

What COVID-19 Teaches Us About Implicit Bias in Pediatric Health Care

Siddika S. Mulchan , PsyD, Emily O. Wakefield, PsyD, and Melissa Santos, PhD

Department of Pediatrics, Connecticut Children's Medical Center, University of Connecticut School of Medicine

All correspondence concerning this article should be addressed to Siddika S. Mulchan, PsyD, Center for Cancer and Blood Disorders, Connecticut Children's Medical Center, 282 Washington Street, Suite 5A, Hartford, CT 06106, USA. E-mail: ssmulchan@gmail.com

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Abstract

Objectives To highlight the role of implicit bias in contributing to existing health disparities among pediatric populations during the coronavirus disease 2019 (COVID-19) pandemic and recommend strategies to reduce its impact. **Methods** A topical review of the recent literature on implicit bias describing its potential impact in key areas of pediatric health care within the context of COVID-19 was conducted. **Results** Pediatric provider implicit bias has been found to be similar to the general population and can negatively influence clinical decision-making and outcomes for marginalized youth and families, particularly under stressful conditions such as the COVID-19 pandemic. Implicit bias can be mitigated through strategies proposed at the individual, institutional/organizational, educational, and scientific/research levels. **Conclusions** The additional strain on provider resources, staff, and supplies created by COVID-19 may exacerbate providers' susceptibility to implicit bias and contribute to health disparities. Pediatric psychologists are encouraged to recognize implicit biases in themselves and colleagues and promote identified strategies to reduce the impact of implicit bias on perpetuating health disparities in marginalized youth and families.

Key words: chronic illness; ; health disparities and inequities; health promotion and prevention.

Introduction

The coronavirus disease 2019 (COVID-19) pandemic has disrupted the lives of many and underscored known health disparities and biases in health care systems. This topical review examines the role of implicit bias in pediatric health care and its potential contribution to health disparities in pediatric populations during COVID-19.

COVID-19 and Health Disparities

With the progression of COVID-19, health disparities, or differences in adverse health outcomes and health care utilization among social groups (Kim et al., 2020), became increasingly apparent. COVID-19 showed tremendous racial and ethnic disparities in

both illness and death in the United States (Centers for Disease Control and Prevention, 2020). Blacks have a higher hospitalization rate for COVID-19 (33%) compared with the general community (18%; Garg, 2020), and deaths per hundred thousand from COVID-19 impacted Blacks (92) and Hispanics (74.3) more than Whites (45.2). Unfortunately, these findings are not unexpected considering the underlying health conditions, presence of under-employment with little sick leave, and high likelihood of living in high-density areas for racial and ethnic minority households (Centers for Disease Control and Prevention, 2020). COVID-19's impact on other groups, such as rural communities, those of low socio-economic status (SES), and those with certain medical comorbidities

(Garg, 2020; Kantamneni, 2020; van Dorn et al., 2020), also became quickly evident, with individuals intersecting groups most impacted.

These health outcomes highlight disparities in care that marginalized groups may experience during COVID-19. For example, research suggests these groups may be less likely to have a primary care provider and obtain a referral to be tested for COVID-19 (Kim et al., 2020). Even once a referral is obtained, many mobile testing sites require a vehicle, which marginalized groups may not have, leaving them without testing or a high cost visit to the emergency department (ED; Kim et al., 2020). These barriers become more pronounced by the high rate of unemployment and potential loss of insurance faced by marginalized populations (Kim et al., 2020).

COVID-19's impact in youth is still emerging but nonetheless critical to examine, given the health disparities seen in adults. Previous research indicates inequities for racial and ethnic minority youth with chronic health conditions (e.g., acute leukemia, cerebral palsy, type 1 diabetes, Down syndrome, HIV/AIDS, spina bifida, and traumatic brain injury) who were found to have greater complications and higher morbidity rates compared with White youth (Berry et al., 2010). Some conditions (e.g., acute leukemia) were similar to COVID-19 in terms of their acute onset and potential long-term consequences. Furthermore, racial and ethnic minority youth and those with complex or chronic health conditions and mental health disorders may be particularly at risk of being affected by health care biases (Cohen & Bosk, 2020; Wong et al., 2020). However, few studies have examined health care bias in pediatric populations.

Therefore, the objective of this topical review is to highlight key areas of pediatric health care in which implicit bias may perpetuate pre-existing health disparities during COVID-19. A review of the scientific literature on implicit bias in pediatric health care was integrated with a review of articles from peer-reviewed journals and news media on COVID-19 and health disparities. From this review, a Call to Action was developed (Table I) with strategies to reduce the influence of implicit bias and promote greater health equity among pediatric populations.

