

Innovative new approach uncovers higher rates of disease

August 16 2013

Christchurch scientists have developed an innovative testing process to uncover patients with legionnaires' disease who would otherwise go undiagnosed.

The world-first approach identified four times as many cases of the potentially fatal disease in Christchurch than would have been picked up by conventional testing.

Professor David Murdoch of the University of Otago, Christchurch, worked with other colleagues from Canterbury Health Laboratories (CHL) on the project.

He says special tests are required to diagnose legionnaires' disease because it looks the same as other forms of [pneumonia](#) on an x-ray and has similar symptoms.

It is often difficult for doctors to know whether to test a patient for legionnaires' disease, Professor Murdoch says. However, it is important to know if a patient has legionnaires' disease as specific antibiotics are required to treat it which differ from the standard treatment for pneumonia.

Professor Murdoch says he and his CHL colleagues suspected legionnaires' disease was markedly under-diagnosed. In 2010 they introduced a systematic testing strategy whereby all samples from Canterbury patients with pneumonia were tested by a special

legionnaires' test called PCR whether requested by doctors or not. This approach was supported by [clinicians](#).

"It's a very simple approach but we don't think anyone else has done this globally."

"We have more than quadrupled the detection of legionnaires' disease with this new strategy and highlighted a big spring/summer peak in activity that is more predictable every year in Christchurch than [influenza](#). This peak is associated with gardening activities."

The results of this study are published in the latest edition of the *Clinical Infectious Diseases* journal.

Professor Murdoch says over the past few years the Canterbury District Health Board has put considerable effort into communicating with the community about guarding against legionnaires' disease. CHL staff, University staff and the health board are now working together to better identify risk factors for legionnaires' disease and improved approaches to preventing this disease. They are also working with other colleagues throughout the country with view to rolling out the Canterbury approach to testing throughout the nation.

Provided by University of Otago

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