

EQUITY OF ACCESS TO INPATIENT REHABILITATION SERVICES IN NEW ZEALAND

QUESTION

- Is access to inpatient rehabilitation equitable across the country?
- Do patients attend rehabilitation in the same area they live in?
- How far do patients have to travel to access inpatient rehabilitation services?

The data used is adult inpatient rehabilitation service utilisation data for discharges from 1 July 2017 to 30 June 2018.

ANSWER

- Access to inpatient rehabilitation facilities is fairly equitable in New Zealand for most patients. However patients living in low socioeconomic and/or rural areas have limited access to inpatient rehabilitation services.
- Most patients attend facilities in the same geographical area where they live, however as no facilities are located in Rural Centre areas, these patients have to travel to other areas for inpatient rehabilitation.
- Overall 69% of patients lived within 20 kilometres of the facility they attended, however 20% of all patients had to travel more than 100 kilometres to an inpatient rehabilitation facility.

Suggested acknowledgement:

Equity of access to inpatient rehabilitation services in New Zealand. AROC Information Series No. 1 NZ (2019). Australasian Rehabilitation Outcomes Centre.

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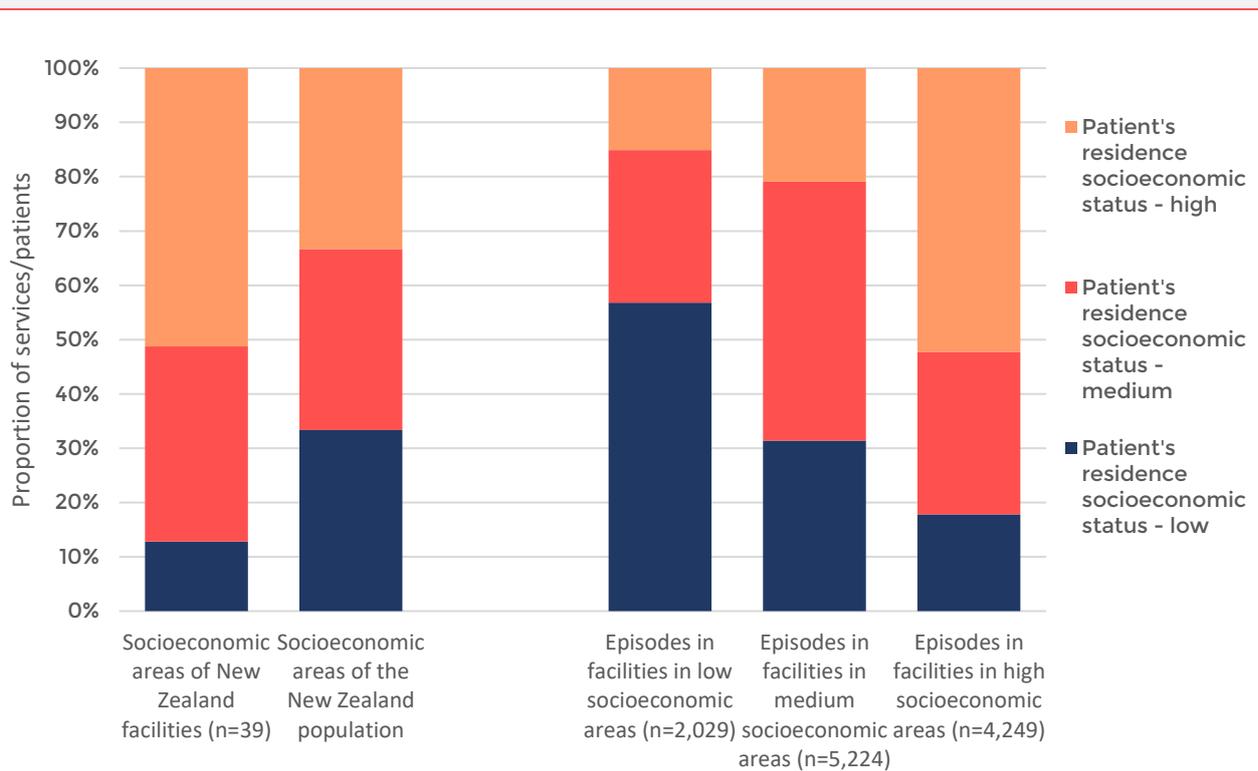
Equity of access

For this analysis the postcodes of inpatient rehabilitation facility locations and the postcodes of patient's residences were mapped to a socioeconomic status of high, medium or low using the Stats NZ index of relative socioeconomic deprivation (NZDep); with low indicating more disadvantaged areas.

The majority of inpatient rehabilitation facilities in New Zealand are located in high socioeconomic areas with only a very small number located in low socioeconomic areas (13%). Overall, patients were most likely to attend a facility in the same socioeconomic area as they lived. Facilities located in medium socioeconomic areas have the most equitable spread of treating patients from all of the socioeconomic groups.

