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## Disparity in Rehabilitation: Another Inconvenient Truth

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“Of all the forms of inequality, injustice in health is the most shocking and inhuman(e).”

—M.L. King, Jr, Medical Committee for Human Rights, June 25, 1966

On the 50th anniversary of the passage of America’s Voting Rights Act and the historic civil rights march from Selma to Montgomery, with the country confronting an ever-increasing diversification of its population, we are still grappling with structural racialization and its inextricable link to poverty. Economic inequality is the highest it has been since 1928. Disparity, with its fractal-like presence, permeates far too many facets of our society including employment opportunity, law enforcement, criminal justice, education, housing, voting rights, and financial lending. Our health care system is an integral part of this troubling phenomenon with systems, structures, and processes of care that reinforce disparity, the root causes of which are complex, troubling, and without simple solutions.<sup>1,2</sup>

Health disparities were defined in 1999 by the National Institutes of Health as “differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups in the United States.”<sup>3</sup> Other definitions exist, but most of them agree with the fundamental concept of differences between population groups with regard to a specific health outcome or process. After the release of the 2002 Institute of Medicine report, *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*,<sup>4</sup> numerous efforts have been undertaken to document and understand health disparities in the United States.<sup>5–7</sup> Since 2003, the Agency for Healthcare Research and Quality has reported annual trends on disparities in health care delivery.<sup>8</sup> Each year the report emphasizes one priority population. In 2013, the Agency for Healthcare

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Research and Quality provided expanded analyses of people with disabilities (defined as children with special health care needs and adults with multiple chronic health conditions), highlighting worse access to and lower quality of care for individuals with disabilities when compared to those without them.<sup>9</sup>

People requiring rehabilitation are a diverse and vulnerable population from multiple perspectives: social class, race, age, ethnicity, indigenous group membership, religion, geographic location, sexual orientation, gender identity, spoken language, immigration status, nationality, family structure, insurance coverage, comorbidities, and health beliefs, attitudes, and literacy. These numerous demographic and personal factors contribute to disparity. They often coexist and may be compounding in their impact, particularly for people with disabilities.<sup>10–12</sup> To successfully achieve health care equity we must understand the complex interplay of these patient-related factors with the structures, financing, and processes of our imperfect health care system. Our field of rehabilitation must bring heightened awareness and understanding of how we, like other health care providers, while altruistic in our aspirations and beliefs, can inadvertently contribute to disparate care through our implicit biases, those unconsciously and unintentionally held preferences and stereotypes of which we are not aware.<sup>13–15</sup> We must take responsibility for understanding how these implicit biases affect the entire patient-provider treatment experience, from patient satisfaction, utilization, and compliance; to provider decision making, diagnoses, interpersonal behavior, and communication; and, ultimately to our patients' short- and long-term functional and health outcomes. Making our care more just, more cross-difference competent, and our systems more equitable are daunting challenges, but ones that must be undertaken by identifying and targeting modifiable factors for intervention.

Looking back over the last decade, most of the literature on disparities in rehabilitation has been related to disparities in access and utilization of services, which are affected by a variety of sociodemographic characteristics.<sup>16–27</sup> Racial and ethnic minority groups are less likely to receive postacute rehabilitation after stroke,<sup>16,17</sup> traumatic brain injury (TBI),<sup>18–21</sup> hip fracture,<sup>22</sup> spinal cord injury (SCI),<sup>23</sup> and multiple trauma.<sup>24</sup> Uninsured patients, as well as those covered by government insurance (Medicaid and Medicare), are less likely to receive rehabilitation after multiple trauma,<sup>25</sup> hip fracture,<sup>26</sup> and TBI<sup>27</sup> when compared to those with commercial insurance. Disparate wheelchair prescribing and funding practices for people with SCI has also been noted, with socioeconomically disadvantaged people (ie, low income, Medicare/Medicaid recipients, less educated) receiving less than the standard of care for manual or power wheelchairs in our nation's Model Spinal Cord Injury Systems funded by the U.S. Department of Education.<sup>28</sup>

The effect of insurance is not limited to differences between governmental and commercial coverage, but also by differences in eligibility, preauthorization requirements, scope of coverage, and idiosyncratic gatekeeping practices. Although there are no studies comparing the effect of differences in coverage between commercial insurance programs, differences in Medicaid coverage by state result in disparities in access to postacute inpatient rehabilitation for patients with stroke.<sup>29</sup>

Geographic distribution, independent from insurance, also has an important role in access to rehabilitation. Patients in urban areas with closer proximity to rehabilitation centers have better access to rehabilitation when compared to those who live further from these centers, when controlling for insurance coverage.<sup>30,31</sup> In North Carolina, patients with strokes from rural or more impoverished counties are less likely to be discharged to inpatient rehabilitation.<sup>32</sup> There also is large interstate variation in postacute rehabilitation care after TBI in children<sup>33</sup> and hip fractures in older adults.<sup>26</sup>

Gender is associated with differences in receipt of rehabilitation. Women are less likely to be discharged to inpatient rehabilitation after acute treatment for stroke,<sup>16</sup> and hip replacement<sup>34</sup> when compared to men with similar clinical and sociodemographic characteristics. Age, too, is an important predictor of receipt of rehabilitation. Older adults are less likely to be discharged to inpatient rehabilitation after a stroke,<sup>16,30</sup> and younger children (typically 0–4y of age) are less likely to receive inpatient rehabilitation after a TBI when compared to children 15 years and older.<sup>33</sup>

