American College of Emergency Physicians®
ADVANCING EMERGENCY CARE

December 4, 2020
The Honorable Richard Neal
Chairman
House Committee on Ways and Means
Washington, D.C. 20515

Dear Chairman Neal:

On behalf of the American College of Emergency Physicians and the 40,000 emergency physicians we represent, thank you once again for the opportunity to work with you and your staff to address the critical issue of health inequities and the misuse of race and ethnicity in clinical algorithms. ACEP shares the goal of eliminating health disparities, addressing structural racism, and improving health equity, and these efforts are among my key priorities for my term as ACEP President.

Per followup conversations with Committee staff regarding ACEP's response to your earlier request for information, this letter seeks to address several additional questions raised by members of your staff, specifically in regard to the use of the STONE Score for Uncomplicated Ureteral Stone (STONE score) in the emergency department.

The STONE score is a clinical prediction rule for uncomplicated ureteral stones (kidney stones), using five factors – sex, timing, origin (race), nausea, and erythrocytes - to create a score to assist clinicians in identifying patient risk for suspected nephrolithiasis. Patients are assigned a score on a scale from 0 to 13 points, aggregated into low- (0 to 5), moderate- (6 to 9), or high-risk (10-13) categories, which can help inform the physician in implementing the appropriate course of treatment. For the race factor, patients are identified as either Black or nonblack and are assigned 0 or 3 points, respectively.

Pain associated with kidney stones accounts for more than one million visits to the emergency department each year, so standardized clinical decision support (CDS) tools such as the STONE score can provide emergency physicians with valuable assistance in diagnosing kidney stones or identifying important alternative diagnoses (appendicitis and diverticulitis, for example). However, given the issues you and others have brought to light regarding the use of race correction in clinical algorithms and how it may exacerbate health disparities or even result in negative outcomes for communities of color, the significance of race as a predictive factor in the STONE score bears further scrutiny and evaluation.

1) **What efforts are being undertaken to review and reevaluate the use of race and ethnicity in clinical algorithms like the STONE Score? How will ACEP work to support, encourage, and coordinate with other specialty organizations that are also conducting a reevaluation?**

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Some have noted questions about the utility of race as a predictor in the STONE Score. A 2016 study published in the *Annals of Emergency Medicine*, "External Validation of the STONE Score, a Clinical Prediction Rule for Ureteral Stone: An Observational Multi-institutional Study," included an analysis of whether the tool could be improved through the omission of the race factor, and how this modified "STNE" score would compare.[1] The authors ultimately found that:

> "…race (black versus nonblack) was not statistically associated with ureteral stone, perhaps because of the difference in the pattern of the duration of symptoms between the nonblack and black participants. According to our sensitivity analysis, we did not find a significant difference in performance between the STONE score, including race and a modified score that omitted race. This suggests that the race predictor could be discarded in future studies of the STONE score."[2]

This finding suggests that a modified "STNE" score could eliminate race as a coefficient without disrupting clinical decision-making, while still providing the same value to the physician.

As we have looked further into this particular question, we have also reached out to one of the developers of the STONE score, an emergency physician who shared additional background on the development of the tool. He noted that the relevant coefficients of the score were determined by the result of a regression model of at least 100 variables, and that among these, race was among the top five in terms of predictive value. Additionally, data shows that nonblack patients have a significantly higher incidence of kidney stones, though the mechanics and underlying reasons for this are not fully understood – therefore, the use of race in this context can be helpful in terms of encouraging a more thorough evaluation in some cases, ruling *out* kidney stones in favor of a correct alternative diagnosis for Black patients otherwise at risk of being misdiagnosed. Admittedly, why race is associated is still not perfectly clear and there could be social constructs and other related factors as causal effects.

In terms of removing race as a coefficient, the author also noted that www.mdcalc.com has made race optional for the STONE score (link) and other medical calculators and risk estimates. However, he also suggested that while the modified STNE score could potentially deliver statistically similar results, simply removing race from the tool is insufficient and would require a reweighting of the remaining coefficients. ACEP offers this context as background and does not speak on behalf of the author(s), but would gladly help facilitate a conversation with your staff if helpful.

ACEP is examining how to appropriately reevaluate clinical algorithms that use race as a coefficient, including the STONE score, and how best to ensure that emergency physicians do not unintentionally exacerbate structural racism or existing health inequities. Further, in addition to their standing objectives, all ACEP committees have been tasked this year with an additional objective of eliminating health disparities and improving health equity. We have more than thirty-five committees and task forces working on issues that include emergency medicine practice, research, ethics, education, public health and injury prevention, pediatric emergency medicine, and many others, so this effort will help ensure that health equity is not simply an area of interest, but rather a fundamental pillar of the work we do to advance emergency medicine. Another idea that has been suggested internally, for example, is that the ACEP Clinical Policies Committee could also be tasked with an additional objective of conducting our own research and assessments of clinical algorithms that are relevant to emergency medicine.

