

Research takes aim at NT super bug in readiness for the wet

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Results from a pioneering Northern Territory-based research project have revealed that the risk of death from the potentially deadly pneumonia-causing super bug, *Acinetobacter*, has been drastically reduced.

The findings, which reveal a drop in mortality from 64 per cent to 11 per cent, stem from new routine treatment protocols first introduced in the 1990s and evaluated as part of a collaborative research project between the Menzies School of Health Research (Menzies) and Royal Darwin Hospital (RDH).

Published this month in the international medical journal, *Chest*, the paper, *A 16-Year Prospective Study of Community-Onset Bacteremic Acinetobacter Pneumonia*, comes as welcome news to Territory health professionals and communities preparing for the upcoming wet.

Menzies infectious diseases specialist, Dr Josh Davis explained that the *Acinetobacter* bacterium is a major cause of severe pneumonia in tropical Australia.

"*Acinetobacter* is a significant cause of community acquired pneumonia in tropical and subtropical regions with the majority of cases (88 per cent) occurring in the wet season," Dr Davis said.

"By looking at our cases in detail, over time we collected the largest series of cases yet reported, and have found that this is a very severe infection with most people requiring admission to the intensive care unit (80 per cent).

"We also found that nearly all affected patients had risk factors, most commonly excessive alcohol use (82 per cent)."

Head of Menzies' Global and Tropical Health Division, RDH Infectious Diseases Physician and senior author, Professor Nick Anstey said the standard treatments for pneumonia are ineffective against *Acinetobacter*.

"People at risk need to be recognized early and immediately treated with antibiotics targeting *Acinetobacter*. We previously identified this infection as a major cause of death from pneumonia at RDH in the 1980s and early 1990s and as a result introduced a new antibiotic treatment plan for at-risk people with pneumonia," Prof Anstey said.

"Combined with excellent clinical care, the new protocol has proved very successful. Following its introduction, the chance of dying from this disease has been reduced from 64 to 11 per cent. The treatment that has saved lives in at-risk people has been the addition of an old antibiotic, gentamicin, to routine antibiotic protocols at RDH."

The paper also cited studies on *Acinetobacter* pneumonia from Hong Kong, Singapore and Taiwan, where the RDH pneumonia protocol is not used. The mortality rate in all locations was found to remain very high at over 60 per cent.

"This is another example of local research out of Menzies and RDH saving lives in the Territory - with global implications for the treatment of pneumonia in other high prevalence tropical regions in the Asia-Pacific," Prof Anstey said.

View the article on the CHEST Journal website:

<http://journal.publications.chestnet.org/article.aspx?articleid=1879145>

Media note:

Dr Josh Davis is Menzies' infectious diseases specialist and an early career researcher. He completed his clinical infectious diseases training in 2004, and then worked on a PhD from 2007-2010 on the epidemiology, pathophysiology and adjunctive treatment of sepsis in the Top End of the Northern Territory (NT).

View his profile at: http://www.menzies.edu.au/page/Our_People/Researchers/Josh_Davis/

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Menzies Background

Menzies School of Health Research is Australia's only Medical Research Institute dedicated to improving Indigenous health and wellbeing. We have a 28-year history of scientific discovery and public health achievement. Menzies works at the frontline, partnering with over 60 Indigenous communities across Northern and Central Australia. We collaborate to create resources, grow local skills and find enduring solutions to problems that matter.