

American Contact Dermatitis Society Position Statement: Dermatitis and Skin of Color

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According to the US Census Bureau, by 2030, more than half of the population will be composed of individuals with skin of color (SOC).¹ Skin of color refers to persons of African, Asian, Native American, Middle Eastern, and Hispanic backgrounds.² Matters of SOC are receiving increased attention, especially with regard to the lack of research and education, dearth of representation of racial minorities within medicine including dermatology, and the need to improve our understanding and care of skin disorders for members of this population.

During the years 2006–2013, dermatology had the second-lowest representation of non-White physicians when compared with other specialties.³ While medical schools and internal medicine residencies have increased their proportion of non-White enrollees and graduates over time,^{4–6} dermatology continues to have disproportionately low percentages of underrepresented in medicine (URM) trainees.⁷ These stagnant trends highlight the need to promote diversity within dermatology at all levels of training to meet the needs of our diversifying population.

The American Contact Dermatitis Society (ACDS) recognizes these disparities in SOC education, research, and representation in dermatology and within our own ACDS community. As such, diversity, equity, and inclusion (DEI) and health care disparities (HDs) have been identified as areas of focus within the ACDS. Herein, we outline our current understanding and ACDS's plan for the path forward.

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WHY IS THIS IMPORTANT?

Implications for Patient Care

According to the 2019 National Healthcare Disparities Report, White patients receive better quality of care than Black/African American, Hispanic, American Indian, Alaska Natives, and Asian patients.⁸ The reason for this is likely multifactorial.

Specific to dermatology, one contributing factor is the limited numbers of URM physicians, which has been associated with suboptimal physician-patient interactions.^{9–11} A 2018 study reported that White patients were about twice as likely to visit an outpatient dermatologist than Black and Hispanic patients.¹² Racial discordant patient encounters can make patients feel wary of their dermatologists' knowledge of their skin and hair.¹³ These perceptions could contribute to fewer outpatient visits among SOC patients, causing their conditions to go untreated or underdiagnosed. Increasing SOC providers in dermatology may increase visits from SOC patients. This is supported by a study showing that Black patients who visited dermatologists at Skin of Color Centers (SOCCs) reported greater satisfaction than patients who visited non-SOCCs. In addition, patients treated by SOCC physicians reported better patient-physician interactions, noting increased elements of shared decision making and trust.¹⁴

Physician-related factors have the potential to contribute to health-related disparities. For example, limited clinical and cultural training during residency may result in some dermatologists feeling less comfortable treating conditions in patients with SOC.¹⁵ Understanding SOC patients' cultural habits and practices is important to improve the quality of patient-physician interactions and reduce explicit and implicit biases in dermatology.¹⁶ Explicit biases refer to attitudes or beliefs a person or institution may hold about a person or group on a conscious level, whereas implicit biases refer to unconscious associations and feelings an individual or institution might unknowingly hold. For example, research has shown that negative stereotypes among physicians may affect the care received by non-White patients.¹⁷ These implicit biases also occur in dermatology,^{18–20} and may manifest as less time spent with patients, less positive interactions, and less patient understanding of the care that is provided.^{18,21,22}

Increasing diversity within the dermatology workforce, improving clinical education, and increasing awareness of implicit biases by promoting an environment of cultural competence should lessen the unconscious reliance on stereotypes and improve dermatologic care of SOC patients.

Implications for Dermatology Research

Skin-of-color (SOC) patients are underrepresented at all levels of dermatology research. In many cases, race and ethnicity data are weakly measured or omitted, which limits our understanding of etiology and management of common skin conditions.

Although the National Institutes of Health (NIH) requires the inclusion of women and minority groups in all NIH-funded clinical research and the Food and Drug Administration recommends the reporting of race/ethnicity and enrollment of patients who reflect clinically relevant populations before drug approval,^{23–25} clinical trials in dermatology have lacked full racial and ethnic representation,²⁶ even in the evaluation of treatments for conditions that commonly affect SOC patients, such as hidradenitis suppurativa^{25,27,28} and atopic dermatitis (AD).^{29–31} Only 59.5% of 78 AD clinical trials published between 2000 and 2009 reported race.³² Of the 22,202 subjects included in this analysis, the demographic percentages were 18.0% Black/African American/African heritage, 6.9% Asian, and 2.0% Hispanic, and most subjects included were White (62.1%).³² Although the Black/African American population within the 87 AD clinical trials remained comparable with the 2010 US Census data (18.0% vs 12.6%, respectively), its Hispanic population was significantly lower than their representation in the US population (2.0% vs 16.3%, respectively).^{32,33}

