

Sports Medicine Patient Experience: Implicit Bias Mitigation and Communication Strategies



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KEYWORDS

- Sports medicine • Athletes • Communication strategies • Implicit bias • Mitigation
- Equality • Diversity • Inclusion

KEY POINTS

- Implicit biases are developed over a lifetime through people's experiences, eventually influencing postures towards multiple choices like race, ethnicity, and physical appearance.
- Education and self-awareness about implicit bias and its potentially harmful effects on judgment and behavior may lead individuals to pursue corrective action and mitigation.
- Team physicians must consider race, gender, critical social determinants of health, access to care, and patient expectations, all of which can significantly impact patient outcomes.
- The first step in preventing implicit bias is educating ourselves about the spontaneous cognitive processes that unconsciously affect our clinical decisions.

INTRODUCTION

In the last decade, many organizations have been working toward achieving equitable and unbiased interaction and opportunities for all types of people. However, persistent racial inequalities and attitudes have driven a search for factors generating ongoing discrimination. Multiple investigators have inculcated implicit race biases as the principal contributor to the perpetuation of discrimination.¹⁻⁴ Unconscious bias occurs spontaneously and unintentionally, affecting the judgment, decision-making, outcomes, and athlete's care.^{1,5} Therefore, education and self-awareness about implicit bias are paramount to swift

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Clin Sports Med 43 (2024) 279–291
<https://doi.org/10.1016/j.csm.2023.07.002>

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individuals to pursue corrective actions and mitigation strategies to improve team physician-athlete relationships, athlete's performance, well-being, and care.⁶

HISTORY

The term "implicit bias" was portrayed in 1995 by psychologists Mahzarin Banaji and Anthony Greenwald⁷ as a social behavior primarily influenced by unconscious associations and judgments. After further author contributions, the term was defined as "the unconscious stereotyping and formation of attitudes toward groups or ideas that can influence our actions." For example, individuals may fully support equality, but their cognition could unknowingly persuade them to react differently.⁸

The concept of implicit bias was initially theorized in 2013 by authors Mahzarin Banaji and Anthony Greenwald in a book called "Blindspot: Hidden Biases of Good People." They explored humans' hidden biases due to life experiences and factors such as nationality, age, gender, ethnicity, and religion. "Humans possess mental blindspots like our visual blind spots—they exist without conscious awareness." "These blindspots house our hidden biases, or 'mind bugs,' which directly conflict with our conscious beliefs and ideologies."⁶

The hidden biases concept is based on prevailing ideas in psychology that the unconscious mind is responsible for much of our actions and behavior. Therefore, humans possess unconscious biases that contribute to discrimination. The mind has an automatic or unconscious side and the reflective or conscious side. Hidden biases are a by-product of the unconscious side and may interfere with the actions and behaviors of the reflective and conscious side.⁶

DEFINITIONS

Implicit bias is a form of bias that occurs spontaneously and unintentionally and nevertheless affects judgments, decisions, and behaviors. It is also known as unconscious bias, is often automatically activated, and operates at a level below the consciousness.¹ It is an unconscious preference in judgment and behavior that results from subtle cognitive processes.⁹

Implicit bias is usually built up based on implicit attitudes and stereotypes, is not limited to race, and can exist for attributes including gender, age, gender identity, disability status, sexual orientation, and physical characteristics such as color, height, and weight. The stereotypes about people are practically ubiquitous, and the implicit bias occurs automatically in almost everyone. Implicit biases are developed over a lifetime through people's environments and experiences. They will eventually influence feelings and attitudes toward multiple choices such as race, ethnicity, physical appearance, and age.⁹

BACKGROUND

Implicit biases are linked to prejudiced outcomes such as poorer quality interactions,¹⁰ constrained employment opportunities,¹¹ and a decreased probability of receiving life-saving emergency medical care.⁶ Moreover, many theorists concluded that implicit biases persist and are robust determinants of behavior because people lack personal awareness of them. They can happen despite conscious nonprejudiced intentions.^{1,4,12}

Unconscious bias can influence the patient-provider relationship, treatment decisions, and outcomes. A systematic review by Hall and colleagues found that implicit bias was significantly related to patient-provider interactions, treatment decisions, treatment adherence, and patient health outcomes.⁵ The group concluded that

“Implicit attitudes were more often significantly related to patient-provider interactions and health outcomes than treatment processes.”

