6060 N. Central Expressway, Suite 500, Dallas TX 75206
Office: 214-750-3800

REPORT ADVISORY No. 5 / Updated on October 30, 2021

RACE NORMING OF INJURIES SUFFERED BY BLACK NFL PLAYERS ILLUSTRATES THE MISGUIDED MEASUREMENT PRACTICES INVOLVING MULTICULTURAL POPULATIONS

By Edward T. Rincón, Ph.D., Rincón & Associates LLC

A. Background

A recent Washington Post story discussed the practice of "race norming" in the NFL industry – a controversial statistical procedure that has been used to determine if ex-NFL players who suffered concussions are eligible to receive compensatory damages for their injuries. The problem with the race norming procedure is that it has systematically disqualified more Black NFL players than white players and denied them thousands of dollars in compensatory damages. For reasons that will be discussed here, the practice of race norming points to a disturbing pattern in the measurement industry that justifies the "adjustment" of statistical indicators to achieve a desired outcome that often threatens the quality of life for U.S. multicultural persons. As explained in the Post story, the justification for using race norming in the testing of NFL players sounds plausible and well meaning:

> "In neuropsychology, cognitive test scores are commonly curved using normative data — or "norms" — intended to correct for demographic factors that can affect a patient's performance, such as age or education. The use of race in score-curving, also known as race-norming, dates from the late 1990s, after published research found many Black Americans performed worse on common tests of cognition than White Americans and risked misdiagnosis for dementia or other diseases." [1]

The use of "race norming" as explained in the Post story has resulted in the systematic denial of concussion cases and thousands in monetary compensation for ex-NFL Black football

players who often suffer these injuries. An estimated 20,000 lawsuits have been filed on behalf of the Black ex-NFL players since 2019 while the NFL and their legal team continue to argue that the neurological tests are not discriminatory. In their review of hundreds of pages of confidential medical and legal documents, the Post investigators concluded that the practice easily could have affected the potential dementia claims of hundreds of former players, saving the NFL millions of dollars. [2]

Fortunately, a legal settlement was recently reached to abandon the race norming practice in favor of a race neutral approach, and many Black ex-NFL players will be re-tested using the new diagnostic protocol to determine if they will qualify for payouts for diagnoses of dementia or other diseases.

Other similarly disturbing measurement practices have evolved in the areas of organ transplants and quality ratings of U.S. hospitals that also merit consideration.

B. Organ Transplants

Organ transplants are in great demand with many potential recipients on long waiting lists. A recent story in the Washington Post reminds us that 107,000 people are on waiting lists for organs, mostly for kidneys, and that 33 people die daily while waiting for an organ.[3] This same story also reported that lawmakers were grilled in a congressional hearing by organ transplant organizations (OPO) about their inaction in reducing racial disparities among donors and recipients. As described in the story:

> "Several members of Congress also cited inequities between Whites and people of color in the transplant system. Data show that Black Americans are substantially more likely to suffer kidney diseases, but Whites are more likely to be referred for transplants, and OPO staffers are more likely to ask White families for permission to donate relatives' organs." (p. 2)

To facilitate the selection of patients that are more likely to benefit from an organ transplant, a pretransplant risk factor profile is completed for a transplant candidate and the recommendation for eligibility follows from this profile – clearly a high-stakes decision. In a recent study evaluating the long-term outcomes of liver transplantations between 2002 and 2013,[4] the study investigators discovered that Hispanics had similar or better long-term post-

liver transplant outcomes compared to non-Hispanic whites despite a worse pre-transplant risk factor profile. Based on this surprising outcome, the investigators suggested that further research was needed to clarify if this survival advantage reflects uncaptured protective factors or more stringent transplant selection in the Hispanic population.

The study underscored the need to validate the use of the pre-transplant risk factor profile to understand why it is not accurately predicting the long-term survival outcomes for Hispanic liver transplant recipients, and the potential of the risk profile to incorrectly conclude that Hispanic candidates are not eligible for an organ transplant. This is especially important given that Hispanics, African Americans and Asians in the U.S. reveal a significantly lower probability of receiving a liver transplant than non-Hispanic whites. [5]

C. Adjusting Hospital Satisfaction Ratings

The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) is a 32-item survey instrument and data collection methodology for measuring patients' perceptions of their hospital experience and has been extensively research and accredited by the National Quality Forum – a national organization of healthcare providers, consumer groups, professional associations, purchasers. federal agencies and research organizations. HCAHPS was designed to allow valid comparisons to be made across hospitals, locally regionally and nationally. To ensure that publicly reported HCAHPS scores are fair and allow accurate comparisons across hospitals, the survey sponsors adjust for factors that are not directly related to hospital performance but which affect how patients items answer survey— such as mode effects and patient-mix characteristics like age, language, education, and others. Adjustments are applied to remove any advantage or disadvantage in scores that may result from the survey mode used or from characteristics of patients that are beyond a hospital's control.

