Algorithm May Reduce Disparities in Multiple Sclerosis Treatment

An algorithm helped determine the best and most cost-effective treatments for people with multiple sclerosis.

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A simple treatment algorithm may help reduce disparities for Black people and Latinos with multiple sclerosis (MS), according to a preliminary study that will be presented at the American Academy of Neurology (AAN).

In the United States, nearly one million people live with MS, a disease that causes the immune system to attack the central nervous system, according to the National Multiple Sclerosis Society.

MS can cause numbness, pain, weakness, vision changes, trouble walking and more. If these symptoms persist for at least 24 hours, they are referred to as MS relapses, according to the study. These relapses can be treated with medications, including natalizumab, rituximab and ofatumumab; however, barriers such as cost and access render these treatments inaccessible to some patients.

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The study used an algorithm to determine the most effective disease-modifying treatments for people with MS. The algorithm utilized clinical and social factors, such as out-of-pocket costs and access to transportation but not race and ethnicity.

“Studies show Hispanic and Black people have higher levels of disability than white people but are not given prescriptions for the newer, more effective treatments as often as white people are,” said AAN member and study author Annette Langer-Gould, MD, PhD, of Kaiser Permanente Southern California in Los Angeles, in the release. “We’re excited that we’ve found a straightforward way to rapidly increase the use of these medications among all three groups, greatly improving their health.”

The study involved 1,741 Latinos, 978 Black people and 3,400 white people with MS who were being treated with disease-modifying therapies.

Three years before the study began, Latino participants had an annual relapse rate higher than white people, with 245 relapses compared with 156 relapses per 1,000 person-years, which represent the number of people in the study and the amount of time each person participated in the study.

Over a 12-year study period, all three groups had an increased use of highly effective therapies, particularly rituximab, which is less costly and can be given once a year or less. Latinos had an 89% increase in use, Black people had an 87% increase and white people had an 83% increase.

What's more, each group had a decrease in annual relapse rate. The highest decline was seen among Latinos with 90% fewer relapses per year. White people had 86% fewer relapses and Black people had 82% fewer.

"It is encouraging that our program led to more effective treatments for people with MS resulting in a large reduction in relapse rates among Hispanic, Black and white people," Langer-Gould said. "We show that using an algorithmic approach to increase the use of highly effective medications, particularly an affordable one like rituximab, can reduce racial and ethnic disparities in MS and greatly improve outcomes for all people with relapsing forms of MS."
