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2022 Consensus Conference on Diversity, Equity, and Inclusion: Developing an Emergency Medicine Research Agenda for Addressing Racism Through Healthcare Research

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Abstract

Racism in emergency medicine healthcare research is pervasive but often underrecognized. In order to understand the current state of research on racism in emergency medicine healthcare research, we developed a consensus working group on this topic, which concluded a year of work with a consensus-building session as part of the overall Society for Academic Emergency Medicine (SAEM) Consensus Conference on Diversity, Equity, and Inclusion: "Developing a Research Agenda for Addressing Racism in Emergency Medicine," held on May 10, 2022. In this manuscript, we report the development, details of pre-conference methods and preliminary results, and the final consensus of the Healthcare Research Working Group. Preconference work based on literature review and expert opinion identified 13 potential priority research questions that were refined through an iterative process to a list of 10. During the conference, the subgroup used consensus methodology and a "consensus dollar" (contingent valuation) approach to prioritize research questions. The subgroup identified three research gaps: remedies for racial bias and systematic racism, biases and heuristics in clinical care, and racism in study design, and we derived a list of six high-priority research questions for our specialty.

Introduction

Emergency Medicine (EM) serves as the front line for acute care and the safety net for marginalized patients in the United States. One of the fundamental tenets and legal obligations of emergency medicine is the duty to provide access to care to anyone, at any time, without regard for ability to pay.¹ Patients with one or more minoritized identities are often vulnerable and underserved by our current health system and rely disproportionately on the emergency care system for access,² which is itself related to persistent racial disparities in several aspects of acute care.^{3–14} Racism is a pervasive attribute of our culture that affects many aspects of medical care, including health outcomes,^{3,15} access to care,^{16,17} affordability,^{18,19} health literacy,^{20,21} quality of care,^{7,8} interventions received,^{4–14,22} and trust in the healthcare system.^{23,24}

Racism is traditionally a system of structured opportunity and assignment of value that intentionally disadvantages individuals based on the color of their skin (“race”) and often advantages White individuals at the expense of non-White minoritized groups,^{25,26} though it also incorporates other characteristics like ethnicity and socioeconomic status. Racism is experienced and expressed across a spectrum of contexts; it exists at the internalized (or individual), interpersonal, institutional, and systemic levels.²⁷ Internalized racism comprises individual beliefs about racism, while interpersonal racism occurs between individuals. Institutional racism occurs within a single institution while systemic racism occurs among many institutions or across societies or systems (i.e., the healthcare system). Understanding how racism, in all its forms, contributes to inequities in health care delivery may equip emergency physicians (EPs) with the knowledge needed to mitigate the impact on health. Racism affects nearly all aspects of EM care, and this can occur in both overt and covert manners.

Research has shown that Black patients not only have poorer health outcomes than their White counterparts,^{3,15} but also receive lower quality care. Evidence points to Black patients experiencing less aggressive treatment for pain,^{4–6,22} fewer evidence-based interventions,^{7,8} and increased use of physical restraints,^{9–13} among many other disparities. In these instances, individual or interpersonal racism may be driven by implicit racial biases, i.e., automatic and unintentional biases. For example, Black and Hispanic patients are more likely to be transported to safety net hospitals than their white counterparts in the same zip code.¹⁴

In addition to internalized and interpersonal forms of racism, our healthcare systems also perpetuate institutional racism. False beliefs regarding the biological basis for race persist in medicine. Early in training, medical students have been shown to believe that Black patients possess biological mechanisms for higher pain tolerance, leading to disparities in pain management.²² Historically, disparities in pain were thought to be related to beliefs about Black patients and drug abuse,²⁸ but this finding suggests that some of these disparities are the result of an engrained, albeit false, belief and not necessarily a personal feeling. Such false beliefs are also evidenced in current guidelines and clinical decision tools, most notably, the calculation of race-specific glomerular filtration rate (GFR). Despite there being no biologically plausible explanation for muscle mass differences across races,

GFR equations have historically included a race coefficient that systematically inflates the estimated GFR of Black patients to account for the higher serum creatinine levels ostensibly resulting from their greater muscle mass.²⁹ Many other clinical algorithms and calculations also use race incorrectly as a biologic measure. This includes scores for kidney transplant, patient admitted with heart failure, and pulmonary function tests. All of these could serve - and have served - to further disadvantage Black patients.³⁰