Several studies have evaluated allergic contact dermatitis (ACD) differences between Black and White individuals.^{34–38} The largest study was completed by the North American Contact Dermatitis Group (NACDG) and reported patch test results for the years 1998–2006 for 1360 (7.1%) Black persons and 17,803 (92.9%) White persons.³⁷ Although the demographics of this study is closer to those reported by the 2000³⁹ and 2010³³ US Census Bureau, even this large data set underrepresents Black/African American and other minority participants. These discrepancies highlight the need to accrue additional racial/ethnic data for clinical and research databases. Furthermore, when studies evaluating incidence and characteristics of skin diseases lack representative proportions of SOC patients, it is impossible to report valid comparisons between racial and ethnic groups.³⁹

The interest in correcting these disparities has led to an increase in dermatology publications with topics relevant to SOC for the past 4 years.⁴⁰ A 2018–2020 analysis of SOC-related content in 52 dermatology journals calculated the mean SOC content as 16.8%, with a range of 2.04% to 61.81%.⁴¹ These authors presented data on the journals *Dermatitis* and *Contact Dermatitis* at the 2021 annual ACDS meeting; these journals ranked 45th and 46th, respectively, for percentage of articles relevant to SOC.⁴²

Race, Ethnicity, and Dermatitis Prevalence

Contact dermatitis (CD), including ACD and irritant CD, is one of the most common inflammatory dermatological conditions. Previously, it was hypothesized that darker pigmented individuals had lower rates of CD because their skin was less prone to contact sensitization.^{35,43,44} However, published studies comparing Black and White patch-test patients have demonstrated similar incidences of CD.^{34,45}

International cohorts demonstrate that more than half of patients presenting for patch testing have a final diagnosis of ACD. For instance, a 13-year review of 1045 medical records in Brazil reported that 57.5% of patch-tested patients had a final diagnosis of ACD.⁴⁶ This is similar to North American findings; the most recent NACDG analysis (2017–2018) found that 65.4% of 4947 patch-tested patients had at least 1 positive patch test reaction, and 50.4% had a final primary diagnosis of ACD.⁴⁷

Although the prevalence of ACD has not been shown to significantly differ across race and ethnic populations, the prevalence of AD has been found to vary widely across different ethnic groups.^{48,49} Global and national studies suggest that the prevalence of AD is increasing in African American and Asian communities.³⁰ Wang et al⁵⁰ reported that the rates of AD increased by 5.54% between 2008 and 2018 in the Asia Pacific region, and a review of international time trends in AD from 1990 to 2010 highlighted the increasing prevalence of AD in African countries.⁵¹ Studies in the United States and England have reported that AD occurs more frequently in non-White than in White patients.^{30,52,53} After adjusting for potential confounders, investigators reported that AD rates were 1.7 times higher in Black children compared with White children.⁵⁴

Race, Ethnicity, and Dermatitis Risk Factors

Although the overall frequencies of diagnosis of ACD are similar in White and SOC patients,⁵⁵ there may be differences in allergen sensitization or irritant potential across racial/ethnic groups. The 1998–2006 NACDG review found that there were statistically significant differences in positive patch test reactions to specific allergens between White and Black patients.³⁷ Nickel sulfate, neomycin, bacitracin, cobalt chloride, and *p*-phenylenediamine were the most common causes of contact allergy in Black patients, whereas nickel sulfate, *Myroxylon pereirae*, neomycin, quaternium 15, and formaldehyde were the most common in White patients.³⁷ Similarly, a review of patch test results of 139 Black patients demonstrated high rates of positive patch tests to nickel sulfate, *p*-phenylenediamine, and bacitracin.³⁶

A study assessing susceptibility to irritants determined that Asian subjects experienced significantly higher adverse skin reactions to cosmetics containing 0.5% aqueous sodium lauryl sulfate and 0.15% retinol compared with White subjects (33.0% vs 11.3%, respectively).⁵⁶ The reasons underlying these differences are unknown and need further research.

