

### Transcript Details

This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: <https://reachmd.com/programs/neurofrontiers/genetics-and-schizophrenia-key-ethical-considerations/32749/>

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## Genetics and Schizophrenia: Key Ethical Considerations

### Announcer:

Welcome to *NeuroFrontiers* on ReachMD. On this episode, we'll hear from Dr. Aaron Besterman, who's a Health Sciences Associate Clinical Professor at the UCSD Department of Psychiatry, a Clinical Investigator at Rady Children's Institute for Genomic Medicine, and a Child and Adolescent Psychiatrist at Rady Children's Hospital San Diego. He'll be discussing ethical considerations in the use of genetics for schizophrenia management. Here's Dr. Besterman now.

### Dr. Besterman:

There are several ethical challenges in using genetic tools to help patients with schizophrenia. The majority of genetic research in psychiatry, broadly speaking, has been done in people of European ancestry, and so the findings from those research studies are most beneficial to that group of people—people of European ancestry. So those findings may not be equally beneficial to individuals of other ancestral backgrounds, and that certainly can contribute to or enhance health disparities between different groups.

The other thing that we really need to be mindful of is in a new field of genetics known as polygenic risk scoring. As opposed to looking for rare variants that have a big effect, there are other types of studies known as genome-wide association studies where you look across the genome for small little changes, and each one only has a tiny little effect and by itself does very little. But if you add the cumulative or combined effect of all these tiny little changes together and create something known as a polygenic or multigenic risk score, then together they can have some sort of impact and can tell you something about an individual's risk of developing a certain disorder. The problem is right now, their ability to do that, especially in psychiatric disorders and in schizophrenia in particular, remains pretty limited, it's not reliable from one person to another at this point.

And so there are a lot of companies who are looking to profit off of this new approach in technology, but there are still many limitations. So this is a major ethical issue that has come up in our field where technologies are being used in a commercial way before they've been truly validated by rigorous research. So we just need to be very careful that the general public is aware of where the evidence base stands and the true potential benefit of these technologies but also the true limitations of these technologies in actually being able to predict the onset of psychiatric diseases like schizophrenia in people who don't currently have those disorders or who have very limited or early symptoms that are potentially suggestive of those disorders.

### Announcer:

That was Dr. Aaron Besterman talking about ethical issues in a genetics-guided approach to schizophrenia management. To access this and other episodes in our series, visit *NeuroFrontiers* on ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!