Likewise, systemic racism plays a role in health and health-related inequities perpetuated through differential access to resources, opportunities, and services codified in laws, policies, practices, and societal norms. For example, minoritized patients have higher levels of poverty,^{31,32} less access to medical care,³³ less access to quality education,³⁴ increased exposure to violence,³⁵⁻³⁷ increased exposure to incarceration,^{38,39} and greater number of adverse childhood experiences.⁴⁰ Medical distrust is also common among Black patients, likely fostered by personal experiences in healthcare but also grounded in unethical historical research practices such as the Tuskegee research trials and the controversial commercialization of the “HeLa” cells obtained from Henrietta Lacks without her consent.⁴¹ Together, all these types of racism (internalized, interpersonal, institutional, and systemic) interact and lead to disparities in medical care received by racial minoritized patients.

Racist practices can arise from one type or from multiple types of racism, but once practices are embedded in systems, they can be more difficult to challenge. For example, inadequate pain control may be an isolated form of interpersonal racism (i.e., prejudicial care), but it also be a byproduct of institutional and systemic issues (i.e., perpetuation of false beliefs).

To fully understand the role of racism in the provision of equitable care in EM, high-quality research on the topic is imperative. We must additionally understand how the process of research in emergency care may perpetuate racism. While there are still gaps in the literature, it has been clearly demonstrated that racial disparities exist in the quality of acute care provided to patients.^{3-13,22} However, proven interventions to reduce racism, disparities, and racial bias in emergency care and systems — as well as racial bias in current heuristics, clinical care, and research study design— are lacking. To address these research gaps, the Society for Academic Emergency Medicine convened the 2022 Consensus Conference “Diversity, Equity, and Inclusion: Developing a Research Agenda for Addressing Racism in Emergency Medicine”. Presented in this manuscript are the results for one of three Working Groups at the Consensus Conference – the Healthcare Research Working Group. The goal of this manuscript is to describe the results of our Working Group’s consensus process and present a priority list of research questions that came out of our Working Group from the Consensus Conference.

Consensus Building Methods

A group of 18 experts, three of whom served as co-leaders, were recruited from the SAEM membership in the summer of 2021 to participate in the Racism in Healthcare Research Working Group. These experts were self-nominated volunteers and vetted by the Conference leadership. Sixteen (89%) of them supplied demographic data in response to email requests after the Consensus Conference (Table 1). The working group met monthly by

video conference to (1) determine priority research gaps to explore, (2) develop narrative literature reviews on these gaps, and (3) draft and evaluate consensus on research priorities to address these gaps for discussion at the SAEM Consensus Conference on May 10, 2022 (Figure 1).

In October and November 2021, ten potential priority research gaps were identified through two 1-hour group discussions. The initial lists of research questions prepared by each of the three pre-conference working groups (Leadership, Education, and Healthcare Research) were submitted to the Conference Planning Committee who reviewed and helped revise questions, identifying any overlap between the working groups and confirming adherence to the theme of each working group.

In December 2021, Healthcare Research Working Group members ranked all 10 potential areas in terms of importance using a web-based survey. Working group members were given these criteria to determine priority: (1) Relevant, (2) At the stage for further research development, (3) Sufficiently defined to examine current literature, and (4) Does not duplicate work from the breakout group on Race of the prior 2021 SAEM Consensus Conference “Social EM and Population Health.”⁴² 13 members participated in the ranking (13/18). The research gaps of: “Racism and Access to Care”, “Remedies for Bias and Systematic Racism”, “Biases in Heuristics and Clinical Care” and “Racism in Study Design” were the top ranked priority areas (Table 2). As the concept of “racism and access to care” were extensively explored in the 2021 SAEM Consensus Conference, we chose to focus on the other three top ranked research gap domains.