In **Figure 1** below the first bar on the left side represents the distribution of inpatient rehabilitation facilities in New Zealand across the socioeconomic areas, with the next bar highlighting the even distribution of the population of New Zealand across the socioeconomic areas. The three bars on the right side of the graph represent the socioeconomic status of where the inpatient rehabilitation facilities are located and the shading of the bar indicates the socioeconomic status of where the patients that attended those facilities lived.

Figure 1 Socioeconomic status of New Zealand inpatient rehabilitation services and their patients.



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Location of treating facilities

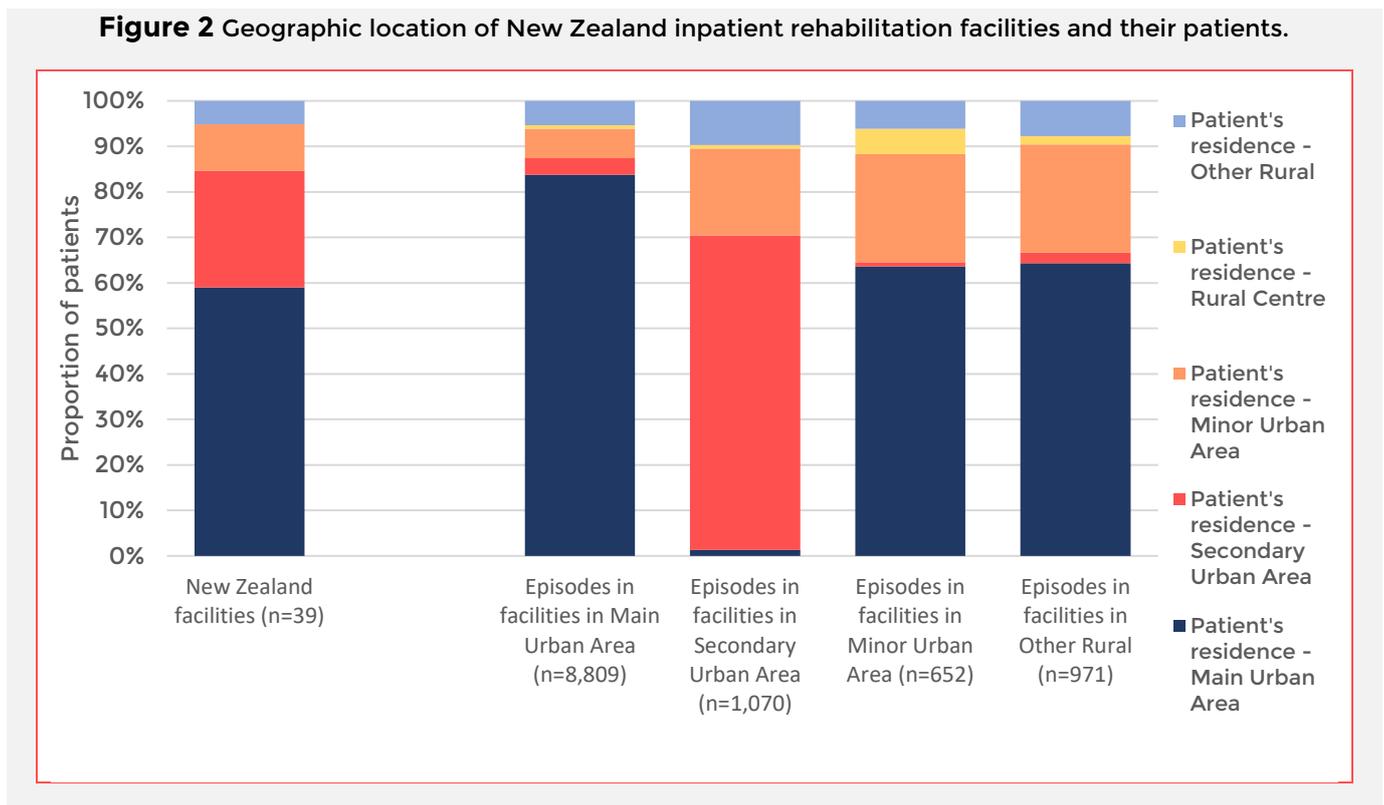
For this analysis Stats NZ Urban-Rural Index of geographic location categories was used for facility and patient residence locations.

The majority of inpatient rehabilitation facilities in New Zealand are located in Main Urban Areas (59%), with the remainder mostly located in Secondary Urban Areas. There are no inpatient rehabilitation facilities in rural centres.

Patients attending a facility located in Secondary Urban Areas, typically also lived in the same geographical area, whereas patients attending facilities in other areas, typically lived in a Main Urban Area. Regardless of the location of the inpatient rehabilitation facility, between 5-10% of all patients attending lived rurally.

In **Figure 2** below the bar on the left shows the distribution of inpatient rehabilitation facilities in New Zealand. The four bars on the right represent where inpatient rehabilitation facilities are located and the shading of the bar indicates where the patients that attended those facilities lived.

