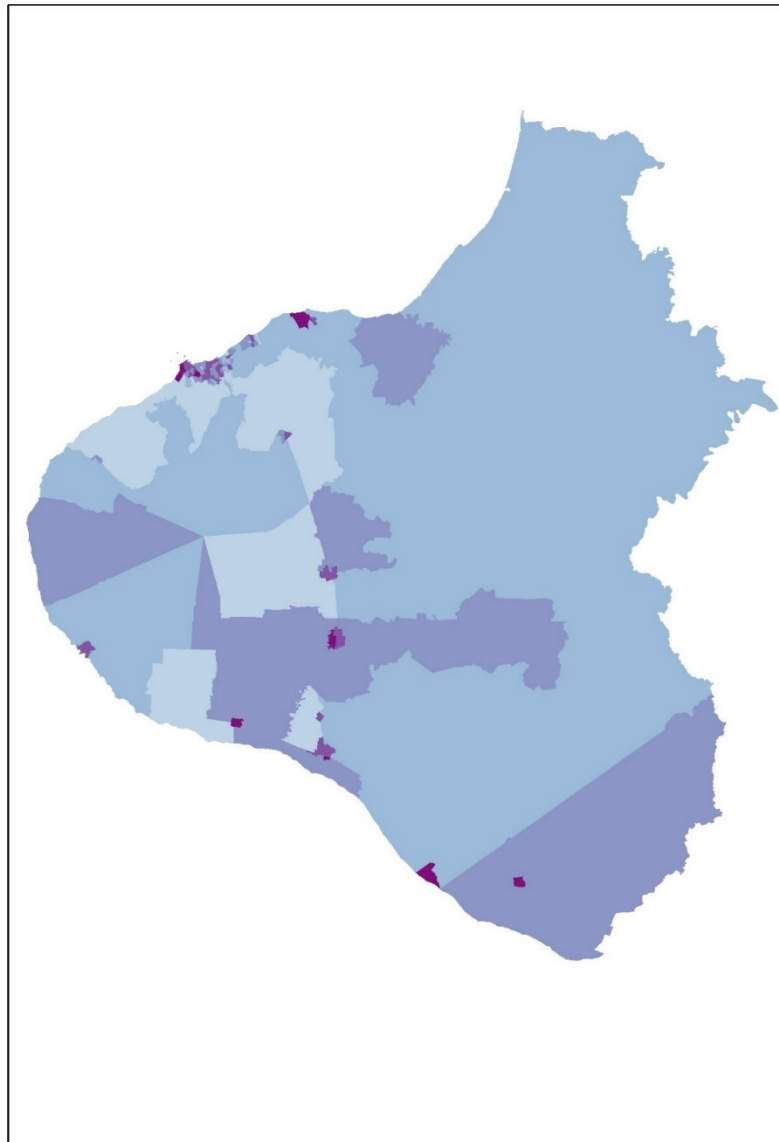


# A deprivation and demographic profile of the Taranaki DHB



Taranaki DHB, showing overall IMD deprivation  
with the most deprived areas shaded darkest

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## Statistics New Zealand Disclaimer

The results in this report are not official statistics, they have been created for research purposes from the Integrated Data Infrastructure (IDI), managed by Statistics New Zealand. The opinions, findings, recommendations, and conclusions expressed in this paper are those of the author(s) not Statistics NZ or the University of Auckland.

Access to the anonymised data used in this study was provided by Statistics NZ in accordance with security and confidentiality provisions of the Statistics Act 1975. Only people authorised by the Statistics Act 1975 are allowed to see data about a particular person, household, business, or organisation and the results in this paper have been confidentialised to protect these groups from identification. Careful consideration has been given to the privacy, security, and confidentiality issues associated with using administrative and survey data in the IDI. Further detail can be found in the Privacy impact assessment for the Integrated Data Infrastructure available from [www.stats.govt.nz](http://www.stats.govt.nz).

The results are based in part on tax data supplied by Inland Revenue to Statistics NZ under the Tax Administration Act 1994. This tax data must be used only for statistical purposes, and no individual information may be published or disclosed in any other form, or provided to Inland Revenue for administrative or regulatory purposes. Any person who has had access to the unit-record data has certified that they have been shown, have read, and have understood section 81 of the Tax Administration Act 1994, which relates to secrecy. Any discussion of data limitations or weaknesses is in the context of using the IDI for statistical purposes, and is not related to the data's ability to support Inland Revenue's core operational requirements.