Specific molecular profiles or other genetic factors associated with variability of ACD presentation and prevalence across race and ethnicity are not yet known. In contrast, several genetic differences among the races have been found to explain the varying presentations of AD. Filaggrin gene mutations, which influence the severity and persistence of AD,^{30,57,58} are 6 times more prevalent in White AD patients compared with African American AD patients (5.8% vs 27.5%, respectively).⁵⁹ In addition, mRNA levels of inflammatory cytokines, such as T_H22 and T_H17, are highly expressed in Asian AD patients, whereas levels in Black/African American AD patients are attenuated.^{60,61} The significance of these

molecular changes in the context of AD is the subject of future research, and the possibility of similar differences observed for ACD patients represents another knowledge gap in our understanding of CD.

Race, Ethnicity, and Dermatitis Clinical Presentation, Diagnosis, and Management

Depending on the etiology, symptoms of CD can vary in severity and clinical presentation. Some ACD patients present acutely with erythema, and/or pruritic, indurated papules, and plaques, whereas others have chronic symptoms including scaling, lichenification, and fissuring.⁶² Many of these clinical features are less distinguishable in SOC patients because they are more prone to dyspigmentation and lichenification³⁶ and erythema may be more difficult to appreciate.⁵⁵

Interpretation of patch test results can be challenging in SOC patients. Studies have shown that patients with darker skin types may demonstrate a lack of erythema and an earlier papular response at positive patch test sites.³⁶ Because these changes can be subtle, recommendations include adequate side lighting and palpation when interpreting patch test results in patients with SOC.^{36,63,64}

Regarding management, given the potential risks of hyperpigmentation in darker skin types, early identification, diagnosis, and management of dermatitis are particularly important. In SOC patients, earlier treatment of AD with dupilumab may accelerate the return of the patient's normal skin tone.⁶⁵ Other important considerations in the treatment of dermatitis in patients with SOC are the risks of hypopigmentation, particularly with the use of high-potency topical corticosteroids.

CURRENT ACDS DEI EFFORTS

Considering the need to understand and expand knowledge of the relationship between race, ethnicity, HDs, and dermatitis, the ACDS sought to increase its efforts to promote DEI. Under the leadership of the ACDS Immediate Past President Dr Amber Reck Atwater and President Dr Douglas Powell, the ACDS DEI and HD Task Force was established in mid-2020. Three cochairs of the task force were identified: Drs Mari Paz Castanedo-Tardan, Marjorie Montanez-Wiscovich, and Peggy Wu. The task force held their initial meeting in September 2020. Through the work of the chairs, members, and support of the ACDS leadership, the ACDS DEI and HD Task Force was inaugurated as a full committee at the January 2021 board meeting with the mission, "To develop research, education and mentorship opportunities that promote diversity, equity, and inclusion within the American Contact Dermatitis Society. We are committed to reducing health care disparities and advancing dermatitis care with a compassionate and socially conscious approach."

Through discussion among members, the DEI and HD Committee determined specific goals to expand the organization's efforts in membership, mentorship, research, and education to promote DEI and reduce HDs while advancing dermatitis care. The following is a summary of committee accomplishments, ongoing projects, and future directions (Table 1).

Membership

A diverse membership is important to the strength of the ACDS and for the advancement of dermatitis care. The first task undertaken by the committee was to canvas the current racial and ethnic demographics of the ACDS membership by providing members an opportunity to voluntarily share their demographic information at the time of membership renewal and application. At the same time, the ACDS Board approved voluntary race and ethnicity questions for patients accessing the newest version of the Contact Allergen Management Program (CAMP) 2.0.

The society aims to understand how its demographic data compares with patient demographic data as an initial step in identifying and defining any racial and ethnic gaps within the society. To address such gaps, the ACDS aims to meet member and patient needs with ongoing research, education, and mentorship efforts in DEI and HDs. To date, the ACDS has collected race and ethnicity demographic data for 43% of its physician and 40% of its nonphysician membership with hopes of reaching greater than 90% membership demographic data in the future.