Implicit Bias in Pediatric Health Care

Pediatric health care providers (HCPs) are working under increasingly stressful conditions during the current pandemic as they follow new and frequently changing protocols for COVID-19 to protect themselves, their staff, and the families they serve. As front-line health workers during COVID-19, HCPs are at risk of psychological distress including burnout, characterized by emotional exhaustion, depersonalization,

and a diminished sense of personal accomplishment, and anxiety (Rodriguez et al., 2020; Sultana et al., 2020). Long work hours may result in sleep deprivation which further increases the risk of burnout and stress (Sultana et al., 2020). As a result, HCPs may rely more on cognitive “shortcuts,” such as stereotypes, to diagnose and treat patients efficiently (Lang et al., 2016). This type of “quick thinking” is more likely to occur under conditions which have been amplified by COVID-19, such as when multi-tasking, under time constraints, and/or feeling anxious, and may lead to the activation of implicit bias (Chapman et al., 2013).

Implicit bias was originally described in the seminal article by Devine (1989) on the activation of racial stereotypes and is defined as “attitudes or stereotypes that impact understanding, actions, and decisions in an unconscious manner” (Raphael & Oyeku, 2020, p. 35). The most commonly used, validated assessment of implicit bias is the Implicit Association Test (IAT; Greenwald et al., 1998), which is a computerized categorization task that involves rapidly pairing two social groups (e.g., Black and White faces) with positive or negative attributes (e.g., wonderful, horrible, etc.). Response latency and error frequency indicate the strength of an association, where faster responses and fewer errors reflect a stronger association (Greenwald et al., 1998). For example, on the Race IAT, a shorter response time and few errors when categorizing White faces with positive words compared to the same task with Black faces indicates a pro-White implicit bias.

Systematic and narrative reviews of studies using the IAT in adult health care have demonstrated that implicit bias not only applies to race and ethnicity, but also to gender, age, and weight (Fitzgerald & Hurst, 2017; Zestcott et al., 2016). Implicit bias in pediatric care is an emerging area of research, but preliminary evidence suggests it is a barrier to health equity for pediatric populations (Raphael & Oyeku, 2020). This growing body of literature has primarily used the IAT to examine implicit racial bias in pediatric HCPs in the ED setting using cross-sectional data and experimental vignette methodology (EVM; Johnson et al., 2017; Puumala et al., 2016). Rates of pediatric HCP implicit bias have been documented as similar to that of the general population and can negatively impact clinical decision-making and outcomes for marginalized pediatric populations (Johnson et al., 2017; Raphael & Oyeku, 2020). Given these findings, it is imperative to understand how implicit bias could impact health disparities among youth during COVID-19.

Areas of Impact

Individual

Most research on implicit bias in pediatric care has focused on the individual HCP level. Findings from

studies using EVM and videotaped pediatric encounters indicate that implicit bias can negatively affect pediatric providers' assumptions and communication with patients and families (Johnson et al., 2017; Stivers & Majid, 2007). For example, families of low SES may activate providers' implicit biases for negative associations (e.g., "noncompliant"; Lang et al., 2016). HCPs may perceive these families as resistant to following recommended precautions without considering systemic factors related to environment (e.g., families reside where COVID-19 is more easily transmitted) and access (e.g., poor insurance, lack of available testing centers and/or personal protective equipment, limited transportation, unreliable internet for telehealth), thereby increasing the likelihood of victim blaming (Nelson, 2002) and ineffective patient/family-provider communication.

HCP implicit bias conveyed toward youth and families through subtle microaggressions may be a barrier to patient trust and communication (Lang et al., 2016). Microaggressions can be intentional or unintentional and may occur in multiple contexts. For example, a provider who meets with a Black child and their mother for a new patient appointment might assume the mother is a single parent without having asked about family environment and say, "Being a single parent is really hard." This comment may have been well-meaning, but it indirectly communicates negative stereotypes about Black families as single-parent households. Microaggressions can also occur between HCPs and reinforce negative stereotypes in health care, such as when a provider explains to a colleague the reason a Hispanic child with obesity continues to gain weight is "noncompliance" because "it goes with the population." Patients and families may be less willing to disclose symptoms or barriers with HCPs they perceive as high in implicit bias (Penner et al., 2010), creating a cycle where treatment is negatively impacted due to poor patient engagement and adherence and disparities in health outcomes are reinforced. Studies indicate rates of HCP implicit bias against children of racial and ethnic minority status may be similar to those in adults based on IAT comparison and can lead to disparities in patient-provider communication (Johnson et al., 2017; Puumala et al., 2016; Stivers & Majid, 2007). HCPs may benefit from seeking implicit bias training, such as those emphasizing perspective taking and emotional regulation (Burgess et al., 2007), to improve communication with patients and families. Further research is needed on the clinical implications of HCP implicit bias on pediatric populations.