Figure 2 Geographic location of New Zealand inpatient rehabilitation facilities and their patients.



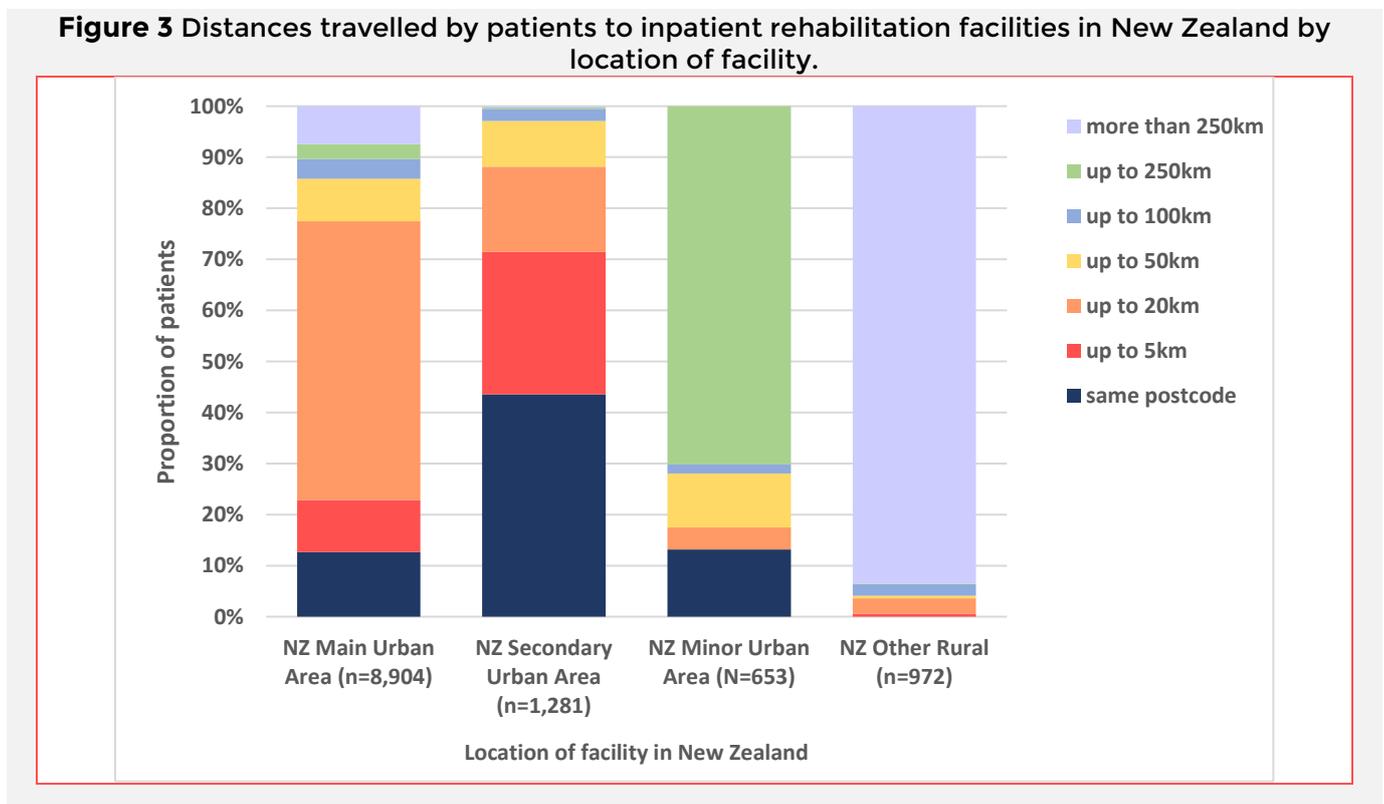
Distances travelled

For this analysis the distance travelled was estimated as the straight line distance between the postcodes of the patient's residence and that of the inpatient rehabilitation facility the patient attended.

Most patients attending an inpatient rehabilitation facility in Main Urban Areas and Secondary Urban Areas lived within 20kms of the facility they attended for treatment. Most patients attending a facility in Minor Urban Areas or Other Rural Areas travelled the furthest, with most travelling more than 100kms.

In **Figure 3** below each bar represents where inpatient rehabilitation facilities are located and the shading of the bar indicates the distance travelled by the patients attending the facilities from where they lived.

Figure 3 Distances travelled by patients to inpatient rehabilitation facilities in New Zealand by location of facility.



Further Reading:

F. D. Simmonds, J. P. Dawber & J. P. Green "Equity of access to rehabilitation services in Australia", ANZCOS / AFRM Conference, Brisbane, 15 September 2011, (2011)

<https://ro.uow.edu.au/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1110&context=ahsri>

Currow DC, Allingham S, Bird S, Yates P, Lewis J, Dawber J and Eagar K (2012) Referral patterns and proximity to palliative care inpatient services by level of socio-economic disadvantage. A national study using spatial analysis. BMC Health Services Research, 12: 424.