Another point of consideration in this discussion and in conversations within ACEP is the fundamental understanding of the language "race" and "ethnicity." There is a tendency to use these terms interchangeably when they are not interchangeable, especially when other aspects like genetics, heredity, or ethnicity may be more appropriate and informative variables. We also recognize that race is sometimes used a proxy for social determinants of health, meaning that factors like economic stability, education, health care access, and other social determinants may be more relevant coefficients that are lost when race is used instead. Our understanding of these questions is an evolving

[1] https://www.annemergmed.com/article/S0196-0644(15)01200-7/fulltext
[2] Ibid.

educational process and we continue to seek more definitive answers that for questions that are not well understood today.

As ACEP works to develop additional specific plans of action, we will ensure that your Committee is informed of our ongoing efforts and we stand ready to connect you with our experts and advocates to further this discussion. Finally, knowing that other medical professional societies are also working on similar efforts, we will coordinate where appropriate to ensure that our goals are aligned.

2) **While reevaluating and ending the misuse of race/ethnicity in these algorithms could take some time, what guidance can the ACEP issue quickly to redirect clinicians' use of these algorithms? How will ACEP inform clinicians of the impact of these algorithms on racial health inequities? What guidance would ACEP offer on how this should be communicated to patients?**

All clinical algorithms are different and require individual analysis, which makes rapid changes difficult until we have a better understanding of both the problems and the path forward. As noted in our previous response, one of the most significant challenges from the perspective of ACEP and the individual emergency physician is that clinical algorithms and CDS tools are implemented the facility or health system level, so redirecting clinicians' use of these algorithms is not necessarily within ACEP's purview. However, there are efforts we can and do promote such as implicit bias training to help physicians with clinical determinations even when they may be required to use tools that incorporate race as a coefficient. As we gain a better understanding of the use or misuse of race in clinical algorithms, we may also be able to leverage our relationships with the health systems with whom our members contract and encourage these facilities and systems to reevaluate the algorithms they use.

Beyond that, there are a number of possible actions ACEP could take that may better inform our members about the potential health equity problems posed by these algorithms. These include direct member communications, guidance and editorials published in the *Annals of Emergency Medicine* and the *Journal of the American College of Emergency Physicians Open (JACEP Open)*, developing policy statements, and many others.

With respect to communicating this information to patients, this task is similarly dependent on what our ongoing efforts uncover, what specific algorithms come into question, and what patient groups are affected. Patient communication is a critical part of care delivery, but often subject to numerous challenges and limitations, such as geographic, cultural, and socioeconomic factors, all of which shape our outreach. Emergency physicians also face a challenge unique to other physicians, in that we typically have no pre-established relationship with our patients and only encounter them a single time, which often means that we must adapt our methods of preemptive communications. As we detailed in our previous response, the COVID-19 Initiative directed by the ACEP Diversity, Inclusion, and Health Equity Section serves as an informative example on what efforts are effective in reaching communities of color. To further the reach of our public communications, ACEP also recently developed a patient-facing website, www.emergencyphysicians.org, which we can be leveraged to alert patients to the potential issues of health inequities and the use of race in medicine.

3) **What are some of the various options for remedies that could be implemented prospectively to ensure appropriate care for patients who have not received it because of the misuse of race and ethnicity? What role could the federal government play in this implementation? What role should ACEP play in the implementation?**

In addition to the efforts already underway within ACEP, the federal government could help further this work by encouraging the National Institutes of Health (NIH) to work with medical professional organizations and other stakeholders to develop research publication standards or to issue guidance regarding clinical algorithm development and implementation to prevent the misuse of race or ethnicity. And as noted in our previous response, the federal government could provide grants or other support mechanisms to medical professional associations to help fill in existing gaps in research and knowledge in this rapidly growing field, as well as to help support and expand ongoing diversity mentoring efforts.

Another potential avenue worth considering is through the office of the Assistant Secretary for Planning and Evaluation (ASPE) within the Department of Health and Human Services (HHS). Given ASPE's role in health policy development and analysis, including data and science activities, there may be numerous opportunities to work together on the issue of health equity. In fact, one of ASPE's most recent publications is "Disparities in Rates of COVID-19 Infection, Hospitalization, and Death by Race and Ethnicity," and the office has previously issued reports to Congress on the relationship of social risk factors and Medicare's value-based purchasing programs as recently as May 2020, highlighting that the office is already engaged on this subject.

ACEP has long been dedicated to the issue of eliminating health disparities, promoting health equity, and caring for our most vulnerable populations, and this commitment is stronger and more focused than ever before. The emergency department often reveals the inequities and disparities that exist in our society and emergency physicians work every day to rectify these imbalances as we provide care to anyone, any time. Once again, thank you for your continued attention to this vital effort and we are grateful for the opportunity to continue working with you and your staff to establish a truly equitable health care system.

Sincerely,

Mark Rosenberg, DO, MBA, FACEP
ACEP President