Unconscious bias is an implicit bias that can be considered a “*shortcut*” our minds take to make a rapid and spontaneous judgment about someone.^{13,14} Personal background, life experiences, societal stereotypes, and cultural background influence perceptions and decisions about interactions with others. The associations are based on multiple experiences and direct and indirect exposures during life, starting at a very early age.

Differences in gender, ethnicity, race, and socioeconomic status within the diverse population of the United States have led to the infiltration of disparities across many specialties in the medical field.^{15,16} Several investigators have documented differences in orthopedics utilization, selection, treatment, and outcomes.^{15,17–21} In 2003, in the Institute of Medicine report “Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care,” the investigators determined that “bias, stereotyping, and clinical uncertainty on the part of health care providers may contribute to racial and ethnic disparities in health care” often despite providers’ best intentions.²²

Several studies have shown that individual and institutional discrimination contributes to disparities in African American patients, resulting in fewer indicated and required procedures and higher infant mortality rates compared with non-Hispanic whites.^{22,23}

Female athletes are 2 to 8 times more likely to sustain an anterior cruciate ligament (ACL) injury.^{23–25} Hence, recent literature on ACL injuries in women has shown an interest in understanding the potential mechanism underlying gender differences in injury rates.²⁶ In addition, several investigators have documented multifactorial reasons for racial and ethnic disparities in treatment and outcomes after ACL injuries in the population.²⁷ Furthermore, patient satisfaction and health outcomes are favorable when racial, ethnic, and linguistic concordance exists between the physician and patient.^{28–30}

In recent years, multiple reports in the literature have documented the concept that implicit bias in health care can directly lead to health care disparities. Eliminating health care disparities is among the top 5 initiatives of the National Institute of Health. The concept of implicit bias mitigations in health adopts multiple strategies to identify and make people aware of each person’s elements for judgment and how to avoid unconscious bias and improve behavior, health care–patient interactions, and outcomes. Burgess and colleagues documented that “if health care providers understand that stereotyping and racial prejudice are ‘a normal aspect of human cognition,’ they may be more open to learning about this phenomenon and how it impacts medical practice.”³¹

Druckman and colleagues did a study and evaluated race and sports and focused on racial bias in the sports medicine field. The investigators evaluated the interaction of racial bias in pain-related perceptions among NCAA Division I sports medical staff. The study results showed that medical staff perceived black athletes as feeling less pain than white counterparts and basketball players as feeling less pain than soccer players. Moreover, the bias was mediated by perceptions of social class. Racial bias was not evident in other outcome measures, including the perception of recovery process pain, the likelihood of overreporting pain, and the overuse of drugs to combat pain.³²

Devana and colleagues²⁷ conducted a research study to review the literature to identify gender, racial and ethnic disparities in incidence, treatment, and outcomes of ACL injury. The study results showed that non-White and Spanish-speaking patients are less likely to undergo anterior cruciate ligament reconstruction (ACLR) after an ACL tear. Black and Hispanic youth have a more significant surgical delay to ACLR,

increased risk for loss to clinical follow-up, and fewer physical therapy sessions, thereby leading to more significant deficits in knee extensor strength during rehabilitation. Furthermore, they found that Hispanic and Black patients had a higher risk of hospital admission after ACLR. Women have higher rates of ACL injury, with inconclusive evidence on the anatomic predisposition and ACL failure rate differences between genders.

In recent literature, several investigators have found inferior return to sports and functional outcomes following ACLR in women.^{27,33} In addition, the investigators suggest disparities in those who undergo ACLR and their time to treatment. Other investigators have found that sex-based outcomes differ after ACL reconstruction depending on the used metric.³⁴

DISCUSSION

Unconscious bias originates from patterns humans develop from the ability to create configurations in small bits of information. These configurations emerge from positive and negative attitudes and stereotypes people unconsciously develop about certain situations and individuals. This cognitive process generates a behavioral pattern that evolves from unconscious biases and helps to sort and filter people's perceptions. Moreover, it promotes inconsistent decision-making and possible systematic errors in judgment.³⁵

Health care professionals have the same level of implicit bias as the general population, and higher levels are linked with suboptimal quality care. Providers with higher levels of bias are more likely to demonstrate unequal treatment recommendations, disparities in pain management, and even a lack of empathy toward minority patients.³⁶

HOW DO WE TACKLE THE PRESENCE AND UNCONSCIOUS RESPONSE OF IMPLICIT BIAS DURING ATHLETE'S CARE?

