity to express that preference rather than having that preference presumed. The practice of including this in induction and revisiting the use of titles on a periodic basis can address the common practice of lapsing into the use of informal forms of address for those from under-represented groups.

5. Take action

   The new team member's preference is warmly acknowledged, and the topic is explored further with her, seeking information regarding occasions where first names (already in use) may be preferred. Prior to her arrival, the new supervisor begins the conversation with the team regarding use of titles among members of the team. Practices that are currently embedded around the use of titles are discussed openly, and each team member is given the opportunity to share observations about current cultural norms and customs. Where those customs and norms diminish the accomplishments of a member of team, consideration is given to updating communication and forms of address. In anticipation of the new team member's arrival, conversations with members of the larger organisation that reference the new team member consistently reference her using the professional title. With her permission, you share with your immediate team her preference that her professional title be used in formal settings and written communications along with her openness to the use of her first name in informal meetings and conversations.

6. Reflect and debrief

   The healthcare team should be aware of the tendency to untitle and decredential members of groups typically under-represented in leadership in medicine. This practice not only diminishes the accomplishments of the object of this bias but detracts from the effectiveness of the entire team. In situations where the use of formal titles may feel unnecessarily hierarchical, care must be taken to ensure that the casual forms of address are used for all members of the team.

THE BIAS TIME OUT IN PRACTICE

It is important to recognise that bias has an effect on organisational decisions at every level. Instead of wondering 'if' bias affects organisations, we should begin to wonder 'where' bias makes its mark.[19] The Bias Time Out seeks to promote thoughtfulness and self-exploration, and to activate an anti-bias response at every organisational level of influence. As leaders, we find ourselves with countless opportunities to shift our mindset and willingly take the time to look for, analyse and act when/where potential bias exists. The following examples illustrate how the principles of the Bias Time Out can be used at the individual, group and systems level to bring mindfulness and implement strategies towards mitigating bias.

Bias Time Out in promotion and tenure committee review

Committee members presenting the candidates typically start the presentation with a summary of the candidate's

educational background, listing all the places the candidates trained. This practice invites bias by focusing on institutional pedigree rather than the candidate. The author interrupted that process during an active meeting to ask that it be stopped and then provided the following context:

> The summaries (to the provost) do not report educational background; I would intentionally EXCLUDE that information in the committee's discussion because of the bias that educational background may introduce and the irrelevance of the information.

First, relative to bias, as we discussed in the committee's orientation, there is potential for bias in this and every evaluative process and two potential ways that educational background can bias the committee's decision: affinity bias (which occurs when we see someone we feel we have an affinity with; eg we trained at the same institution) and the halo effect (when we see one great thing about a person and we let the halo-glow of that significant aspect affect our opinions of everything else about that person) have the potential to affect the committee members' evaluation of the applicants qualifications for the promotion. If we do not present that data to the group or call it out in the summary, we are better defended from those potential biases.

Secondly, the candidates' educational background is not listed in our criteria for promotion and so is irrelevant data, and eliminating irrelevant data is ideal in assuring a thorough yet efficient review process.

Recognising that bias was at play, there was an intentional pause, an assessment of biases and their effect, followed by recommended strategies. The pause served to remind the committee of the training they had already received regarding bias in the promotion process, to reinforce that training with a very specific example of a long-standing biased practice that had been institutionalised in the portfolio presentations, and the need for such presentations to be removed to reduce the risk of future bias in the promotion review process.

Bias Time Out in language

Another example of the Bias Time Out in practice is recognising one's own language in the moment. For example, in a recent session one of the authors used the term 'stakeholder', and as they said the word, they wondered about its origin. They stopped mid-presentation and engaged willing audience members in a sidebar conversation about language and the use of the term 'stakeholder' in particular. While no one could address the question (ie origin of the term and its potential effect on specific groups of people) in that session, in other sessions there was someone present who could address the origin or implication of the word in question, further educate the entire audience and suggest an alternative word, term or phrase. This particular scenario requires mindfulness (monitoring oneself in the moment), humility (calling oneself out mid-presentation), inclusion (asking for a definition or clarification and encouraging education regarding an alternative term or word while not singling out any member of the group as the presumed authority).

