Residents of South Auckland are nearly two times more likely to suffer from diabetes than those who live 25 kilometres across Auckland in the North Shore.

In a study that looked at diabetes distribution across electoral districts in the Auckland region, researchers found that geography matters.

The highest rate of diabetes was 17.3 percent in Mangere and the lowest was 3.2 percent on the North Shore. This difference persisted after adjusting for age, gender and ethnicity.

"To our knowledge, this was the first study to look at the diabetes distribution by electorate and we found those with the greatest risk of diabetes fell within the boundaries of the Counties Manukau DHB," says study leader, Dr Daniel Exeter from Epidemiology and Biostatistics at the University of Auckland. The research results were published today in the *NZ Medical Journal*.

The study looked at the data from 63,000 people diagnosed with type 1 or type 2 diabetes across the region in 2011 who were aged 30 years or over. The *diabetes prevalence* in the Auckland region was close to the national average at 8.5 percent.

The highest age-related rate of diabetes was in the 70 to 79 year old group at 15.6 percent and as expected males had a higher rate of diabetes than females.
There was marked variation in diabetes by ethnicity with rates of 10.3 percent among Maori, 15.8 percent among Pacific and 6.3 percent among NZ Europeans.

The study found that residents in the Mangere electorate were the most affected, with the highest rate of diabetes even after adjusting for age, gender and ethnicity.

"These inequities across the Auckland region are stark reminders that even in one relatively small metropolitan area, there can be huge variations in rates of key health conditions," says Dr Exeter. "The reasons behind this are complex and probably due to many factors, but the social determinants of health that begin even before birth are increasingly involved."

"Factors such as maternal deprivation in pregnancy, the local food environment, stress and access to health care are also seen as contributing to this," he says.

The use of electorates to describe the problem is of importance, as these are areas represented by elected members of Parliament.

"This allows researchers and the public to present politicians with data that directly relates to the area they represent," says Dr Exeter. "It allows the inequities in health outcomes to speak for themselves, so that politicians can represent their constituents when seeking to improve the health of their populations. We believe this approach can be a catalyst for change."

He says community-based action programmes could be especially important, such as involving local schools through education and ensuring the environment is more conducive to healthy lifestyles.
"Whatever decisions are made about the future of diabetes policy, prevention and management programmes, the fact that these residents living 25 kilometres apart have such a disparity in diabetes prevalence, is unacceptable," says Dr Exeter.

Provided by University of Auckland


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