Mentorship

Effective mentorship can increase representation of URM physicians and help build a more well-rounded pool of dermatitis and patch test experts within the ACDS. Supporting physician diversity and cultural competence are pivotal aspects to providing well-rounded care for diverse patient populations. Mentors can inspire and provide younger generations with the tools and support necessary to pursue a career in dermatology and dermatitis.

One step in expanding the reach of ACDS's mentorship efforts is to incorporate individuals at all levels of training, including medical students, to maximize diversity and inclusiveness. With this in mind, the ACDS expanded eligibility criteria for the ACDS mentorship award to include not only dermatologists, dermatology residents, and fellows, but all medical trainees at any level of education. Expanding award eligibility criteria to include medical students allows the ACDS to tap into a broader network of trainees with hopes of identifying and supporting a more diverse population of aspiring dermatitis experts. Moreover, expansion of eligibility criteria can dually function to reinforce the award's original mission of providing dermatology trainees with academic and research skills that may not be available at their current training institutions.

Research

Recognizing that there are significant gaps in understanding the role that factors such as race and ethnicity play in CD, the ACDS DEI and HD Committee has established initiatives to bridge this gap via promotion of the study of dermatitis in diverse patient populations.

In January 2021, the ACDS Board approved a motion to establish funding for research projects whose work aims to increase understanding of dermatitis in patients of color as well as HDs within dermatitis care. Proposals for projects aimed toward expanding the knowledge base of the pathophysiology, epidemiology, diagnosis,

TABLE 1. Current ACDS DEI and HD Efforts and Future Directions—At a Glance

	Current Efforts	Future Directions
Membership	<ul style="list-style-type: none"> • Canvas current racial and ethnic demographics of ACDS membership • Inclusion of voluntary race and ethnicity questions for CAMP 2.0 	<ul style="list-style-type: none"> • Expand outreach and partnerships with existing organizations dedicated to DEI and HD initiatives (SOCS, SNMA, LMSA)
Mentorship	<ul style="list-style-type: none"> • Expand eligibility criteria for ACDS mentorship award to include medical trainees at all levels of education, including medical students 	<ul style="list-style-type: none"> • Establish mentorship pairing program for ACDS members and mentees with a mutual interest in DEI and HD issues
Research	<ul style="list-style-type: none"> • Establish funding for research projects that aim to increase understanding of dermatitis in patients of color and HDs • Present “Diversity, Equity, Inclusion, and Healthcare Disparities” poster award at the ACDS annual meeting to acknowledge research efforts that highlight DEI and HDs within dermatitis 	<ul style="list-style-type: none"> • Allocate funds for DEI- and HD-focused research projects • Organize findings from funded research projects to contribute to a special issue of <i>Dermatitis</i> focused on SOC
Education	<ul style="list-style-type: none"> • Include topics of DEI and HDs in Fisher research presentations and “Hot Topics” sessions at the 2021 virtual annual ACDS meeting • Fall 2021 virtual event with CME: “Diversity and Dermatitis: Where We Are Now and the Path Forward” 	<ul style="list-style-type: none"> • Provide travel support for DEI and HD experts to present at ACDS annual and midyear meetings • Create and distribute patch test resource guides that include clinical pearls for patch testing in SOC patients • Boost ACDS social media presence and SOC content on multiple platforms to increase interest and education in the field of dermatitis

ACDS, American Contact Dermatitis Society; CAMP, Contact Allergen Management Program; CME, continuing medical education; DEI, diversity, equity, and inclusion; HDs, health care disparities; LMSA, Latino Medical Student Association; SNMA, Student National Medical Association; SOC, skin of color; SOCS, Skin of Color Society.

and management of dermatitis and occupational dermatoses, and their associated morbidities in patients of color are encouraged.

In addition to financially supported awards and recognitions, the committee aims to publicly acknowledge research efforts that highlight DEI and HDs within dermatitis at the annual meeting by presenting a “Diversity, Equity, Inclusion, and Healthcare Disparities” poster award.