Bias Time Out in training

BJC HealthCare (BJC) is a large regional academic health system located in Missouri and Illinois. The business imperative for advancing DEIB is well established and recognised across the system. As a component of its organisational development and operational excellence work with leaders, the Bias Time Out framework has been integrated into its organisational bias training strategy. Leaders who have completed the foundational online bias training can also seek support from consultants within the BJC Office of Diversity, Equity and Inclusion to facilitate local interactive sessions that

allow them to further examine, identify and mitigate biases on an interpersonal and institutional level. These consultants also partner with senior leadership to develop more in-depth training to promote new organisational structures and systems that help reduce bias.

The Bias Time Out provides a practical means for clinicians, leaders, educators and DEIB professionals to engage in shared learning with an intentional and effective application that supports the organisational objectives and business imperatives.

IMPLICATIONS FOR TRANSLATION

The COVID-19 pandemic illuminated disparities perpetuated by social and structural determinants of health. To reverse these, healthcare institutions will need to embed intentionally focused efforts that dismantle and completely rebuild practices, policies, systems and structures to advance equity. With this in mind, we designed the Bias Time Out to drive meaningful progress. As noted previously, to effectively apply the Bias Time Out there must be an intentional curation of an anti-bias environment. There are a myriad of tools to undertake this important organisational pre-work (Appendix 1). This is, perhaps, the first intention that must be set as this is the foundation from which change will grow. As with our work to advance safety and quality, we must have a firm commitment to improvement to effectively develop and implement tools that support this intention. We have many lessons learned from the quality movement that can be readily applied to the health equity movement. Consistent processes and high reliability approaches will drive continuous and sustained improvement and help revolutionise this work. However, the processes and approaches must be practical and streamlined for widespread adoption to occur. This is the approach we are following with the Bias Time Out.

The use of a Bias Time Out is modelled after procedural time outs used in care delivery to ensure clinicians have the right patient, right procedure and right side to avoid harming the patient. These time outs were an outgrowth of the work Dr Don Berwick started in the 1980s to improve processes in healthcare. The Plan/Do/Check/Act cycle was the foundation for Dr Berwick and the Institute for Healthcare Improvement campaign to encourage healthcare clinicians and administrators to identify the root cause of problems and change the processes to ensure the outcome improved patient care quality and reduced waste in the system. The Bias Time Out applies these learnings such as engaging a small group of organisations to adopt the process and measure the benefits; creating specific metrics for them to use; telling stories about the successes these organisations experience; engaging nationally recognised spokespersons to advocate for its use; ensuring that clinicians and administrators see the value of the process; and recognising that it will take time, patience and tenacity to be successful.

Decades of quality work have brought us to this level of maturity. We believe that these lessons learned will save us decades of work that produce only a minimal effect in the equity space. It will also allow us to enhance our effectiveness and accelerate improved outcomes. In the same way that the quality movement became a life-or-death endeavour, we can draw parallels to the work of DEIB. In the same way that today we would find it strange to try to continue our journey in safety and quality without being part of a learning and improvement community or being accountable to oversight bodies, we believe the same is true for DEIB.

Learning communities

We recognise the benefit of experimentation and leveraging learning communities to help advance and scale the work. The Bias Time Out

lends itself to easy adoption, application and translation. There are many learning communities as well as other platforms and associations that can be leveraged for learning on a broader scale. The Equity Collaborative serves as a best practice model for such a learning community.

The Equity Collaborative, an initiative of the Carol Emmott Foundation, is an active self-directed learning community and 'do-tank' made up of senior leaders of large healthcare organisations delivering on diversity, equity — especially gender equity — inclusion and belonging.[20] Members avail themselves of the latest research on how to reduce bias, share and pilot new initiatives, policies and model leadership behaviours that support cultures of belonging. They track measurable progress in established metrics and benefit from the support of others on the same journey. These organisations demonstrate more accountability to their boards, staff, patients and health communities. Significant gains in leadership representation have been achieved in the past three years as bias in recruitment and promotion has been addressed. Adopting an intersectional lens in the collection, analysis and reporting of quality, process and human resource data has revealed significant gaps by race and gender, exposing the inherent bias within health care institutions and providing members with specific care issues to address. Over the last three years, members have expanded talent pools, retained greater numbers of employees and moved to measurably more inclusive cultures. The members of The Equity Collaborative engage in anti-bias behaviour as a standard. Some of the anti-bias solutions they have shared and adopted to drive these improvements are shared here for further exploration and adoption.