Institutional/Organizational

In addition to individual HCP implicit bias, the current pandemic has uncovered institutional and

organizational implicit biases. The emerging literature in this area has been in the form of editorials and perspective papers (Milam et al., 2020; Williams & Cooper, 2020). Disparities in access to COVID-19 testing, lifesaving treatment, and mortality rates for racial and ethnic minority communities have been reported (Milam et al., 2020). Williams and Cooper (2020) note that the "segregation of health care" (p. 2478) limits access to primary care and specialty care offices in communities of color where individuals tend to have poor health insurance. In fact, many COVID-19 testing centers are located away from low-income communities where many racial and ethnic minorities reside (Williams & Cooper, 2020). These biased decisions reduce children's access to services and may exacerbate negative health outcomes for racial and ethnic minority youth, a population already at risk for the worst health outcomes of COVID-19 (Rutgers University, 2020) due to high rates of asthma, obesity, and diabetes compared with Whites (Berry et al., 2010; Flores & The Committee on Pediatric Research, 2010).

Implicit bias can also manifest in institutional and organizational culture and leadership, which influence workforce diversity and pediatric care (Schnierle et al., 2019). Several national organizations focused on pediatric health care have recently demonstrated increased awareness of implicit bias. These include the American Academy of Pediatrics who published a policy statement encouraging advocacy for implicit bias training (Trent et al., 2019), the American Academy of Family Physicians who developed the "EveryONE Project Implicit Bias Training Guide," and the American Psychological Association's Society of Pediatric Psychology who established its Antiracism Task Force. Racial and ethnic minorities are often underrepresented among HCPs and organizational leadership, and this lack of diversity could limit patient and family engagement in their care (Li et al., 2020). Additionally, HCPs may experience challenges with perspective taking and empathy building with populations they perceive as dissimilar from themselves (Burgess et al., 2007). These findings are particularly concerning in the context of COVID-19, given the discrepancy in demographics between the health care workforce (e.g., White, middle-to-high SES) and patients and families at the greatest risk of contracting the virus (e.g., Black or Hispanic, low SES; Garg, 2020; Li et al., 2020). Martinez-Kaigi (2020) has called for pediatric HCPs to protect vulnerable youth by developing institutional and organizational policies that reflect a commitment to improving health equity, such as diversifying health care teams, promoting education and training on implicit bias, and implementing strategies to mitigate its impact on clinical decision-making. Encouraging open communication about

implicit bias among team members and patient/family advocacy are also important considerations for leadership. More program evaluation and quality improvement initiatives are needed to address problematic internal culture and clinical practices within pediatric health care institutions and organizations.

Educational

HCPs, including pediatric providers, are often taught during their education and training that certain diseases and disorders are more prevalent in some populations. As these associations are repeated, stereotypes develop and are reinforced (Moskowitz et al., 2012). For example, medical students may learn that the prevalence of obesity and diabetes is higher in Black and Hispanic youth due to lifestyle choices as opposed to systemic factors. This focus on population health, in addition to the acquisition of vast scientific knowledge increasing self-perceived objectivity, may strengthen implicit biases among HCPs (Chapman et al., 2013). HCPs may be susceptible to negative consequences stemming from implicit bias due to a lack of education and awareness. In the midst of COVID-19, opportunities for HCPs to engage in continuing education and self-reflection are further limited by increased work demands. As such, they may be unfamiliar with strategies to mitigate the effects of implicit bias, such as stereotype replacement, individuation, perspective taking, and emotional regulation (Burgess et al., 2007; Raphael & Oyeku, 2020).

Limited research is available examining implicit bias in medical education. However, a recent commentary by Karani et al. (2017) observed that the selection of academic material for medical programs may reflect bias from faculty who may be less knowledgeable about, or sensitive to, marginalized populations. Medical communities, including the American Academy of Pediatrics, have called for the inclusion of implicit bias training in medical education due to consistent findings demonstrating its impact on clinical care, and additional research is being conducted in this area (Raphael & Oyeku, 2020; Zestcott et al., 2016). Nonetheless, such training has not yet been widely adopted by academic programs (Raphael & Oyeku, 2020). Even in fields such as psychology where implicit bias tends to be part of the educational curriculum through didactic and clinical training/supervision, stereotypes about marginalized youth and families may persist. For example, the stereotype that racial and ethnic minority youth and families are “guarded” or “stoic” and prefer emotional support from their communities may limit mental health services from being offered to this population. In the context of COVID-19, where racial and ethnic minorities are already presented with barriers to access, such stereotypes can exacerbate health disparities. Given

promising findings that HCP implicit bias training can improve patient satisfaction with care and reduce implicit racial and ethnic stereotyping (Ruben & Saks, 2020; Zestcott et al., 2016), further development of medical training in implicit bias grounded in a scientific framework is warranted (Hagiwara et al., 2020). Additional research is needed on strategies for including implicit bias training in academic and continuing education programs, as well as the most effective content and structure for teaching this information to HCPs and trainees during COVID-19.