- I. Strategies for the application of strategies for future conversations and experiences with athletes
 - Existing implicit bias mitigation techniques

Education and self-awareness about the presence of implicit bias and its potentially harmful effects on judgment and behavior may lead individuals to pursue corrective action and mitigation.³⁷ Mitigation is defined as the action to reduce or exclude the occurrence of an undesirable event.³⁸ Implicit bias can be mitigated with awareness and effective bias-reduction strategies. Implicit bias mitigation aims to generate awareness of an individual's unconscious bias and related actions to consciously redirect our response and decision-making process. According to several investigators, effective communication strategies reduce implicit bias.¹ In addition, many of these strategies can be applied to mitigate implicit bias during athlete interventions.

- Devine and colleagues published 6 strategies to reduce unconscious bias¹:
 1. Stereotype replacement
 - i. Recognize that a response is based on a stereotype and is consciously adjusting the response.
 2. Counterstereotypic imaging
 - i. The exercise of imagining the individual as the opposite of the stereotype.
 3. Individuation
 - i. Seeing the person as an individual rather than a stereotype.
 4. Perspective taking
 - i. Putting yourself in the other person's shoes.

5. Increasing opportunities
 - i. Increase occasions for contact with individuals from different groups.
 - ii. It is expanding one's network of friends and colleagues.
 - iii. Contemplate attending events with people of other racial and ethnic groups, gender identities, sexual orientations, and other groups.
6. Partnership building
 - i. Intend reframing the interaction with the patient as one between collaborating equals rather than between a high and low status.
- Augustus and colleagues published the book "*Seeing Patients: Unconscious Bias in Health Care*" and expressed practical tips to combat implicit bias in the health care field³⁹:
 1. Understanding culture
 - a. The team physician must have a basic understanding of the cultures of the athlete.
 2. Avoid stereotyping
 - a. Avoid stereotyping the athlete and individuating them by consciously avoiding unconscious bias.
 3. Understand unconscious bias
 - a. The team physician must comprehend the power of unconscious bias. Recognizing the personal triggers and consciously avoiding their influence in the decision-making process help mitigate the power of unconscious bias. There is an association between a more substantial implicit bias and poorer patient-provider communication.
 - b. The Implicit Association Test enables measurements of implicit bias automatic associations between concepts. It measures the strength of association between notions, evaluations, and stereotypes. This test helps to identify the team physician's own unconscious bias. The test assesses if mental links exist between concepts and potentially associated values. The main idea is that making a response is more straightforward when closely related items share the same response key.²²
 4. Recognize
 - a. Recognize situations that magnify stereotyping and bias.
 5. Culturalization
 - a. Know the national culturally and linguistically appropriate services standards.
 6. Teach Back
 - a. Do a "Teach Back" method to confirm patient understanding of health care instructions associated with improved adherence, quality, and patient safety.
 7. Practice evidence-based medicine
 - a. Assiduously practice evidence-based medicine.
- Several investigators have expressed their strategies to mitigate implicit bias.^{40–44} The most important of these strategies include the following:
 - Perspective-taking⁴²
 - Imagine being the person who experiences people questioning your ability or skills because of your social identity.
 - Counterstereotypic examples⁴⁰
 - Identify scientists of diverse backgrounds in your field.
 - Implicit stereotypes are malleable, and controlled processes, such as mental imagery, influence the stereotyping process at its early and later stages.

- Interrupt automatic biased thoughts⁴⁵
 - Identify when a person is influenced by implicit bias and helps create a response-conscious action plan. Therefore, implementation intentions may be an effective and efficient means of controlling automatic thought aspects.
- Education^{41,46}
 - Carnes and colleagues⁴¹
 - An intervention that facilitates intentional behavioral change can help faculty break the gender bias habit and change department climate in ways that should support women's career advancement in academic medicine, science, and engineering.
 - Girod and colleagues⁴⁴
 - Providing education on bias and strategies for reducing it can serve as an essential step toward reducing gender bias in academic medicine and, ultimately, promoting institutional change, specifically promoting women to higher ranks.