For example, it is generally known that telephone interviews result in more positive evaluations than other modes that are self-administered like mail and online surveys. The effect of the adjustment formula is to reduce the positive evaluations from surveys completed by telephone by certain percentage points. Similarly, if a hospital has a patient base that is

predominantly Latino who are known to provide more positive evaluations than non-Latinos, then the patient-mix adjustment would lower the positive evaluations by Latino respondents.

This controversial practice has encountered criticism in the research industry. Regarding Hispanic ratings, the practice assumes that the positive Hispanic ratings are not valid or relevant to their hospital experience; however, the ratings could reflect a stronger level of satisfaction and appreciation for the service that Hispanic patients receive. Telephone interviews are more often chosen over other modes by survey respondents who like to talk, have literacy issues and not Internet savvy – hardly reasons to lower their satisfaction ratings. The practice attempts to remove the influence of demographic and cultural factors on satisfaction ratings, but these factors are embedded in the hospital that patients routinely visit. Removing their influence creates a reality that does not exist and unfairly penalizes hospitals that are doing a good job serving these patients. Rather than financially penalizing hospitals for their positive patient ratings, perhaps they should be rewarded.

D. Aggregation of Asian Subgroup Data

Our research industry has become accustomed to completing studies with small samples of Asian respondents, although the Pew Research Center has in past years employed the needed linguistic resources to conduct national studies of U.S. Asians that included large samples of diverse Asian subgroups. [6] Unfortunately, the more frequent industry practice has been to aggregate the responses of smaller Asian subgroups to achieve larger samples for more reliable statistical analysis. This practice, however, obscures important differences among the Asian subgroups. As the following excerpt illustrates, this aggregation practice is especially problematic in medical research. [7]

> "…National health surveys (i.e., Framingham Heart Study, Cancer Prevention Study, Behavioral Risk Factor Surveillance Survey) did not report data for Asian American subgroups. As a result, misleading and erroneous conclusions were often made due to the omission of Asian respondents resulting from small sample sizes, or the aggregation of data that masked important differences among the Asian subgroups. For example:
>
> - Asian Indians have greater coronary heart disease risk than Chinese persons when compared to non-Hispanic whites;

- Japanese have greater risk for incident cancers while Asian Indians have the lowest risk;
- Liver cancer mortality rates are higher for Vietnamese, Koreans and Chinese when compared to other Asian American subgroups and non-Hispanic whites.
- Colorectal cancer rates are particularly higher for Japanese and exceed the rates for non-Hispanic whites and all other Asian subgroups.

The study investigators also discussed the results of recent pharmacogenomics studies that document how some Asian American subgroups respond differently to a variety of drug treatments, including chemotherapy, anti-coagulants, anti-platelets, and anticonvulsants. At least in the medical arena, the study investigators clearly illustrate that carelessness or indifference to the use of Asian subgroup identities can have significant consequences."

Although the successful completion of research studies that target Asian communities in the U.S. will continue to pose challenges to research practitioners, the path forward seems clear: studies of Asian communities will require additional linguistic and financial resources to meet the standards of quality in the research industry.

E. Conclusion

These thoughts were shared as a reminder that the quest for statistical excellence can sometimes obscure the harmful consequences that our research brings to human beings, especially the more vulnerable groups like Latinos, Blacks, and Asians.

******

Please direct any comments regarding this Report Advisory to Dr. Rincón at edward@rinconassoc.com.

Reference Notes

[1] Hobson, W. (2021, October). NFL, former players agree to remove 'race-norming' from concussion settlement evaluations. Washington Post. Accessed at: https://www.washingtonpost.com/sports/2021/10/20/nfl-players-race-norming-concussions/

[2] Hobson, W. (2021, September). 'Race-norming' kept former NFL players from dementia diagnoses. Their families want answers. Washington Post. Accessed at: https://www.washingtonpost.com/sports/2021/09/29/nfl-concussion-settlement-race-norming/

[3] Berstien, L. (2021 May). Organ collection agencies told to improve performance or face tighter rules. The Washington Post. Accessed at: https://www.washingtonpost.com/health/organ-collection-agencies-told-to-improve-performance-or-face-tighter-rules/2021/05/04/68847bce-ad06-11eb-acd3-24b44a57093a_story.html

[4] Ochoa-Allemant, P., Ezaz, G., Sanchez-Fernandez, L. and Bonder, A. (2020 February). Long-term outcomes after liver transplantation in the Hispanic population. Liver Int. 40 (2), 437-446. Accessed at: https://pubmed.ncbi.nlm.nih.gov/31505081/

[5] Kaswala, D. H., Zhang, J., Liu, A., Sundaram, V., Liu, B., Bhuket, B. and Wong, R.J. (2020 March). A comprehensive analysis of liver transplantation outcomes among ethnic minorities in the United States. Journal of Clinical Gastroenterology, 54 (3) 263-270. Accessed at: https://pubmed.ncbi.nlm.nih.gov/31169758/

[6] Pew Research Center (2013 April) The rise of Asian Americans. Accessed at: https://www.pewresearch.org/social-trends/2012/06/19/the-rise-of-asian-americans/

[7] Rincon, E. T. (2020). The Culture of Research. The Writer's Marq. (P. 34)