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## A Call for Grounding Implicit Bias Training in Clinical and Translational Frameworks

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## A call for grounding implicit bias training in clinical and translational frameworks

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Since the publication of *Unequal Treatment* in 2003,<sup>1</sup> the number of studies investigating the implicit bias of health-care providers and its troubling consequences has increased exponentially. Bias can occur in all three psychological components: affects (ie, prejudice), cognition (ie, stereotypes), and behaviour (ie, discrimination). Implicit bias refers to prejudicial attitudes towards and stereotypical beliefs about a particular social group or members therein. These prejudicial attitudes and stereotypical beliefs are activated spontaneously and effortlessly, which often result in discriminatory behaviours.<sup>2</sup> This definition is consistent with how implicit bias is defined in psychology<sup>3</sup> and in literature on health disparities.<sup>4</sup> Despite how the definition of implicit bias includes both affective and cognitive components, researchers, health-care providers, educators, and policy makers often use the term broadly and do not differentiate prejudice and stereotyping. Literature on health disparities focuses primarily on implicit prejudice and few studies have systematically investigated the role of implicit stereotyping in patient care.<sup>5</sup> Consequently, implicit bias in previous research generally refers to implicit prejudice. Therefore, we specify whether we mean implicit prejudice or implicit stereotyping, particularly when we review findings from previous studies.

It is well established that health-care providers' implicit prejudice is associated with reports of lower quality patient-provider communication among patients from marginalised social groups.<sup>5</sup> For example, black patients who interacted with physicians with higher levels of implicit prejudice reported significantly lower levels of interpersonal care than did patients who interacted with physicians with lower levels of implicit prejudice.<sup>6</sup> Accordingly, many US medical schools and other health organisations are now teaching about the role of implicit bias in patient care.<sup>7</sup> Research into provider implicit bias is also noticeably changing the situation at the policy level. For example, several candidates for the 2020 US

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Declaration of interests

All authors declare no competing interests.

presidential election acknowledged the role of health-care providers' implicit bias in racial or ethnic health disparities and have demanded remediation.<sup>8</sup> On Oct 2, 2019, California assembly bill no 241 was signed into law,<sup>9</sup> mandating implicit bias training for health-care providers, and thereby making it probable that other US medical schools and health organisations will follow suit.

Implicit bias is not specific to a particular country. Multiple forms of implicit bias have been reported globally, such as implicit racial bias in Italy,<sup>10</sup> implicit racial and gender bias in UK,<sup>11</sup> and implicit weight bias in Singapore.<sup>12</sup> The form of implicit bias that plays an important role, in intergroup relations in general and in patient care specifically in a given country, is determined largely by its cultural, historical, and economic contexts. For example, in countries with relatively little racial variability, other forms of implicit bias such as weight (eg, eastern Asian countries), immigrants (eg, western European countries), or religion (eg, Middle Eastern countries) might play an important role in patient care.<sup>13–15</sup>

In this Viewpoint, we highlight three crucial translational gaps in implicit bias training that are used in medical schools and other health organisations. We suggest that before medical schools and other health organisations invest further time and financial resources in implicit bias training, they should pause, take a step back, and critically evaluate the grounding and effectiveness of current training. Evidence shows that health-care providers' implicit bias and its consequences are not limited to the USA, although the form of bias might differ across cultures.<sup>4</sup> Therefore, our observations and suggestions will probably resonate with a wider audience interested in implicit bias training.

The development and implementation of successful implicit bias training in health care can be understood within the Clinical and Translational Science framework. This framework is the scientific process through which research findings are translated into improved patient outcomes and consists of five stages, ranging from T0 (basic biomedical research) to T4 (translation to communities).<sup>16</sup> Of those five stages, T1 to T3 are particularly relevant to the development and implementation of implicit bias training. In the context of this training, T1 (translation to humans) is often done in the field of basic experimental social psychology. The goal of this stage is to identify strategies driven by theories to reduce implicit bias in general populations. Stage T2 (translation to patients) aims to develop implicit bias training on the basis of findings from T1, and to test its effectiveness with health-care providers. The goal of T3 (translation to practice) is to evaluate the effectiveness of implicit bias training after it is adapted into the existing curriculum and training. In the rigorous Clinical and Translational Science framework, each stage should build on and inform other stages. However, translational gaps exist among all three stages in the literature on health-care providers' implicit bias. Failure to recognise and address these gaps considerably reduces the effectiveness of implicit bias training in standard practice.

The gap between T1 and T2 reflects inconsistencies between findings from basic social psychology research into implicit bias and the content of implicit bias training used in the health-care system. Most of these training programmes are designed to increase health-care providers' awareness about their implicit bias, with the ultimate goal of reducing this bias. However, basic social psychology research suggests that increased awareness alone is not

sufficient for a reduction and that people should also be motivated to decrease their implicit bias.<sup>17</sup> In health care, expressions of bias are strongly condemned. This criticism might seem like a strong motivation for providers to reduce their implicit bias. However, research has shown that people with high external motivation to avoid prejudice (ie, those who are concerned about how they are evaluated by others) were unable to prevent the expression of implicit prejudice; whereas, people with high internal motivation to avoid prejudice (ie, those who personally value egalitarianism) were successful in reducing their implicit prejudice.<sup>18</sup> Thus, implicit bias training should address both providers' awareness and internal motivation.