Communication strategies during athlete intervention and care

The first step in preventing implicit bias is educating ourselves about the spontaneous cognitive processes that unconsciously affect our clinical decisions. In 2019, Edgoose and colleagues recommended 3 primary strategies to mitigate implicit bias: educate, expose, and approach (Fig. 1). Furthermore, these strategies were subdivided into 8 evidence-based tactics.³⁵

1. EDUCATE

a. Introspection:

i. Take the Implicit Association Test to recognize

1. This test measures the strength of associations between concepts (eg, black people, gay people) and evaluations (eg, good, bad) or stereotypes (eg, athletic, clumsy). The main idea is that making a response is more straightforward when closely related items share the same response key.⁴⁶

ii. Confront and explore your own implicit biases.

b. Mindfulness

- i. Increasing mindfulness improves our coping ability and modifies biological reactions that influence attention, emotional regulation, and habit formation.⁴⁷

2. EXPOSE

- a. Expose to counterstereotypes and focus on the unique individuals you interact with.

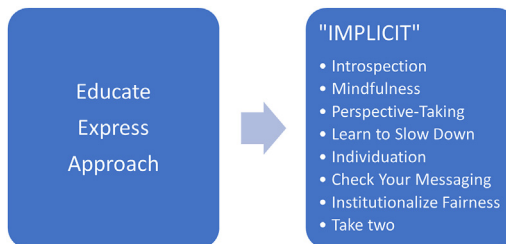


Fig. 1. Strategies to combat our implicit biases.³⁸ (From: Edgoose JYC, Quiogue M, and Sidhar K. How to Identify, Understand, and Unlearn Implicit Bias in Patient Care. *Fam Pract Manag*, 2019. 26(4): p. 29-33.)

- b. Avoid similarity and experience bias.
 - Exposure to other groups and ways of thinking can help mitigate the similarity and experience bias.
 - c. Perspective-talking
 - d. Learn to slow down
 - i. Acknowledging the potential for bias is crucial for the physician to recognize that safe options remain for managing patients' conditions.
 - e. Individuation
 - i. This method relies on gathering specific information about the person interrelating with you to counteract group-based stereotypic inferences.
3. APPROACH
- a. Check your messaging
 - i. Using specific messages designed to create a more inclusive environment and mitigate implicit bias can make a real difference. For example, statements that welcome and embrace multiculturalism will have more success in decreasing unconscious bias.

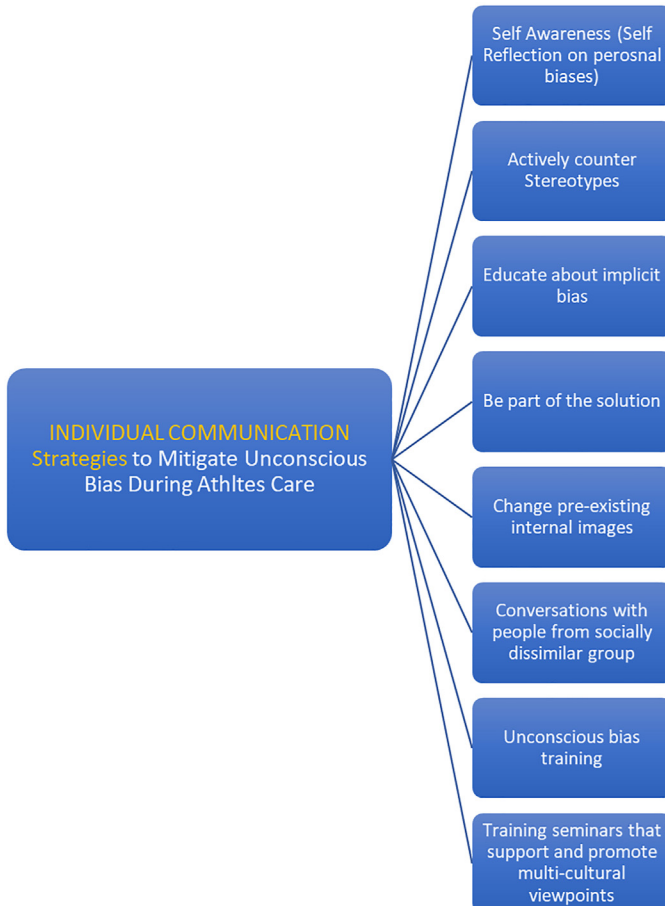


Fig. 2. Individual communication strategies for athlete's interventions and health care.

