

Panorama

## The Prism of Inequity: Health Disparities in Rheumatoid Arthritis

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Her eyes welled up with a confusing essence of unrelenting strength and vulnerability. “Quiero ayudar a mi hermana” [I want to help my sister], she cried. Ms. R is a familiar patient at our local free clinic’s rheumatology night. She is plagued with a severe case of juvenile idiopathic arthritis (JIA) that has persisted into adulthood, uses a wheelchair, and is an immigrant from Nicaragua. I looked at her underdeveloped extremities and inflamed joints in awe, that on this evening, her chief complaint is that she is unable to find work and thus feels like a burden to her sister, who is her primary caretaker. In that moment, nothing stood between us but a wooden desk, yet we were separated by a world of adversity that Ms. R is constantly overcoming—one that I could not begin to imagine.

When I was 5 years old, I was diagnosed with juvenile rheumatoid arthritis (now JIA), the same diagnosis that visibly defines Ms. R. However, I do not look like her. Since early childhood, I have had the luxury of disease-modifying antirheumatic drugs (DMARDs) coursing through me, preventing the deformities and disabilities that are so evident in her. I could never relate to her condition, yet I felt connected to her in a unique way. When I looked at her, I saw a reflection of myself—not a reflection one would see in a mirror, but in a prism. I saw a version of what my life could have been like had it been fractured by socioeconomic limitations—had I not won the lottery of privilege that granted me attentive healthcare throughout my life. At the same time, this angular reflection I saw in Ms. R radiated beautiful colors that portray an extraordinary resilience, positivity, and hope that I could never embody.

When I first met Ms. R and thought about what the greatest contributor to our starkly different conditions could be, I immediately assumed that access to medication and care was the primary explanation. After reviewing the literature discussing health disparities in JIA and rheumatoid arthritis (RA), I realized the extent to which all other aspects of our upbringing and social situations were at play. This patient was an immigrant, grew up in a nation with a low gross domestic product (GDP) and an underdeveloped healthcare system, and was not able to speak or understand the language of the country in which she was now living. She was living with her relative and did not have access to government assistance despite her disability. On the other

hand, I was a medical student in my mid-20s, bilingual, financially supported by my parents, and raised with access to food, education, and private health insurance in a healthcare system that worked in my favor.

Financial circumstances have been shown to adversely affect RA and JIA disease activity in multiple studies. A study of children with JIA that investigated the differences in disease outcomes between Medicaid and privately insured children found that children insured under Medicaid had significantly higher disease activity and lower physical function than privately insured children, when adjusted for disease onset and course. This discrepancy was despite having similar access to healthcare services across both groups.<sup>1</sup> A study that examined disparities in RA disease activity according to the GDP of patients’ countries of residence found that patients in low GDP countries had higher disease activity levels by all measures despite similar use of DMARDs and similar time to initiation of DMARDs from symptom onset.<sup>2</sup> These investigators found that GDP explained 61% of the variation in Disease Activity Score in 28 joints.<sup>2</sup> The findings of both these studies highlights the negative effect that low socioeconomic status has on disease outcome even when access to medical care is similar. This strongly suggests that the stress of financial uncertainty can have a biological effect that dampens the efficacy of the implemented treatments.

Cultural and racial differences have also proven to play a significant role in the type of care that is pursued and received for management of RA.<sup>3</sup> This is critically important, particularly when it comes to delay in onset of aggressive care and willingness to receive aggressive care. One study found that the median time from symptom onset to specialist visit with a rheumatologist was 22.7 months in Hispanic patients, compared to 6.8 months in all other ethnic or racial groups. This difference persisted regardless of preferred spoken language.<sup>4</sup> Another study reported that non-White patients waited an average of 7 years for initiation of DMARD therapy compared to 1 year for White patients.<sup>5</sup> Given the degenerative nature of RA, the delay in starting a DMARD leads to more severe long-term damage in these patients that spirals into other areas of life, including independence and productivity in society, further perpetuating the disparities that led them there to begin with.

In order to bring equitable care to all patients, we must address cultural, socioeconomic, and health literacy (including English literacy) implications. These factors not only affect the way that providers give care but also how patients seek it. One study showed that racial and ethnic minorities with arthritis have significantly lower healthcare expenditures compared to non-Hispanic White individuals, when adjusted for healthcare access and level of disability. Patients who delayed care proved to have the highest expenditures, whereas those who went without care altogether spent the least.<sup>6</sup> Another study found that 51% of White participants preferred aggressive treatment (dual therapy with biologic agent and methotrexate) to methotrexate monotherapy, compared to only 16% of Black patients; this is a difference that persisted when controlled for level of education.<sup>7</sup> This hesitancy contributes to adverse outcomes and irreversible progression of disease that could have been attenuated. I would postulate that at least some component of the difference in “preference” stems from difficulty identifying with their healthcare providers, and thus, it takes more time to develop trust in their recommendations.

Health disparities and associated adverse outcomes in RA are complex issues that cannot be explained by a single factor. There are several recognized and unrecognized components that play into this, and they cannot be corrected with one simple intervention. For this reason, it is important to identify and acknowledge as many of these factors as possible, such that we as healthcare providers can intervene when we are able to on a population- and individual-level scale.

It is imperative that we are cognizant of these disparities and work to combat them in our clinical practice. When we see patients like Ms. R, or her younger counterparts who

have not yet progressed to her level of disease severity, we need to look beyond their immediate presentation and identify additional needs they may have. These patients do not exist in a vacuum that begins and ends at the clinic door. We as providers should be seeking opportunities to take an extra moment with these patients so that we can understand and address their barriers to care, be they external factors imposed upon them or internal hesitations they may have. In doing so, we will progress toward recalibrating this unbalanced scale.

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