Originally, when the policy for gender-expansive and nonconforming employees was being created, we titled it the transgender inclusion policy. After working with some additional team members, the leadership sponsoring the policy realised that transgender inclusion did not include employees whose identity is gender expansive, but not transgender. The team agreed to call the new policy the 'gender identity and gender expression inclusion policy'.

In a leadership discussion to plan the kick-off of a very large system initiative, it was noted that Easter weekend would not work because it was 'Easter'. One of the executives pointed out that there were many employees who were not Christian and that a communication referencing Easter could be perceived as biased. The conversation changed to acknowledging that the kick-off could not be that weekend because it was a 'high vacation' time.

Human Resources has been scrubbing policies to change the binary language of 'she/he' or 'his/her' to gender neutral language of 'they' and 'their'. Similarly, there is work being done on language for pregnancy screening to read 'women, girls and/or other gender identified person with female reproductive organs' instead of only 'women'.

This commitment to driving diversity, gender equity, inclusion and belonging is the basis for The Equity Collaborative member's desire to experiment with the Bias Time Out. Members will design opportunities to use it, document its use and measure its effect on decision making and outcomes. Practical implementation of the Bias Time Out will allow moments, like those mentioned previously, to become a standard practice that challenges all members to engage in anti-bias behaviour.

The work of The Equity Collaborative can be integrated into forums like the American College of Healthcare Executives, the AAMC and many others who shape healthcare education and delivery. As the Bias Time Out and our learnings from its application reach farther afield, we will begin to produce a greater effect in this space. It will be important to engage leaders at all levels of healthcare organisations in ideation on the further translation of the Bias Time Out.

Oversight bodies

In healthcare, oversight bodies play a critical role in establishing and ensuring adherence to expected standards. As a result, there is tremendous opportunity to set standards that advance anti-bias efforts in health care delivery and education. The Joint Commission's mission is to continuously improve health care for the public by evaluating health care organisations and inspiring them to excel in providing safe and effective care of the highest quality and value.[21] The Joint Commission's President and CEO, Dr Jonathan B. Perlin, MD, notes: '[E]very patient deserves the right to safe, equitable health care. All health care organizations have a responsibility to identify and address the disparities that their unique patient populations face.'[22] It follows that recognising and mitigating bias in health care is a quality and patient safety issue that the Joint Commission should actively address with standards in the same manner as it does with implementing the National Patient Safety Goals with standards, helping organisations across the continuum of care lead the way to zero harm.

In the same manner of oversight, the Liaison Committee on Medical Education (LCME) is the nationally recognised accrediting authority for medical education programmes leading to the MD degree in the United States (and Canada). LCME accreditation is required in most states for licensing graduates and receiving federal financial aid.[23] The LCME Diversity standard (3.3) addresses diversity and inclusion in academic medicine. It believes that aspiring future physicians will be best prepared for medical practice in a diverse society if they learn in an environment characterised by, and supportive of, diversity and inclusion.

'Each medical school must have policies and practices to achieve appropriate diversity among its students, faculty, staff, and other members of its academic community, and must engage in ongoing, systematic, and focused efforts to attract and retain students, faculty, staff, and others from demographically diverse backgrounds.'[24] Beyond the importance of diversity and inclusion in medical education, the LCME standards should consider addressing bias in the structure and design of the curriculum. It has been repeatedly noted that we all have biases. In addition to including therapy and technology, changes in the understanding of disease, and the effects of social needs and demands on care, the curriculum should also include implicit bias as a current concept in the basic and clinical sciences. Addressing the negative influence of bias in medical training is a deep, complex problem that involves our intellectual and our emotional selves, our conscious and our unconscious attitudes and behaviour. The author Plews-Ogan notes that overcoming the negative effects of bias takes not only the will to do so but also the skill.[25] They propose that cognitive and social psychology science be the foundation of how we understand bias and how to mitigate its negative effects in our teaching and mentoring. The LCME could help drive this change as part of its curricular standards and requirement.

