

Disparities in insulin pump use by New Zealanders with type 1 diabetes

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Erin McKergow and Dr Lianne Parkin

There are significant demographic and regional disparities in the use of insulin pumps in New Zealand, according to new University of Otago research.

People with type 1 diabetes need regular insulin in order to control their [blood sugar levels](#). Insulin can be administered by giving several injections a day or by using an insulin pump. Pumps have been funded by PHARMAC since September 2012 for patients who meet certain clinical criteria.

However, the Otago researchers found that Māori, Pacific, and Asian

people with type 1 diabetes were significantly less likely to be using a pump than New Zealand Europeans. The most socioeconomically disadvantaged, males, and older patients were also less likely to be using a pump and there were significant differences in use across District Health Board regions.

Their study is newly published in the international diabetes journal, *Acta Diabetologica*.

Differences in insulin pump use by ethnicity were present even when age, sex, region, and socioeconomic factors were taken into account, according to the lead authors, Erin McKergow and Dr Lianne Parkin.

"International research suggests that [insulin pumps](#) may have several advantages compared with multiple daily injections, including improved quality of life and fewer diabetes-related complications," says Dr Parkin. "There is also some evidence to suggest that the use of insulin pumps may help to alleviate some of the [socioeconomic differences](#) in blood glucose control which have been observed internationally."

"Our study was based on anonymised summary data from the Ministry of Health so we don't know whether the observed disparities in insulin pump use are due to differences in funding eligibility, decisions by doctors, or patient choice," she says.

"However, it is possible that patients with the greatest need are receiving less intensive management. More research is needed to explore this further."

More information: Erin McKergow et al. Demographic and regional disparities in insulin pump utilization in a setting of universal funding: a New Zealand nationwide study, *Acta Diabetologica* (2016). [DOI: 10.1007/s00592-016-0912-7](https://doi.org/10.1007/s00592-016-0912-7)

Provided by University of Otago

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