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Asthma through the eyes of a medical anthropologist

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Asthma diagnosis and management vary dramatically around the world, said David Van Sickle, an honorary associate fellow at the University of Wisconsin School of Medicine and Public Health, during a presentation today at the annual meeting of the American Association for the Advancement of Science (AAAS).

Asthma affects an estimated 8 percent of Americans, and about 300 million people around the world, but varying practices in diagnosis and treatment have global implications in understanding a widespread, chronic condition, says Van Sickle, who applies an anthropological approach to medicine.

"Since the major way to learn how many people have asthma is to ask them, external factors that alter those estimates have a major impact on our understanding of how widespread asthma is," he says. "Yet local culture and conditions make these estimates subject to a great deal of error."

Van Sickle, who joined an AAAS panel discussing the role of anthropology in medicine, researched asthma diagnosis and treatment in India for several years. In one project, he had doctors watch videos showing classic asthma symptoms — wheezing, shortness of breath, waking up and coughing in the night.

"I asked, 'If you saw this in the clinic, how would you describe it?' and found very few of them used the term 'asthma.' Instead, many applied a

label that was less stigmatized, more friendly, like 'wheezy bronchitis.'"

When Van Sickle repeated the experiment in Wisconsin, "The physicians were much more likely to identify the signs and symptoms of asthma, and they applied a very different set of terms to describe the video scenes," he says.

The difference in diagnostic practices may reflect different motivations. In India, Van Sickle says, "People resist being diagnosed with asthma for fear of being stigmatized. A diagnosis of chronic disease can impair a woman's marital chances, and a physician is unlikely to make an unpopular diagnosis because one can always go down the street and get a different doctor. It's a private medical marketplace, with many competing systems that include traditional medicine, which often market products for chronic diseases that western medicine cannot cure, but has little incentive for accuracy. The patient pays out-of-pocket, and there's pressure on physicians to make the patient a satisfied customer."

Physicians in high-income countries appear more likely to use the label of asthma for a variety of reasons, ranging from differences in the overall burden of respiratory disease to the structure of the health care system.

When Van Sickle looked at asthma management on Navajo reservations in Arizona and New Mexico, he found that extremely young children were expected to take preventive medications by themselves.

"In United States, the dominant approach to asthma is self-management," he says. "People are expected to monitor and take care of asthma largely on their own. But in Navajo country, due to cultural ideas about individual autonomy, self-management means giving very young kids primary responsibility for managing the disease, and parents play a lesser role."

Although that decision reflects Navajo traditions, Van Sickle says, "If kids are getting this responsibility, they need more training and education. But in the clinic, most doctors focus on the parent, not the child."

Van Sickle says that rates of asthma reflect both the diagnostic habits of physicians and the differences in the actual frequency of disease. The origins of asthma have been tied to a host of risk factors, ranging from genes, allergy, viral infections and environmental conditions such as smoky fires. "It's considered a 'multifactorial' disease, but I think that's another way of saying we can't fully explain the prevalence patterns or time trends," he says.

A better understanding of the causes of the disease should emerge from better data about those with asthma and on under circumstances they develop asthma, Van Sickle says.

"Important differences in the incidence of asthma are built into different ways of life — such as diet, environmental exposures and clinical practices — and anthropology should be able to help us understand how to prevent and treat this disease," he says. "I hope that my work can help make sense of the origins of asthma and the sizable differences in the rates of asthma across populations. Behavior and culture play major roles in the causation and treatment of many diseases, and anthropology is the study of culture and behavior."

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