From January 2022 to March 2022, the working group broke into three subgroups, one for each priority research domain: “Remedies for Bias and Systematic Racism”, “Biases in Heuristics and Clinical Care”, and “Racism in Study Design”. Each domain subgroup conducted a literature review and developed a narrative review in their research area from which they subsequently proposed potential research gaps and questions from prioritization. The entire working group reconvened to examine the literature reviews and proposed research questions; through an iterative process, the initial 13 proposed questions were discussed, refined, enhanced, combined, and reduced to a list of 12 research gaps and priority research questions (Table 2). The revised questions were then circulated back to the working group to select the research gaps and questions that were low priority; 13/18 members (72%) responded. Of the respondents, 70% rated the same question as low priority and thus it was removed. 38% of the respondents identified a second question as low priority; however, it was related to another higher priority question, therefore these were combined, leaving a final preconference list of 10 research gap domains and potential research questions. (Table 3)

The details of the Consensus process have been described elsewhere.⁴³ In summary, these 10 questions were sent to all registered Consensus Conference attendees in late April 2022 to vote on questions in the one or two focus area breakout groups they planned to attend (education, healthcare research, leadership). At the conference, attendees self-selected into breakouts in the morning on the pre-selected focus areas: healthcare research, education, and leadership. For Healthcare Research, there were 24 conference attendees at the morning

session and 11 at the afternoon session gathered to further refine the research questions and generate consensus. After discussion, a consensus was reached through a stepwise process, held over a morning and afternoon session, with attendees encouraged to attend a second focus area for the afternoon session. Two research gaps and proposed research questions were added during the morning session, and an additional two research gaps and proposed research questions were added during the afternoon session. Each conference attendee was allotted \$240 fictional “funding dollars” (4 aliquots each of \$10, \$20, and \$30) to allocate to each potential priority research question. Consensus was defined as >80% of total proportional funding dollars ([total funding dollars spent / (number of participants x number of research questions)] x 0.8). For the Healthcare Research subgroup, that amount was \$492. We ended the conference with 14 potential questions, 10 of which were edited from the preconference questions and 4 new questions. Six questions reached consensus as high priority (Table 4). All 6 high priority questions were refined from preconference questions. Below we describe the 6 questions in the 3 domains. We summarize the literature for each domain, followed by a description of the discussion had by both the morning and afternoon sessions of the Working Group and a listing of the associated priority research questions.

Consensus Findings:

Research Gap Domain 1: Remedies for Bias and Systematic Racism

In the preconference literature review, we found articles in the literature that highlight strategies for addressing racism and racial bias on internalized, interpersonal, institutional, and systemic levels.^{26,44–52} Much of the literature focused on describing workshops and efforts to address racism in healthcare and diversity in recruitment of healthcare professionals.^{45,47,48,50,51} While several of the available articles raise awareness of issues and provide suggestions for interventions, few articles exist with data measuring the impact of such interventions.^{5,54} Available data primarily focus on measuring the effectiveness of education in improving *awareness* of racism. Studied interventions that have been found to be successful at improving awareness of racial bias and racism include health equity retreats for EM residents,⁴⁸ critical race theory curricula in EM education,⁵⁵ health equity journal clubs for EM staff,⁴⁵ and online courses for EM faculty.⁵⁶ Literature focused on improving outcomes related to emergency medical care included incorporating medical Spanish in residency to improve patient satisfaction,⁵⁷ decreasing barriers for Black and Hispanic men to receive opioid use disorder treatment,⁵⁸ and emergency department (ED)-based interventions to address access to care.⁵⁷

During the morning consensus session, there was agreement about race being a social construct. Initial discussion focused on the usage of terminology, specifically bias versus discrimination. Discrimination was described as being a more active term with the potential for alienating some providers. Given the difficulty in measuring systemic racism, discussion surrounded the level of bias (i.e., internalized, systemic, etc.) at which measurement should take place. There was discussion about whether or not patient-level subjective outcomes are superior to clinical outcomes. Conference attendees agreed that researchers should take care to differentiate between patient dissatisfaction with care from dissatisfaction based on the

perception of biased care. Attendees noted that for health services research and retrospective studies, the importance of distinguishing whether documentation of race in the health record reflects a patient's self-reported race or a patient's perceived race assigned by ED staff, as each of these sources may impact a patient's experiences of bias and discrimination. There was agreement that racial bias should be measured both from the clinician and patient perspectives. Attendees further concurred that emphasis should be placed on both the patient and clinician perspectives to guide effective interventions.