Studies<sup>34–38</sup> examining disparities in functional outcomes after rehabilitation focus mainly on differences by race and ethnicity. Fyffe et al<sup>35</sup> report less improvement in self-care and mobility after SCI following inpatient rehabilitation for non-Hispanic black (NHB) patients, but not for Hispanic patients, when compared to non-Hispanic whites (NHWs). Two studies<sup>34,36</sup> examining functional independence after inpatient rehabilitation for hip replacement surgery<sup>34</sup> and hip fracture<sup>36</sup> show poorer outcomes for all minority groups (Asians, NHBs, Hispanics) compared to NHWs. In contrast, 2 other studies<sup>37,38</sup> looking at motor function after inpatient rehabilitation for stroke found nonsignificant differences between NHBs and NHWs after controlling for patient characteristics, therapy frequency and intensity, and specific interventions within therapy activities. There were, however, differences across racial groups in the amount of therapy received and specific therapy interventions and activities, highlighting that issues of racial disparity and rehabilitation outcomes are multidimensional and complex.

Until this year's publication of the pilot work by Hausmann et al<sup>39</sup> that focused on physiatrists specializing in the care of people with SCI, we are unaware of an investigation of implicit bias among rehabilitation providers. Implicit racial bias against NHBs relative to NHWs has been found in many provider groups including pediatricians, internists, family physicians, emergency department residents, and nurse practitioners.<sup>40–44</sup> The degree of implicit racial bias among health care providers appears similar to that of the general population and that of the community served by the provider. We appear to be as biased as the community and society from which we come.

Hausmann,<sup>39</sup> motivated to undertake this investigation by the known racial and ethnic disparities in health and health-related quality of life among people with SCI, not only found a strong implicit racial bias (prowhite/antiblack) among their physician cohort,<sup>28,45–47</sup> but a stronger bias than that found among other health care provider samples. Also noteworthy was the association of this physician implicit bias with patient outcomes assessed beyond a single clinical encounter. The physicians' implicit racial bias was linked to reported worse social integration, depression, and life satisfaction in the patients for whom they provided

care. Such biases were not, however, associated with functional outcomes in the spheres of mobility, occupation, physical independence, or overall health status.

If, as demonstrated in this bold pilot study and a growing body of health care literature, implicit bias can adversely affect the immediate- and long-term patient-provider experience and associated health outcomes of our patient populations, isn't it time that rehabilitation providers, educators, administrators, policy makers, and researchers systematically determine the impact implicit bias has on our work?<sup>41–43,48,49</sup> Unlike explicit biases, which operate at the level of our conscious awareness and which various programs at all levels have sought to address, implicit biases dwell in our subconscious and are ingrained societally and historically, affecting all of us as individuals and communities. Unchecked implicit biases and attitudes, however, govern our behavior, trumping our rationally held values and beliefs.<sup>50–52</sup> We describe Hausmann's work as bold because it challenges us at the personal and professional level to know our inner selves with respect to the emotionally, politically, and socially charged factors that contribute to disparity. While facing this challenge requires courage, Hausmann has paved the way by showing that such an undertaking is feasible. Personal recognition of implicit biases, while a vital first step, must be accompanied by intentional, concerted, and durable organizational change and commitment necessary to develop a heightened level of cultural and cross-difference competence through training and education.<sup>53,54</sup>

It is a professional and ethical imperative that we establish ourselves and our organizations as allies to those patient groups at high risk for disparate treatment. We must establish a personal ethos, organizational culture, and national conscience that mandate equitable care for all. One approach to accomplish this is through the framework of continuous quality improvement (CQI). Although CQI traditionally has not been used to address disparity,<sup>55</sup> recent work substantiates the concept that a byproduct of efforts to improve overall quality of care can also reduce racial and ethnic disparities.<sup>56</sup> A culturally and cross-difference competent CQI approach must first identify disparities. Such data can then be used to target and monitor mitigating interventions for barriers either common or unique to specific vulnerable populations. This requires standardized mechanisms for tracking patients' race, ethnicity, language, insurance status, and other relevant sociodemographic information.<sup>57</sup> To be of maximal value, there must be disaggregation of these variables from the traditionally broad, general classification schemes (ie, Asian, African, etc) into more finely granular subgroups.<sup>58</sup> If not, important distinctions are lost. Perhaps some day our health care organizations will be mandated to publically post disparity indicators as they now do for many other quality-of-care measures. That which is valued is that which is measured; that which is unmeasured will not be improved.

Although there has been a history of political and economic debate over entitlement programs in the United States, there should be no controversy that all our patients are entitled to equitable health care, including rehabilitation. While we have made progress in the past half-century, the increasing diversity of our patients and the complexity of their health care needs make the achievement of equitable care a humbling challenge. Reaching this goal will necessitate input from a broad array of stakeholders—patients and their families, health care providers and insurers, educators, community and faith leaders, policy

makers, scientists, funding agencies, corporate and business leaders, human and social service agencies, and the media. All stakeholders have a moral imperative to help move the arc of history toward more just and equitable health care. “Somewhere we must come to see that human progress never rolls on the wheels of inevitability. It comes through the tireless and persistent work of dedicated individuals. Without this hard work, time becomes an ally of the primitive forces of social stagnation. So we must help time and realize that the time is always right to do right.” (M.L. King, Jr, Oberlin College commencement address, June 1965.)

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## List of abbreviations

|            |                                |
|------------|--------------------------------|
| <b>CQI</b> | continuous quality improvement |
| <b>NHB</b> | non-Hispanic black             |
| <b>NHW</b> | non-Hispanic white             |
| <b>SCI</b> | spinal cord injury             |
| <b>TBI</b> | traumatic brain injury         |

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