

Health Ministry needs to act to reduce antibiotic use in New Zealand

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Targets to reduce antibiotic use are urgently needed, according to new research from the University of Auckland.

The Ministry of Health needs to step up efforts to reduce antibiotic consumption in New Zealand by setting reduction targets and then reporting on progress towards these by each of the country's District Health Boards, says Associate Professor Mark Thomas from the University's Department of Molecular Medicine and Pathology.

"Antibiotic use in New Zealand needs to be reduced if we are to slow the spread of [antibiotic resistant bacteria](#)," he says.

In a paper published in the *New Zealand Medical Journal* today, Dr Thomas was the lead author in an investigation into the main cause of rising [antibiotic resistance](#).

"Reporting the per capita antibiotic consumption within each DHB, in relation to targets for reductions from present levels, could provide an impetus for DHBs to address this threat to health," says Dr Thomas.

"New Zealand is fortunate in already having excellent data on antibiotic use, and regular reporting of this data in relation to reduction targets will encourage health administrators to allocate resources to local or national programmes that encourage reductions," he says.

"Residents of DHBs that consistently fail to meet these reduction targets

should be encouraged to press their health administrators for the reasons why they are failing to ensure that [antibiotic treatments](#) are not overused," says Dr Thomas. "Failure to act now will significantly harm the health of our population in the future."

"Resistance to commonly used [antibiotics](#) in a wide range of bacteria that are responsible for common diseases is rapidly emerging as a major threat to health in New Zealand", he says.

"The epidemic of [resistant bacteria](#) in New Zealand has grown rapidly in recent years, and experience from other countries suggests that it may become much more common here in the next few years," says Dr Thomas.

He says that in New Zealand, at present, for most infections due to antibiotic-resistant bacteria, a relatively effective treatment is available, even if it has disadvantages regarding cost, convenience or adverse effects.

But some strains of bacteria such as E.coli and K. pneumoniae, cannot be effectively treated and, up until now, these untreatable bacteria have been isolated from very small numbers of patients in New Zealand.

"There has been an alarming increase in their prevalence in hospitals overseas. These infections are often untreatable and cause high death rates," says Dr Thomas. "If untreatable infections from drug-resistant organisms become common here, this will have major consequences for the New Zealand healthcare system."

Antibacterial consumption in NZ had been relatively prudent in the past and so the prevalence of antibiotic resistance in most organisms was, until recently, relatively low.

But in the seven years from 2005 to 2012, annual per capita antibiotic consumption by community-based patients increased by 43 per cent, an average annual increase of just over six per cent each year.

The low rates of completely drug-resistant organisms in New Zealand means the infectious risks of some modern medical procedures, such as organ transplantation, joint replacements, and prolonged stays in an intensive care unit, are considered acceptable for most patients.

"If an increasing proportion of procedure-related infections are caused by untreatable bacteria, the infectious risks may be considered less acceptable and the use of these procedures curtailed," he says.

"Increasing antibiotic resistance threatens a very wide range of medical and surgical practices. It should be of great concern to the community and to all healthcare workers."

Dr Thomas says that it seems unlikely that new drugs will be developed in time to effectively treat infections caused by the increasing numbers of highly resistant bacteria.

"We must change our strategy from accepting the emergence of bacterial resistance as a minor inconvenience, to doing all that is feasible to slow the emergence of resistance," he says.

The study put New Zealand's rate of antibiotic use in context with other countries around the world.

The overall level of antibiotic use by community based patients in New Zealand in 2010 was less than that in Greece, Belgium, France and Italy, but was greater than that in Spain and most other European countries.

"Our antibiotic use in New Zealand in recent years is comparable with those countries considered to have profligate levels of antibiotic use, and

so have high levels of antibiotic resistance," says Dr Thomas.

"Sustained reductions in antibiotic use in NZ in the coming years will need recognition that this is a goal with major long term benefits – effort expended now is more than repaid in the future."

Narrow spectrum antibiotics should be prescribed for the shortest duration necessary to achieve a significant impact on mortality or illness, and not prolonged unnecessarily, he says.

Provided by University of Auckland

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