The afternoon consensus discussion focused on the need to elucidate the patient versus clinician perspectives and appreciation of each other's views. For example, immediate outcomes may improve, but long-term disease outcome may be worse if the patient chooses not to return secondary to perceived racial bias. There is a need to focus on the different levels of racism – internalized, interpersonal, institutional and systemic. In addition, there is a need to measure racial bias among all staff engaged in clinical care, not just clinicians. EM is team-based; therefore, it may be difficult to determine who influenced the quality of care or provided biased care. The patient experience and perspective should encompass the entire clinical care experience as racial bias can exist from both the clinician and systemic failures. It is important to have a feedback mechanism by which clinicians or staff receive information that highlights unintentional biases. Identifying or publicizing racial disparities may put hospitals or healthcare systems at risk of negative media exposure or lawsuits, and these legal/financial risks will need to be mitigated.

Final Consensus Priority Research Questions in “Remedies for Bias and Systematic Racism”

- Which intervention designs are most effective and for which domains of racism & bias?
- How do we measure interpersonal and internalized racial bias in a clinical encounter?
- How do we measure patient experiences with and clinical outcomes from racism and racially biased care?

Research Gap 2: Biases in Heuristics and Clinical Care

While there is no “gold-standard” for measuring racial bias, there are validated tools that measure implicit bias, including implicit association tests (IAT) and subliminal priming. Implicit bias is an unconscious favoritism toward or prejudice against people of a particular ethnicity, gender, or social group that influences one's actions or perceptions. IATs are a social psychology tool that measure implicit associations between any number of variables or demographics.^{59,60} The role that implicit biases play in clinical care, however, is not clear.^{59–61} Heuristics are mental shortcuts that allow people to solve problems and make judgments quickly and efficiently but often at the expense of imperfect accuracy. Current gaps in heuristics in medicine are significant.⁶¹ Research has shown that racial bias is present in physicians at similar levels to general population, and the direction is anti-Black (in adults and children), anti-Hispanic, anti-obese.^{60,62–65} We know that implicit bias is more likely to surface during periods of stress,⁶⁶ and that bias is increased in settings of

high cognitive load, such as busy EDs. Increased bias is associated with differential care in patient vignettes and associated with communication quality and patient satisfaction.^{63,66} No studies have examined the role of racial bias and patient outcomes in the ED setting.⁶⁷ Interventions looking at education and mindfulness for reducing implicit bias have not shown direct patient care improvements.⁶⁸ Clinical guidelines can reduce disparities but require ongoing scrutiny.⁶⁹

The morning consensus session asked two important questions 1.) Do all clinical guidelines cause inherent bias? and 2.) How effective are clinical guidelines in mitigating racism in clinical care? It is important to know if the goal of clinical guidelines is to reduce implicit bias by the clinician or to reduce inequities in clinical outcomes. Also, the discussion addressed the importance of defining how race is used in clinical guidelines – is race self-reported by a patient or assigned as perceived by ED staff? Another important discussion point asked was: is there a strong connection between racially equitable care and better outcomes? Use of “best practices” in terms of mitigating racial bias and racism should be used with caution as it assumes there are evidenced-based best practices. Racially biased care can exist in all aspects of care including disposition, after care, and prehospital care.

The afternoon session started with discussion on guidelines and the importance of how race was assigned during the development of the guidelines – patient self-report of race or staff-assigned perceived race. It is important to note if racial bias affects uptake of clinical guidelines and if guidelines are developed and reviewed through a health equity lens. There needs to be a re-evaluation of guidelines to understand what drove the development, especially when race is a consideration in usage of guidelines. Moving forward, social determinants of health need to be included into clinical guidelines, and EM may benefit from lessons learned from other industries in this regard. For example, housing policies have long been plagued by systemic racism and improved access to housing has shown to reduce Emergency Department usage and health care costs.⁷⁰ The risk factors that increase racially biased care need to be identified.

Final Consensus Priority Research Questions for “Biases in Heuristics and Clinical Care”

- How effective are clinical guidelines in eliminating/exacerbating race-based inequities; do they help reduce unconscious bias during times of stress/cognitive overload?
- Are there best practices in reducing racism and racial bias in care processes and heuristics?