Education

Health care disparities, equity, and inclusion can be improved, in part, by supporting educational efforts that target both patient and physician populations. As such, the ACDS will promote education events that improve and expand knowledge of issues that impact patients of color. At the 2021 virtual annual ACDS meeting, multiple DEI and HD topics including patterns of ACD in Black and White patients; assessment of published content on SOC; racial analysis of patch test databases; and DEI, dermatitis, and CD were included in both Fisher research presentations and “Hot Topics” sessions. In Fall 2021, a virtual program with a DEI and HD theme and continuing medical education credit was held. In the upcoming 2022 annual meeting, DEI and HD experts will be invited to present and apply for travel support. The ACDS plans to continue these efforts to garner recognition and interest in DEI-focused education.

FUTURE DIRECTIONS

Membership and Mentorship

To increase and retain URM membership in the ACDS, the DEI and HD Committee will establish a mentorship pairing program for members and mentees with a mutual interest in DEI and HD issues. Outreach and partnerships with existing organizations dedicated to DEI initiatives such as those focused on supporting medical

students traditionally URM, such as the Student National Medical Association and the Latino Medical Students Association, or organizations that are dedicated to health equity, such as the Skin of Color Society, may function to strengthen ACDS DEI-focused mentorship objectives while also boosting visibility for the organization and its members. In the larger society of medicine, with the ongoing active involvement of ACDS in the American Medical Association, these efforts to promote DEI can have a farther-reaching role.

Efforts will be made to include and expand the role of ACDS members identifying as URM in ongoing society programming, committees, events, and leadership, with a goal to augment the feeling of belonging, highlight avenues for personal development and professional growth within the ACDS, and recognize members for their contributions to the organization.

Research

The DEI and HD Committee and ACDS aim to expand the current knowledge of dermatitis in SOC patients by seeking opportunities to apply for and allocate funds for DEI- and HD-focused research projects, particularly those exploring novel areas of research that aim to address important unanswered questions. With enough original findings and collaborations, especially with the international community, the ACDS aims to publish a special issue of *Dermatitis* specifically focused on SOC.

Education

The ACDS plans to incorporate new and focused considerations for SOC patients into existing patch-test educational materials. Patch test interpretation can be challenging in SOC patients given the need to visualize erythema and superficial skin changes, particularly for mildly positive reactions. Using published information and expert opinion, the ACDS will create and distribute patch test resource guides that include clinical pearls specific to patch testing in patients with SOC.

Any educational gaps between providers and patients would be identified and bridged in the coming months via the CAMP, the Web-based resource designed to help patients find personal care products that are free of their identified allergens. The CAMP will be updated to include a broader variety of products and allergens, specifically those more often used by patients of color, including bleaching agents, detangling products, and ethnic hair care products for curly hair. Through the CAMP and Education Committees of ACDS, educational handouts will be updated to be more inclusive of diverse and culturally sensitive information and products.

The DEI and HD Committee recognizes that initiatives focused on education that seek to engage and inform patients via social media can also help improve HDs. The ACDS currently has existing social media platforms (Instagram, ACDS_Dermatitis; Twitter, @ACDS_Dermatitis; Facebook, @ACDSDermatitis) that can be used for this purpose. By boosting the ACDS social media presence on multiple platforms, the ACDS can increase interest and education in the field of dermatitis by regularly engaging with medical students, dermatology residents, allergy and immunology fellows, practicing dermatologists and allergists, and patients. Possible methods of social media engagement include a “Spotlight” section highlighting perspectives and experiences solicited from a diverse range of individuals within the dermatitis community, quiz questions on dermatitis in SOC topics, and meaningful interactions with other societies that have established social media pages, such as the Skin of Color Society or Student National Medical Association.

In addition to spotlighting DEI and HD topics at the meeting, virtual programming, and social media interactions, the DEI and HD Committee hopes to incorporate more continuing medical education–supported learning opportunities for dermatitis providers that promote cultural competence and shed light on the nuances associated with treating patients of color.

CONCLUSIONS

The increasing diversity of backgrounds and cultures represented in our patient populations represent both challenges and opportunities for advancement going forward. Recognizing the impact that these changing demographic patterns have on delivering high quality patient care as well as the pursuit of dermatitis-related research that takes into account biologic and cultural diversity, the ACDS presents herein its approach to addressing diversity, health equity, and inclusion and health care disparities. It is our goal, by outlining our current efforts and future goals of ACDS, to further move this society forward toward equity and inclusiveness for the betterment of our members and all the patients we serve.

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