The Accreditation Council for Graduate Medical Education (ACGME) sets and monitors voluntary professional educational standards essential in preparing physicians to deliver safe, high-quality medical care to all Americans. Graduate medical education (GME) refers to the period of education in a particular specialty (residency) or subspecialty (fellowship) following medical school; the ACGME oversees the accreditation of residency and fellowship programmes in the United States. The ACGME has Common Program Requirements that are a basic set of standards (requirements) in training and preparing resident and fellow physicians. These requirements set the context within clinical learning environments for development of the skills, knowledge and attitudes necessary to take personal responsibility for the individual care of patients. In addition, they facilitate

an environment where residents and fellows can interact with patients under the guidance and supervision of qualified faculty members who give value, context and meaning to those interactions.[26]

The ACGME has an opportunity to further set additional programme requirements in the area of implicit bias awareness and mitigation to reduce the negative effects of racial, ethnic, religious, gender and disability bias in GME. Training programmes could provide trainees with fundamental wisdom, and awareness skills through cognitive, affective and reflective skill building; providing debiasing strategies across all programmes to mitigate the negative effects of biases on the quality of care and health outcomes of all Americans, particularly those who are marginalised in society.[27]

It should be noted that, in support of its commitment to DEIB, the ACGME launched *ACGME Equity Matters*,[28] an initiative that supplies a framework for continuous learning and process improvement in the areas of DEIB and antiracism practices. The initiative aims to drive change within GME by increasing physician workforce diversity, and building safe and inclusive learning environments, while promoting health equity by addressing racial disparities in health care and overall population health. This is a promising step towards addressing bias in GME.[29]

CONCLUSION

As we learned in the 1999 IOM report by the same title, to err is human. The IOM report noted that 'dramatic, system wide changes are necessary to prevent injury and death'.[30] Over several decades, the quality movement has mobilised us to drive error out of health care to improve outcomes and save lives. We learned and demonstrated that improving health care quality and safety is everyone's job and the commitment and priority must start with board members and senior management. Errors may have a variety of root causes and analysis is necessary to determine the underlying factors precipitating an error to effectively approach error proofing. The same is true for DEIB. We have the opportunity and responsibility to continue this crucial work with intentional efforts to identify and drive bias out of healthcare. Bias, like error, is both insidious and human. The Bias Time Out is a tool that can be applied consistently to create the space and process for needed analysis to determine whether bias is involved and how. Then the work of bias proofing or at least bias mitigation can begin. The Bias Time Out inspires the radical mindset shift and collective acts necessary to design and implement the change that our organisations need and that our patients, communities, staff and students deserve.

Organisations are looking for meaningful ways to apply (or justify) bias training. The goal of bias training is not only to identify bias but to also effectively respond and intentionally act to mitigate any negative effect of bias. The Bias Time Out provides a tool that helps accomplish these ends. Integrated into bias training, the Bias Time Out offers a framework that employees can use to become consciously competent in identifying and mitigating bias. They can use the tool to assess the various scenarios where the tool might be most beneficial. They can also use the Bias Time Out to implement measures that may not otherwise have occurred. Leaders and organisations can also use this tool to mitigate bias in a more systemic and systematic way. With an organisation-wide lens, the Bias Time Out can be used to identify where and how to hardwire mitigating behaviours, processes, policies and practices. When used retrospectively, organisations can interrogate numerous data sets (safety and quality, patient experience, employee engagement, physician engagement and alignment, financial or any other performance indicators) where results are not as expected, looking

for bias-mitigation opportunities when disparities are identified in disaggregated data.

It is important to engage in collective efforts to accelerate our work in diversity, equity inclusion and belonging. What we have learned from the quality movement is that improvements must be hardwired to be sustained. One powerful system we have established to this end is just culture. Following this approach propagates and supports balanced accountability where organisations are accountable for systems design and for ensuring fair and just responses to individual behaviours and where individuals are accountable for their choices and for reporting weaknesses in the system.[31,32] The significant gains we have experienced in improving patient safety will also be realised as we leverage the just culture framework together with the Bias Time Out to effectively drive bias out of our environment.

The Bias Time Out both engages collective effort and recognises that different solutions may be necessary to be effective and drive needed outcomes at the various points of engagement of a healthcare organisation. The Bias Time Out allows for development and implementation of plans with the specific intent of making an impact along these different points of accountability. The tool can and should be used by individuals, teams, leaders, organisations and learning communities. Measurement is necessary, and the Bias Time Out calls for evaluation of the commitment to act, as well as the outcome of the strategies undertaken. This can be determined, prospectively, as well as retrospectively. A reduction in disparate outcomes can be used as one of the indicators of success for Bias Time Out application. Ultimately, we anticipate that the Bias Time Out framework can be leveraged to drive equity in any number of arenas and reinforced and sustained in an environment that embraces just culture.