Research Gap Domain 3: Racism in Study Design

With regard to research study design and its implications for perpetuating racism and racial bias, there is very little literature summarizing the representativeness of ED-based research participants in terms of both race and many other social determinants of health, and little on the composition and training of the EM research workforce. It has been shown that minoritized faculty in EM are disadvantaged in terms of advancement and rank compared to their colleagues.⁷¹ As part of the ARMED MedED research course, there

have been efforts to increase DEI awareness and strategies among junior investigators,⁷² but this curriculum has yet to be formally evaluated. In fields outside EM, gender and racial bias have been shown to influence supervisors' perceptions of developing investigators,⁷³ but this has not been evaluated specifically for researchers in EM. The state of representation among emergency care research participants, and best strategies to increase representation, are not well documented. Work in cardiology, vaccination science, and cancer research has described best practices and strategies to increase representativeness, including literacy levels, consent procedures, diversity targets on enrollment, flexibility in screening and recruitment hours, investigator training, addressing prior harms inflicted by researchers, community based participatory research practices, and considering cultural values and communication barriers.^{74–79} There are also calls for increased reporting of representativeness in all research fields.^{80–83}

During the morning session, the discussion focused on measuring representativeness and specifying the groups that should be represented. Attendees concurred that focus should not be only on race and ethnicity but also on intersectionality and understanding and fostering race-conscious versus race-based care.⁸⁴ More definition needs to be constructed to measure systems of oppression. There was discussion of how identification of race is complicated and appropriate measures to accurately identify and measure race and its outcomes need to be developed. This includes both patient self-reported race versus staff-assigned perceived race and specific criteria to identify race of minors and incapacitated patients. Attendees expressed the need to define best practices for EM researchers to collect, present, and categorize race. There was also discussion about the potential usefulness of artificial intelligence and big data and if minorities are appropriately included in the datasets. Attendees also note that there is potential to worsen inequities with machine learning methods if the training data are flawed.

Discussion in the afternoon session focused on how to evaluate representativeness in community consultation for exception from informed consent and possible need for community consent. Informed consent procedures need to be assessed through the lenses of race and racial bias. Inclusion criteria for research studies need to specify patient self-reported race versus staff-assigned perceived race. Further research was deemed necessary by attendees to understand whether patient self-reported versus staff-assigned race better correlates to clinical outcomes and what are the best practices for defining race in research study designs.

Final Consensus Priority Research Questions for “Racism in Study Design”

- How do we improve representation and participation in ED-based research?

Discussion and Conclusions:

In the Racism in Healthcare Research Working Group of the 2022 SAEM Consensus Conference “Diversity, Equity, and Inclusion: Developing a Research Agenda for Addressing Racism in Emergency Medicine”, we identified 14 potential research questions, and six reached consensus as priority research agenda questions (Table 4).

It is well established that there are racial disparities in medical care, including EM. Our working group identified research priorities focused not on reiterating this fact, but rather on future-oriented advancements to mitigate and reduce racism, such as how to measure and quantify racism in EM; how to design and implement research studies that are racially equitable; how to design a research infrastructure that supports research in diversity, equity, and inclusion; and what interventions can be implemented to effectively reduce racial bias and racism in EM. High quality research is imperative to combating racism in EM. We must be able to measure and quantify the disparities and racism in emergency care. As the old saying holds, one cannot improve what one cannot measure; we must be able to quantify the disparities and racism in emergency care. Most importantly, we need to identify and understand what interventions are proven to reduce these disparities.

To achieve these goals, however, we need a health system that reliably and accurately tracks race and other social determinants of health to be able to understand how these factors interact with other aspects of medical care, diagnosis, and treatment. The source of data on race must be clear in the context of each study, given current inconsistencies in the source of racial identity between healthcare systems and data sources. Leaders in the research and health systems also must support research into racial disparities in a non-punitive manner, including adequate funding and leadership support for research into racial bias and racism in EM. Researchers and the research system must also strive to improve representation and participation of minoritized races in research; achieving this goal will require a willingness to admit and reconcile the grave racially based trespasses of the medical research community that rightfully result in distrust among Black, indigenous, and persons of color.

High quality research also drives policy decisions at the institutional, local, state, and federal levels. Racism is embedded in systems and institutions, both within and outside EM. We must change racist policies, procedures, and practices to successfully provide equitable care. Data is perhaps the strongest impetus for this change. Standardized guidelines may help reduce the impact of racial bias in medical care and outcomes, whether it be implicit or explicit, but this should be proven empirically.

Our consensus agenda development process has several potential limitations. First, the individual biases of the participants may be present in the recommendations. To mitigate this, we included a diverse pool of EM physicians. However, the conference attendees were derived from the membership of SAEM, which is largely comprised of academic emergency physicians in urban settings who may share a biased perception of priorities. While the majority of Consensus Conference participants were EM experts in racism, we also included input from experts in related fields and those not considered to be experts on the topic, per se, in order to diversify perspectives. We covered a wide range of potential topics and questions; some research questions, while still important, did not meet the criteria for inclusion in our consensus recommendations, but may still be priorities to some researchers and to communities.