- b. Institutionalize fairness
 - i. Organizations are responsible for supporting a culture of diversity and inclusion because individual actions are not enough to deconstruct systemic inequities.
- c. Take two
 - i. Implicit bias mitigation strategies require constant revision and reflection during an individual's cultural transformation.
- Checklist for recognizing and minimizing the influence of implicit bias **Fig. 2**
 - Acknowledge biases in yourself and others.
 - Simply knowing about implicit bias and its potentially harmful effects on judgment and behavior may prompt individuals to pursue corrective action.
 - Be part of the solution.
 - Be self-aware.
 - Frequently evaluate your judgments for the influence of unconscious bias.
 - Change potential preexisting internal images.
 - Have conversations with people from socially distinct groups and focus on what you need to learn to grow.
 - Unconscious bias training produces better workplace environments, improved physician athlete-relationship and communication, and improved care outcomes.
 - Training seminars that acknowledge and promote an appreciation of group differences and multicultural viewpoints can help reduce implicit bias.⁴⁸
 - Diversity training seminars can be a starting point for cultural change.⁴⁹
 - Raise awareness
 - Recognize and speak up whenever you observe unconscious bias.

The health care worker's nonbiased approach to athlete care: transform bias from biased-unconscious to nonbiased-conscious.⁴⁸ As a leader and a team physician,

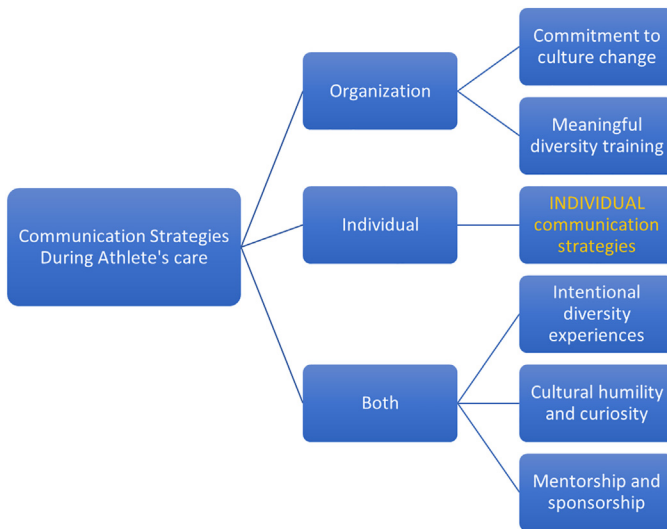


Fig. 3. Organization and individual strategies to mitigate unconscious bias during athlete care. (From: Hewett TE, Ford KR, and Myer GD. Anterior cruciate ligament injuries in female athletes: Part 2, a meta-analysis of neuromuscular interventions aimed at injury prevention. *Am J Sports Med*, 2006. 34(3): p. 490-8.)

use inclusive language, increase diversity to include underrepresented groups on the team, and make efforts to empower everyone equally and support underrepresented groups. Encourage leadership to offer training and workshops on unconscious bias.

SUMMARY

Unconscious bias, also known as implicit bias, is the principal contributor to the perpetuation of discrimination^{1–4} and is a robust determinant of behavior because people lack personal awareness of them. They can happen despite conscious nonprejudiced intentions^{1,5,7,10} due to an automatic and unconscious response. These unconscious and hidden biases may interfere with the actions and behaviors of the reflective and conscious side.⁶

Education and self-awareness about implicit bias and its potentially harmful effects on judgment and behavior drive individuals to pursue corrective action and mitigation.³⁷ Moreover, it is paramount that individuals seek corrective actions and mitigation strategies to improve team physician-athlete relationships, athlete performance, and care.