This simple framework allows leaders to practise and experiment with application, deepen and accelerate organisational learning, and drive change. We fully expect that the implementation of the Bias Time Out by forward thinking, innovative organisations will shape future iterations and amplify its influence.

In this publication, we seek to inspire conversation and propose a framework to address bias in real time. We invite readers to join us in adopting this solution for application in their organisations and healthcare settings and offer feedback to help build the evidence base for the Bias Time Out to make a positive contribution to the communities we serve. The time to act is now. Will you join us in this effort?

CONFLICT OF INTEREST STATEMENT

The authors have no conflicts of interest to declare.

APPENDIX 1
TOOLS FOR ASSESSING BIAS

1. The Implicit Association Test (https://implicit.harvard.edu/implicit/takeatest.html)
2. The American Association of Medical Colleges Unconscious Bias Resources for Health Professionals (https://www.aamc.org/about-us/equity-diversity-inclusion/unconscious-bias-training)
3. Accreditation Council for Graduate Medical Education Implicit Bias Course (https://dl.acgme.org/courses/implicit-bias-conscientious-interventions-to-tackle-the-elephant-in-the-room)

ADDITIONAL READING AND RESOURCES

1. The Equity Collaborative. 2021. https://carolemmottfoundation.org/the-equity-collaborative/.
2. Everyday Bias: Identifying and Navigating Unconscious Judgments in Our Daily Lives, Howard J. Ross, 2014.

3. Inclusion on Purpose: An Intersectional Approach to Creating a Culture of Belonging at Work, Ruchika Tulshyan, 2022.
4. Morse, G., (2016), 'Designing a bias-free organization: An interview with Iris Bohnet', *Harvard Business Review*, Vol. 94, No. 7/8, pp. 62–67.