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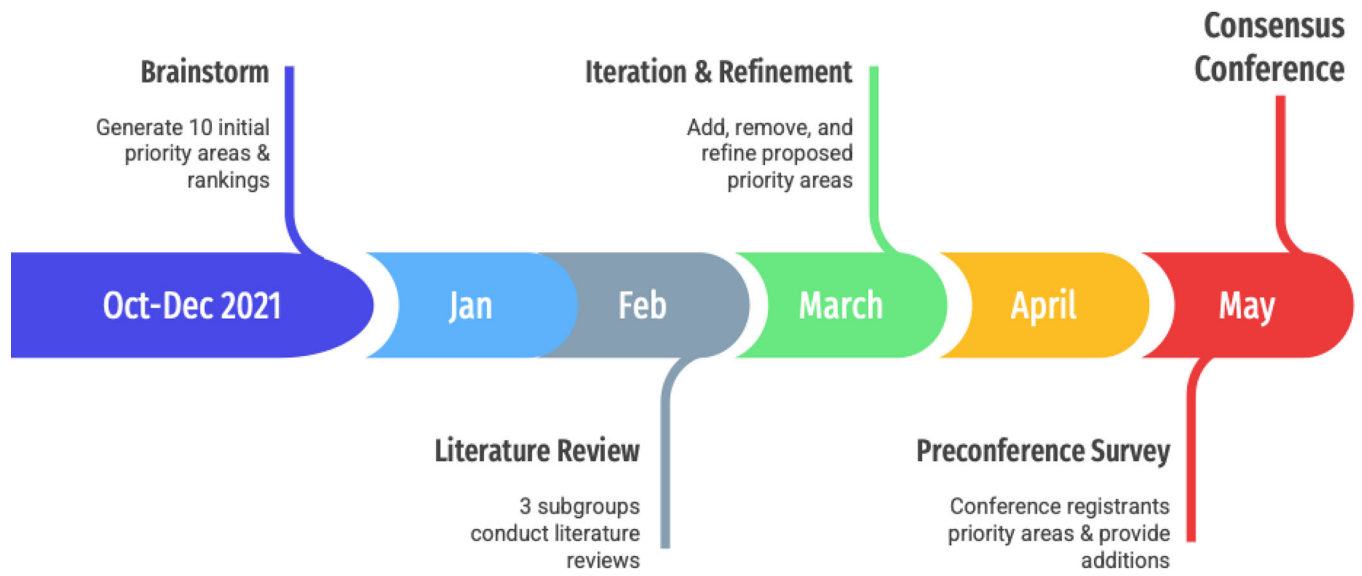


Figure 1. Timeline of Activities for the Healthcare Research Subgroup of the Consensus Conference on Diversity, Equity, and Inclusion: Developing a Research Agenda for Addressing Racism in Emergency Medicine

Table 1. Demographic Characteristics of 16 of 18 Experts in the Society for Academic Emergency Medicine Racism in Healthcare Research Working Group

Gender	Identifies as under-represented in medicine	Years in practice	Research or clinical role	Previous experience or a current focus in healthcare or clinical research	Previous experience or a current focus in health inequities or anti-racism
Female	Yes	16	Clinical	Current	Current
Female	No	10	Both	Current	Current
Female	No	11	Both	Current	Current
Female	No	2	Clinical	Current	Previous
Female	No	2	Both	Current	Current
Male	Yes	22	Both	Previous	Current
Female	No	3	Both	Current	Current
Female	No	7	Both	Current	Previous
Female	Yes	10	Clinical	Current	Current
Female	No	8	Clinical	Current	Current
Female	Yes	16	Both	Current	Current
Female	No	5	Both	Current	Current
Female	No	4	Both	Current	Current
Male	No	21	Clinical	Previous	Current
Female	No	10	Both	Current	Current
Male	No	3	Both	Current	Current

Table 2.