Scientific/Research

COVID-19 has sparked increased awareness about health disparities and research on factors maintaining inequities in health care, including implicit bias (Milam et al., 2020; Williams & Cooper, 2020). Systematic and narrative reviews of studies over the last decade have demonstrated the detrimental impact of implicit bias on patient-provider interactions, clinical decision-making, and quality of care for stigmatized groups (Fitzgerald & Hurst, 2017; Zestcott et al., 2016). Research on implicit bias in pediatric populations is still emerging (Raphael & Oyeku, 2020), but evidence suggests that implicit bias can contribute to disparities in care for youth and families.

HCP implicit bias has been identified as a factor contributing to disparities in patient-provider communication during videotaped pediatric encounters, where Black and Hispanic youth were less likely to be asked questions by pediatricians compared with White and Asian youth (Stivers & Majid, 2007). Implicit bias has been implicated in retrospective cross-sectional and qualitative studies on disparities in analgesic administration for racial and ethnic minority children, who were found to be less likely to receive optimal pain management for various ailments including bone fractures, abdominal pain, appendicitis, and sickle cell pain (Raphael & Oyeku, 2020). These findings have the potential to affect youth and families from other marginalized groups who tend to receive care in the ED, such as those from low SES backgrounds and those with mental health disorders and complex or chronic health conditions. The growing body of literature on implicit bias in pediatric populations can be enhanced through study design considerations, additional research investigations, and further support from scientific organizations.

Call to Action

This topical review demonstrates the potential impact of implicit bias on perpetuating health disparities in pediatric populations during COVID-19 and the need for additional research. Action items intended to

Table I. *Implicit Bias in Pediatric Health Care Call to Action*

Individual level

- Develop self-awareness about implicit biases, particularly when experiencing higher clinical demands related to COVID-19, via administration of the Implicit Associations Test (Ratcliff et al., 2011; <https://implicit.harvard.edu/implicit/index.jsp>) or increased observation of discomfort around particular pediatric groups
- Seek out perspective taking and emotional regulation training to manage implicit biases that may be negatively impacting the quality of care of pediatric patients and their families
- Appreciate that implicit bias is difficult to change and develop a same-team focus when caring for marginalized pediatric populations (Burgess et al., 2007)

Institutional/organizational level

- Invest in quality improvement methods (e.g., decision trees, clinical audits, process mapping) that continually provide feedback regarding clinical interactions with youth and families that may be susceptible to implicit biases from providers (Rapheal & Oyeku, 2020)
- Encourage patient advocacy in improving clinical care via open communication with pediatric patients and their families (i.e., family advisory councils)
- Enhance the utilization of community resources that reduce barriers to access quality health care for pediatric patients and their families in need of additional services.
- Develop a culture of open communication about provider implicit bias and microaggressions without fear of retaliation

Educational level

- Provide annual hospital-wide implicit bias training for all employees who have direct contact/communication with pediatric patients and their families
- Integrate perspective taking and empathy building trainings within medical school and clinical rotations in pediatric hospital settings (Burgess et al., 2007)
- Reinforce implicit bias training and encourage emotional regulation strategies (e.g., mindfulness, mediation, etc.) when trainees interact with pediatric patients and families who are dissimilar in social group (e.g., race, ethnicity, age, gender, and SES) via clinical supervision discussions about discomfort or potential normative implicit biases

Scientific/research level

- Use appropriate operationalized definitions of implicit bias in pediatric research and rigorously evaluate the effectiveness of interventions targeting this construct. Continuous feedback from participants on the methodology and outcomes may help reduce any potential bias within the study
- Focus on implicit bias outcomes in pediatric populations due to the lack of research within this population
- Incentivize research dedicated to the impact of bias on pediatric health outcomes, particularly in populations who have access needs, through improving funding mechanisms within the context of COVID-19
- Encourage the development of interventions to address implicit bias in health care through the inclusion of the impact of bias within the mission of the National Institutes of Health and other research organizations specifically in pediatric populations

reduce the negative influence of implicit bias are presented in Table I. Although this Call to Action is designed for pediatric HCPs, pediatric psychologists play an instrumental role in educating HCPs and implementing interventions to mitigate implicit bias, given their expertise in psychosocial factors affecting child health outcomes. However, given that awareness of implicit bias is an ongoing dynamic process, pediatric psychologists must also be vigilant to continually identify and address their own implicit biases prior to being effective in supporting medical teams. Individual- and system-wide changes combined may mitigate implicit bias and promote greater health equity among pediatric populations.

Conflicts of interest: None declared.

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