References and notes

1. Georgetown University National Center for Cultural Competence, (2020), 'Conscious and unconscious biases in healthcare', *Module 3*, available at: https://nccc.georgetown.edu/bias/module-3/1.php (accessed 9th November, 2022).
2. *Ibid*.
3. *Ibid*.
4. Banaji, M. R., Greenwald, A. G., (2013), 'Blindspot: Hidden Biases of Good People', Delacorte Press, Excerpt on book cover, 272 pp.
5. Institute of Medicine, Smedley, B. D., Stith, A.Y., Nelson, A. R., eds., (2003), 'Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care', The National Academies Press, Washington, DC, 780 pp.
6. *Ibid*.
7. Derven, M., (2014), 'Diversity and inclusion by design: Best practices from six global companies', *Industrial and Commercial Training*, Vol. 46, No. 2, pp. 84–91. https://doi.org/10.1108/ICT-09-2013-0063.
8. Hunt, V., Prince, S., Dixon-Fyle, S., Dolan, K., (19 May 2020), 'Diversity Wins: How Inclusion Matters', McKinsey & Company [about 30 screens], available at: https://www.mckinsey.com/featured-insights/diversity-and-inclusion/diversity-wins-how-inclusion-matters (accessed 30th October, 2022).
9. *Ibid*.
10. The authors' US registered trademark application is currently pending.
11. Hunt, Prince, Dixon-Fyle, Dolan, ref. 8 above.
12. Ross, H. J., (2014), 'Everyday Bias: Identifying and Navigating Unconscious Judgments in Our Daily Lives', Rowman and Littlefield, Washington, DC, 183 pp.
13. Files, J. A., Mayer, A. P., Ko, M. G., Friedrich, P., Jenkins, M., Bryan, M. J., et al., (2017), 'Speaker introductions at internal medicine grand rounds: Forms of address reveal gender bias', *Journal of Women's Health*, Vol. 26, No. 5, pp. 413–419. https://doi.org/10.1089/jwh.2016.6044.
14. Diehl, A., Dzubinksi, L. M., Dishman, L., eds., (21 January 2021), 'We need to stop "untitling" and "uncredentialing" professional women', *Fast Company & Inc.* [about 14 screens], available at: https://www.fastcompany.com/90596628/we-need-to-stop-untitling-and-uncredentialing-professional-women (accessed 7th November, 2022).
15. Johnson-Bailey, J., Lee, M.Y., (2005), 'Women of color in the academy: Where's our authority in the classroom?', *Feminist Teacher*, Vol. 15, No. 2, pp. 111–122. http://www.jstor.org/stable/40545917.
16. Mirza, R. M., (11 February 2021), 'The "untitling" of women in academia', *LinkedIn* [about 6 screens], available at: https://www.linkedin.com/pulse/untitling-women-academia-raza-m-mirza-ph-d-/ (accessed 7th November, 2022).
17. Messner, M. A., (2000), 'White guy habitus in the classroom: Challenging the reproduction of privilege', *Men and Masculinities*, Vol. 2, No. 4, pp. 457–469. https://doi.org/10.1177/1097184X00002004005.
18. Diehl, A., Dzubinksi, L. M., (22 December 2021), 'When people assume you're not in charge because you're a woman', *Harvard Business Review* [about 14 screens], available at: https://hbr.org/2021/12/when-people-assume-youre-not-in-charge-because-youre-a-woman (accessed 7th November, 2022).
19. Ross, ref. 11 above, p. 114.
20. Carol Emmott Foundation, (2021), 'Clarify designs', The Equity Collaborative, available at: https://carolemmottfoundation.org/the-equity-collaborative/ (accessed 7th November, 2022).
21. The Joint Commission, (2022), 'Who we are' [about 5 screens], available at: https://www.jointcommission.org/who-we-are/ (accessed 5th November, 2022).
22. *Ibid*.
23. The Liaison Committee on Medical Education, (2022), 'About', available at: https://lcme.org/about/ (accessed 7th November, 2022).
24. The Liaison Committee on Medical Education, (2022), 'Standards, publications, and notification forms', LCME Consensus Statement Related to Satisfaction with Element 3.3, Diversity/Pipeline Programs and Partnerships, 2 pp, available at: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwi66PS9iqr-AhVtj4kEHRHvAzwQFnoECBcQAQ&url=https%3A%2F%2Flcme.org%2Fwp-content%2Fuploads%2Ffilebase%2Fwhite_papers%2Flcme-consensus-statement-with-intro-element3-3.doc&usg=AOvVaw1dPcsyChbDEllEqHcqtOhx (accessed 7th November, 2022).
25. Plews-Ogan, M. L., Bell, T. D., Townsend, G., Canterbury, R. J., Wilkes, D. S., (2020), 'Acting wisely: Eliminating negative bias in medical education, part 1: The fundamentals', *Academic Medicine*, Vol. 95, No. 12S, pp. S11–S14.
26. The Accreditation Council for Graduate Medical Education, (2000–2022), 'Accreditation', The Accreditation Council for Graduate Medical Education, Chicago, IL [about 4 screens], available at: https://www.acgme.org/what-we-do/accreditation/ (accessed 5th November, 2022).
27. The Accreditation Council for Graduate Medical Education, (2000–2022), 'Common Program Requirements', The Accreditation Council for Graduate Medical Education, Chicago, IL [about 4 screens], available at: https://www.acgme.org/what-we-do/accreditation/common-program-requirements/ (accessed 5th November, 2022).

28. See note 10 above.
29. The Accreditation Council for Graduate Medical Education, (2000–2022), 'ACGME Equity Matters', The Accreditation Council for Graduate Medical Education, Chicago, IL [about 4 screens], available at: https://www.acgme.org/what-we-do/diversity-equity-and-inclusion/ACGME-Equity-Matters/ (accessed 5th November, 2022).
30. Institute of Medicine, Kohn, L. T., Corrigan, J. M., Donaldson, M. S., eds., (2000), 'To Err Is Human: Building a Safer Health System', The National Academies Press, Washington, DC, 312 pp.
31. Boysen, P. G., (2013), 'Just culture: A foundation for balanced accountability and patient safety', *The Ochsner Journal,* Vol. 13, No. 3, pp. 400–406.
32. Mass General Brigham and Women's Faulkner Hospital, (2023), 'What Is Just Culture? Changing the Way We Think About Errors to Improve Patient Safety and Staff Satisfaction', Brigham and Women's Faulkner Hospital, Boston, MA [about 4 screens], available at: https://www.brighamandwomensfaulkner.org/about-bwfh/news/what-is-just-culture-changing-the-way-we-think-about-errors-to-improve-patient-safety-and-staff-satisfaction (accessed 22nd January, 2023).