Ranking of Priority Research Gaps for the Healthcare Research Subgroup of the Consensus Conference on Diversity, Equity, and Inclusion: Developing a Research Agenda for Addressing Racism in Emergency Medicine

Research Area	Median Priority Ranking (IQR)
Racism and access to care	3 (1,4)
Remedies for bias, systemic racism, and discrimination	3 (3,7)
Identifying biases in heuristics and clinical care	4 (1,6)
Racism in Emergency Medicine study design	5 (2,6)
Defining race in the context of Emergency Department-based research	6 (2,9)
Patient perspectives on bias and racism in emergency care	7 (4,8)
Design of studies with equity lens	7 (4,8)
Diversity in research teams	7 (5,9)
Disparities in access to technology for healthcare	8 (5,9)
Prehospital care and environmental racism	8 (7,10)

Research areas were ranked from 1 to 10, with 1 being highest priority and 10 being lowest priority.

Table 3. Preconference Priority Research Questions for the Healthcare Research Subgroup of the Consensus Conference on Diversity, Equity, and Inclusion: Developing a Research Agenda for Addressing Racism in Emergency Medicine

Research Gap Domain	Potential Priority Research Questions Pre-Conference
	How do we measure patient outcomes related to bias?
	Which intervention designs are most effective and for which domains of racism and bias?
Remedies for Bias and Systematic Racism	What settings and levels of intervention (training level/individual, organizational, community, and policy) are more effective? *
	How do we measure bias in a clinical encounter (which providers, communication, process of care)?
	Does diversity in the workforce reduce biased care, improve patient experience of care, and improve patient outcomes?
	How effective are clinical guidelines in reducing bias and racism? (i.e., Do they help reduce unconscious bias during times of stress/cognitive overload?)
Biases in Heuristics and Clinical Care	Are there best practices in reducing bias in clinical care and what existing interventions in other fields are applicable to Emergency Medicine?
	What parts of the ED visit create the highest risk of biased care? (e.g., triage, decision making, disposition)
	How do we characterize representation within study populations for ED-based studies (e.g., target population, eligible population, screened population, study population, excluded population)?
Racism in Study Design	How do we improve Racial and Ethnic Minority Group (REMG) representation and participation? (e.g., in EMR, big data, prospective studies, biobanking)
	How do we reduce bias in big data/computer learning methods for ED-based studies? **

* For final preconference survey, was combined with above question to read: Which intervention designs, settings and level of training are most effective and for which domains of racism and bias?

** For final preconference survey, was considered to be part of question above.

ED = Emergency Department

Table 4.

Research Questions with “Consensus Dollars” Attributions for the Healthcare Research Subgroup of the Consensus Conference on Diversity, Equity, and Inclusion: Developing a Research Agenda for Addressing Racism in Emergency Medicine

Funded value	Proposed Priority Research Question
\$1,110	How do we measure interpersonal and internalized racial bias in a clinical encounter?
\$1,070	How effective are clinical guidelines in eliminating/exacerbating race-based inequities, do they help reduce unconscious bias during times of stress/cognitive overload?
\$1,060	How do we improve representation and participation in ED based research?
\$980	How do we measure patient experiences with and clinical outcomes from racism and racially biased care?
\$860	Are there best practices in reducing racism and racial bias in care processes and heuristics?
\$760	Which intervention designs are most effective and for which domains of racism & bias?
\$460	What factors increase the risk of the occurrence of racially biased care, and what parts of the emergency patient encounter are these risk factors differentially present?
\$450	Does diversity in the EM workforce reduce biased care, improve patient experience of care and improve patient outcomes?
\$330	Are there biases in EM research funding for DEI, and how do we ensure equity for DEI research and researchers? Break up DEI; add patient perception of racism in healthcare as a patient centered outcome
\$310	How do we reduce racism and racial bias in machine learning/algorithmic modeling methods for ED-based studies? What are the best ways to use artificial intelligence to reduce racially biased care?
\$290	How do we measure the burden of the minority tax on research faculty and other research workforce members?
\$260	How do we characterize the representation within study populations for ED-based studies (target population, eligible population, screened population, study population, excluded population)?
\$230	How to get leadership and stakeholder buy-in to develop interventions, including nursing leadership share findings. What are legal implications?*
\$110	What interventions are there for decreasing the impact of racism and micro-aggressions from patients onto the healthcare team?*

* only voted on for funding in afternoon session

ED, Emergency Department; EM, Emergency Medicine; DEI, Diversity, Equity, and Inclusion