

NTM Deemed “Burgeoning Medical Challenge”

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Causes greater suffering and healthcare burden than tuberculosis in US and Canada

[Nontuberculous mycobacteria \(NTM\)](#), little known cousins of the organism that causes tuberculosis, represent a "burgeoning medical challenge" that may cause significantly greater healthcare spending and patient suffering in the United States and Canada than does tuberculosis, according to Michael Iseman, MD, National Jewish Health Professor of Medicine and pulmonologist Theodore K. Marras, MD, Assistant Professor of Medicine at the University of Toronto.

In an editorial in the Nov. 15 issue of the *American Journal of Respiratory and Critical Care Medicine*, Drs. Iseman and Marras wrote that cases of NTM disease represent "the leading edge of a major public health problem" and that more research into the epidemiology, risk factors, prevention and treatment of the disease is sorely needed.

"These bacteria are present widely throughout the environment," said Dr. Iseman. "All indications suggest that prevalence of the disease is increasing, yet we know almost nothing about why some individuals develop infections, but most do not; what is the natural history of the disease; or how many people may be suffering unrecognized infections."

Since NTM is not a reportable disease, there are no comprehensive statistics on its prevalence or incidence. Based on Dr. Marras' research, it is estimated that annual new cases of TB and NTM are roughly equal. However, most cases of TB are successfully treated in six to nine months, and most patients are asymptomatic within three to six weeks. NTM, on the other hand, causes "vexing infections" that entail an average of 18 months of treatment, and involve antibiotics that cause more side effects and may require intravenous injections. Since NTM has not been well recognized in current medical training, many patients suffer for years before getting a diagnosis. And, despite aggressive multiple-drug treatment, NTM patients experience relapse rates of 30 to 50 percent, resulting in years of symptomatic illness.

While TB rates are declining to historic lows in North America, NTM cases appear to be on the rise. NTM infections are not passed person-to-person as is TB, but are currently believed to be acquired from the environment. One hypothesis that is currently under study is whether potable water in the homes may be a source of infection.

Slender Caucasian women appear to be at particular risk for NTM lung diseases. A report from the National Institutes of Health in the same journal reported characteristics of 63 NTM patients who were taller and leaner than control subjects and demonstrated high rates of scoliosis, mitral valve prolapse and cystic fibrosis genetic mutations.

"I believe that, in the United States, NTM currently causes clinical and healthcare burdens an order of magnitude greater than does tuberculosis," said Dr. Iseman.

National Jewish Health has been a referral center for NTM for the past 40 years, seeing increasing numbers of cases every decade. Originally the cases were derived mostly from the southeastern United States, but now they come from all 50 states and Canada.

"The organism is everywhere, and the incidence of disease appears to be increasing," said Dr. Iseman. "We need to learn more so we can better treat and prevent the suffering and expenses associated with it."

National Jewish Health is the leading respiratory hospital in the nation. Founded 121 years ago as a nonprofit hospital,

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Media Contacts

Our team is available to arrange interviews, discuss events and story ideas.

William Allstetter

303.398.1002

allstetterw@njhealth.org

Adam Dormuth

303.398.1082

dormutha@njhealth.org