It is vital to mitigate and transform ethnic disparities into a provider's desire to avoid unconscious bias, resulting in the best possible care for patients.^{3,40} During athlete interventions, team physicians must consider not only race and gender but also critical social determinants of health, access to care, and patient expectations, all of which can significantly affect patient outcomes.²⁷ In addition, individuals must become conscious and aware of their biases to act and redirect their responses.

Organizations and individuals must consistently create protocols to follow existing implicit bias mitigation and communication strategies. Furthermore, follow guidelines that implement the necessary changes to begin an evolution and consciously identify and change the automatic preferences that drive their judgment and decision-making. As shown in **Fig. 3**, there are already published strategies and infrastructure for organizations and individuals to help mitigate unconscious bias during patient interventions and athlete care. Furthermore, **Fig. 2** provides specific individuals' strategies to reduce unconscious bias and improve patients' and athletes' health care outcomes.

The interaction, communication, and care of athletes are also affected by implicit bias. Therefore, it is paramount to follow implicit bias mitigation and communication strategies to improve the outcome of athletes' intervention and care (see **Fig. 1**).

With sufficient motivation, cognitive resources, and effort, the team physician can focus on the unique qualities of the athletes, rather than on the groups they belong to, in forming impressions and behaving toward others. Furthermore, it is paramount to mitigate and transform ethnic disparities into a provider's desire to avoid unconscious bias, resulting in the best care for athletes.

CLINICS CARE POINTS

- Implicit race biases are the principal contributor to the perpetuation of discrimination.^{1–4}
- Unconscious bias occurs spontaneously and unintentionally, affecting the judgment, decision-making, outcomes, and athlete's care.^{1,5}
- The mind has an automatic or unconscious side and the reflective or conscious side. Hidden biases are a by-product of the unconscious side and may interfere with the actions and behaviors of the reflective and conscious side.³⁷
- Implicit biases persist and are robust determinants of behavior because people lack personal awareness of them, and they can happen despite conscious nonprejudiced intentions.^{1,4,12}

- "Humans possess mental blindspots like our visual blind spots—they exist without conscious awareness." "These blindspots house our hidden biases, or 'mind bugs,' which directly conflict with our conscious beliefs and ideologies".⁴
- Implicit attitudes are often significantly related to patient-provider interactions and health outcomes than treatment processes.⁵
- Education and self-awareness about implicit bias are paramount to swift individuals to pursue corrective actions and mitigation strategies to improve team physician-athlete relationships, athlete's performance, well-being, and care.⁶
- It is paramount to mitigate and transform ethnic disparities into a provider's desire to avoid unconscious bias, resulting in the best possible care for patients.^{3,40}
- It is also known as unconscious bias, is often automatically activated, and operates at a level below consciousness. It is an unconscious preference in judgment and behavior that results from subtle cognitive processes.⁹
- When health care providers understand that stereotyping and racial prejudice are regular aspects of human cognition, they are more open to learning about this phenomenon and how it affects medical practice.³⁰
- Health care professionals have the same level of implicit bias as the general population, and higher levels are linked with suboptimal quality care.³⁶
- Providers with higher levels of bias are more likely to demonstrate unequal treatment recommendations, disparities in pain management, and even a lack of empathy toward minority patients.^{8,9,36}
- Effective communication strategies reduce implicit bias.¹
- Education and self-awareness about implicit bias and its potentially harmful effects on judgment and behavior may lead individuals to pursue corrective action and mitigation.^{6,37,40}
- Three primary strategies to mitigate implicit bias: Educate, Expose, and Approach.³⁵
- Training seminars that acknowledge and promote an appreciation of group differences and multicultural viewpoints can help reduce implicit bias.⁴⁸
- Diversity training seminars can be a starting point for cultural change.⁴⁹
- The health care worker's nonbiased approach to athlete care: transform bias from biased-unconscious to nonbiased-conscious.^{8,48}
- During athlete interventions, team physicians must consider not only race and gender but also critical social determinants of health, access to care, and patient expectations, all of which can significantly affect patient outcomes.²⁷
- Both organizations and individuals must create protocols and guidelines that implement changes to begin an evolution to consciously identify and change the automatic preferences that drive their judgment and decision-making.
- Developing implicit bias mitigation and communication strategies to improve the health care professional's outcome with athletes is paramount.

DISCLOSURE

P.J. Tort; Consultant for Exactech, Smith, and Nephew, and Conmed.

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