Additionally, implicit bias is often conceptualised as a habitual response. By definition, habits are default responses and are difficult to break.<sup>19</sup> However, learning specific strategies to override habitual responses makes habit breaking more effective. A programme that taught college students about five evidence-based strategies for reducing implicit bias (ie, stereotype replacement, counter-stereotypical imaging, individuating, perspective taking, and contact) resulted in lower implicit racial prejudice, as measured by an implicit association test, 8 weeks after the intervention.<sup>20</sup> These findings suggest that implicit bias training should also provide health-care providers with concrete strategies to reduce their implicit bias. Supporting this proposition, a 2019 study showed that this habit-breaking approach was successful in decreasing implicit stereotyping of Latinxs among white medical students in the USA.<sup>21</sup> In fact, implicit bias training that does not teach concrete strategies to health-care providers could potentially have unintended harmful consequences. Specifically, increased awareness of someone's own implicit bias without specific strategies might result in increased anxiety and ultimately avoidance (eg, being discouraged to work at clinics that serve patients from marginalised social groups), withdrawal (eg, having shorter visits with marginalised patients), or overcompensation (eg, being overly friendly, which could be perceived by marginalised social groups as ingenuine and unauthentic). Taken together, this research into basic social psychology provides strong evidence that to be effective, training should increase awareness about someone's own implicit bias, increase internal motivation to reduce implicit bias, and teach health-care providers concrete evidence-based strategies to reduce this bias.<sup>22</sup>

The gap between T2 and T3 reflects two inconsistencies. The first inconsistency is between the actual and the intended goals of implicit bias training. We believe that the intended goal for medical schools and other health organisations to implement this bias training is to improve the care quality for patients from marginalised social groups. However, the actual goal of most implicit bias training used in these settings stops short because training effectiveness is gauged merely by asking study participants to reflect on their own implicit bias (ie, assessment of changes in awareness)<sup>23</sup> or to retake the implicit association test (ie, assessment of changes in the levels of implicit bias).<sup>24</sup> To our knowledge, none of the current programmes evaluate their effectiveness on the basis of improved patient outcomes. Although research suggests that reduction in implicit bias should result in improved patient care, a previous study only compared care quality across health-care providers with different levels of implicit bias (ie, comparisons between people).<sup>25</sup> Additionally, a 2019 meta-analysis suggests changes in implicit bias scores do not always result in changes in behaviours.<sup>26</sup> Thus, whether the successful reduction in implicit bias would result in

improved care quality for patients from marginalised social groups for a given health-care provider (ie, comparison within people) is yet to be tested. In addressing this gap, it is also important to explicate whether the implicit bias training is intended to address the consequences of implicit prejudice, implicit stereotyping, or both, because different aspects of implicit bias are likely to be associated with different patient outcomes (eg, patient-provider communication and providers' treatment recommendations).<sup>5</sup>

The second inconsistency is between the current goal of implicit bias training and the overarching goal of the US health-care system, which seeks to maximise revenues by scheduling providers to see many patients in a short period of time. This high-pressure environment makes it difficult for health-care providers to engage in evidence-based strategies to reduce implicit bias.<sup>27</sup> Specifically, health-care providers who do not have adequate time to get to know their patients have a limited ability to engage in individuation or perspective taking. Furthermore, many health-care providers operating under this constant pressure have chronic stress. Stress often reduces people's ability to exert self-regulation, which is at the core of overriding habitual responses.<sup>28</sup> Consequently, health-care providers might not have the ability to engage in stereotype replacement and counter-stereotypical imaging.

These considerations suggest a situational irony that implicit bias training as currently envisaged might not be an effective or realistic approach to rectifying the negative effects of implicit bias. This issue leads to the final translational gap between T3 and back to T1. The negative associations between the implicit prejudice of health-care providers' and patients from minority groups' reports of their perceived quality of patient-provider communication, as shown in previous research,<sup>5</sup> strongly suggest that the providers' implicit prejudice manifests in their communication behaviours during medical interactions. That is, the communication behaviours of health-care providers serve as a mediator between provider implicit prejudice and patient outcomes. Thus, improving provider communication behaviours might be a more practical and attainable approach to improving care outcomes for patients who are marginalised than are strategies aimed at reducing implicit bias per se.<sup>29</sup> Social psychology research has consistently reported that implicit prejudice often manifests in their non-verbal (how people use their body, such as gestures, eye contact, and body distance) and paraverbal (how people deliver their speech, such as tone, pitch, and volume) behaviours, as opposed to verbal behaviours (the content of people's speech).<sup>2</sup> Hence, rather than reducing implicit bias scores, the better focus for implicit bias training might be to replace negative non-verbal or paraverbal communication behaviours with positive communication behaviours, and to provide relevant opportunities to practise new communication behaviours over time. To develop such training, researchers are encouraged to use multiple lines of investigation, including non-verbal behaviours, impression formation, and theatrical performance.

In this Viewpoint, we highlighted three crucial translational gaps that limit the effectiveness of implicit bias training used in US medical schools and other health organisations. However, these gaps can be addressed by recognising the constraints that exist in the health-care system, identifying appropriate means to achieve the intended goal of implicit bias training within these constraints (ie, improving the care quality for patients from

marginalised groups), and drawing on multiple lines of research that relate directly to the identified means. Although this Viewpoint focused on physicians in the USA, we believe that the observations and suggestions outlined are applicable to a wide range of health-care professions globally. Implicit bias has been reported by many health-care professionals, such as nurses,<sup>30</sup> genetic counsellors,<sup>31</sup> and pharmacists.<sup>32</sup> Additionally, implicit bias training outside of the USA does not have a conceptual evidence-based framework<sup>33,34</sup> for the development of a curriculum that will drive changes in patient outcomes. As many medical schools and other health organisations are expected to increase their investments in implicit bias training, we urgently encourage those responsible for programme development and implementation to pause and address the translational gaps pointed out in this Viewpoint. This consideration will ultimately help those responsible for programme development and implementation to avoid opportunity costs and to guide their organisations towards wiser investments in effective training solutions.

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