Helping multiple sclerosis patients face dizzying medication decisions

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Leslie Wilson, PhD, MS, BS, a health economist and adjunct professor in the UCSF School of Pharmacy, assists James Mona, 26, in filling out a questionnaire that helps patients make decisions about their care and treatment with the purpose of weighing their risks and benefits. Photo: Susan Merrell

(Medical Xpress) -- There is no cure for multiple sclerosis, but several medications can help slow its devastating effects, and extend healthier years for the roughly 2.5 million people worldwide diagnosed with this chronic neurological disease.

But as is the case with many drugs, medications used to treat multiple sclerosis vary in their effectiveness and side-effects, including mood swings, weight gain, flu-like symptoms, and increased risk for leukemia.

According to the National Multiple Sclerosis Society, one of the most

frequent questions from patients is what drug should taken, but there is no concrete answer. "It's a complex decision that can be confusing for patients," says Leslie Wilson, PhD, a health economist and adjunct professor at the UCSF School of Pharmacy.

Wilson is working with colleagues in UCSF's department of neurology to explore whether a popular tool from the world of consumer marketing that has been successfully used in promoting cars and soft drinks might help. It's called "choice-based conjoint analysis", a statistical model used to predict what consumers want in a sea of choices, based on the importance people place on different attributes, such as benefits, risks and ease of administration.

"The Food and Drug Administration (FDA) monitors safety and efficacy, but nobody is really asking patients how they feel about the risks and benefits of the medication," Wilson says. If successful, the model would help multiple sclerosis patients identify the medication best suited for their needs based on risk-benefit preferences, saving time and reducing stress.

Wilson is currently testing the model with patients. The complex project requires building a sophisticated mathematical tool populated with patient opinion data.

For help applying the model to her specific needs, Wilson turned to Consultation Services, provided by UCSF faculty and senior staff through UCSF's Clinical and Translational Science Institute (CTSI).

As part of the service, Wilson was assigned consultant Chuck McCulloch, PhD, a professor in UCSF's Department of Epidemiology & Biostatistics. "Whereas 'conjoint analysis' is a foreign language for many medical researchers, McCulloch was a pro," Wilson says. "He knew exactly what was needed and his explanations were very clear."

Wilson is such a fan of the service she requires her graduate students to tap into it for their major research projects; even guiding them through the process from their request to their consultation. For example, her students have recently examined the cost-effectiveness of testing both the U.S. blood supply for Chagas disease, and drugs for prostate cancer.

CTSI's Consultation Services program offers a one-hour consultation at no charge, an offer that is ideal resource for students to get expert tips for boosting the professionalism of their research. "It's good for the students to know that they're not expected to know everything — they're expected to know how to work with colleagues," Wilson says.

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