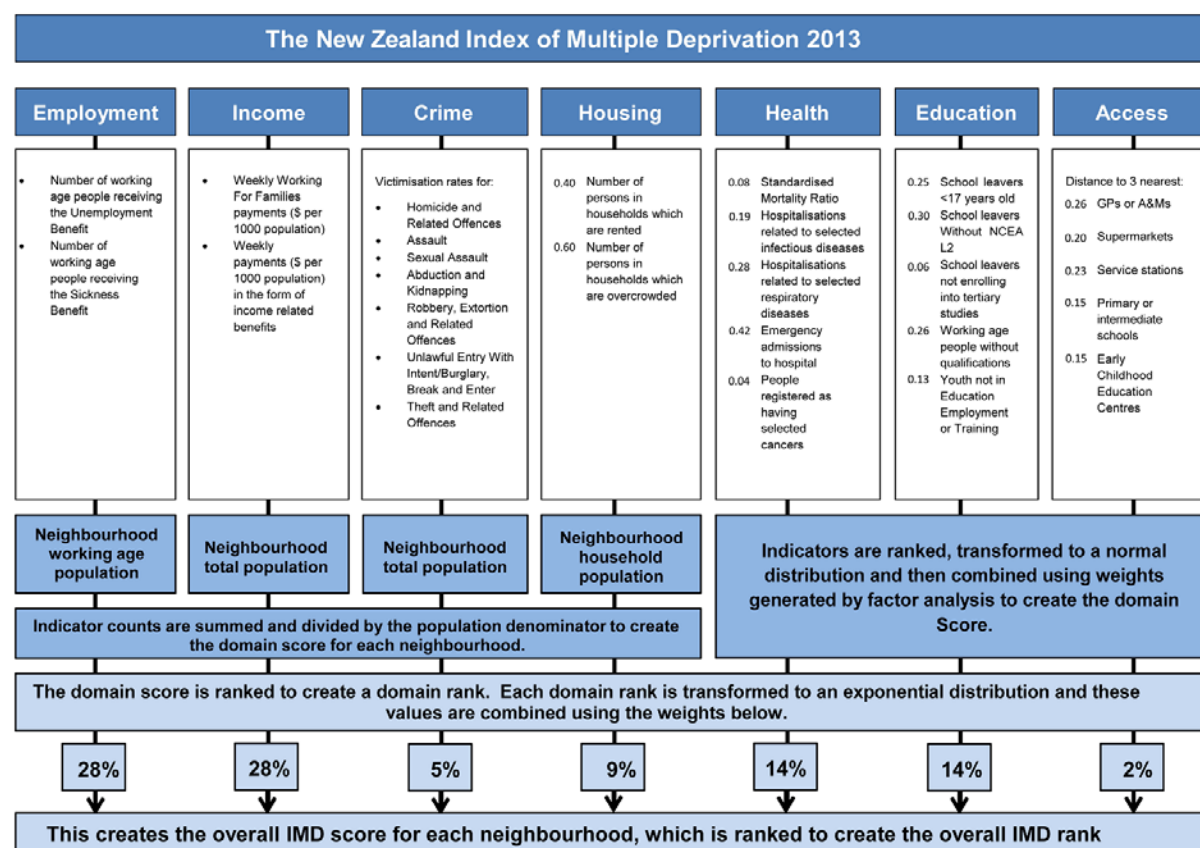
## Acknowledgments

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## A deprivation and demographic profile of the Taranaki DHB

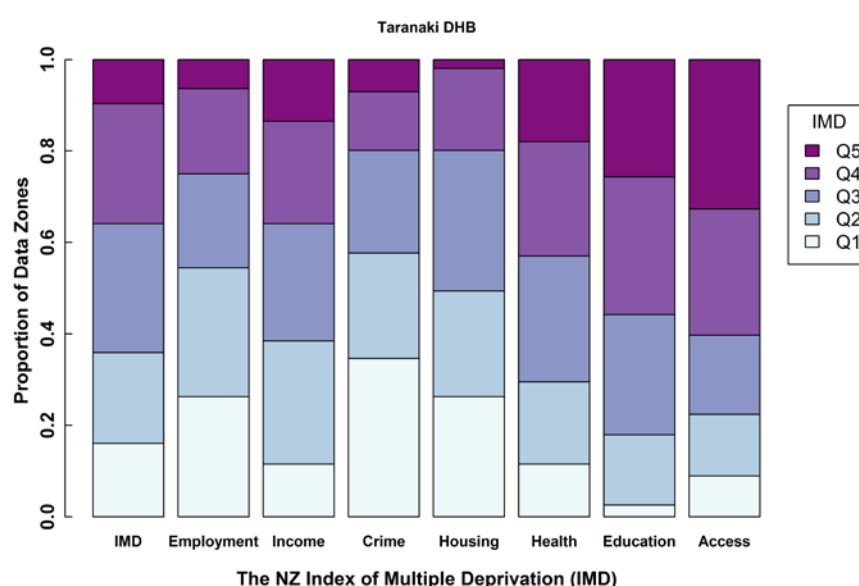
The New Zealand Index of Multiple Deprivation (IMD) allows one to look at disadvantage in overall terms, as well as in terms of seven domains of deprivation: Employment, Income, Crime, Housing, Health, Education and Access. The seven domains are weighted to reflect the relative importance of each domain in representing the key determinants of socio-economic deprivation, the adequacy of their indicators and the robustness of the data that they use. Figure 1 shows the IMD's 28 indicators and weightings of the seven domains.

The IMD measures deprivation at the neighbourhood level using custom designed data zones that were specifically developed for social and health research. The New Zealand (NZ) land mass has 5,958 neighbourhood-level data zones that have a mean population of 712 people. In urban settings, they are just a few streets long and a few streets wide. Data zones are ranked from the least to most deprived (1 to 5958) and grouped into five quintiles. Q1 (light shading) represents the least deprived 20% of data zones in the whole of NZ; while Q5 (dark shading) represents the most deprived 20%. This multidimensional deprivation information is combined with demographic information from the 2013 census to produce a DHB profile.



**Figure 1. Flow diagram showing the IMD, its indicators, domains and weights.** Adapted from Figure 4.2 SIMD 2012 Methodology, in Scottish Index of Multiple Deprivation 2012. Edinburgh: Scottish Government (Crown copyright 2012).

The stacked bar chart in Figure 2 shows the proportion of data zones in the Taranaki DHB (TDHB) that belonged to each deprivation quintile for overall deprivation (IMD) and the seven domains in 2013. If the deprivation circumstances in the TDHB were the same as all of NZ, we would see 20% of the TDHB's 156 data zones in each quintile. Figure 2 shows that the proportion of data zones with Q5 overall IMD deprivation was less than 20% for all domains, except for Education and Access, while the proportion of data zones with Q4 deprivation was greater than 20% for overall IMD deprivation and all domains except Employment, Crime and Housing. The TDHB has moderate levels of overall IMD deprivation, with 35.9% (56/156) of its data zones in Q4 or Q5.



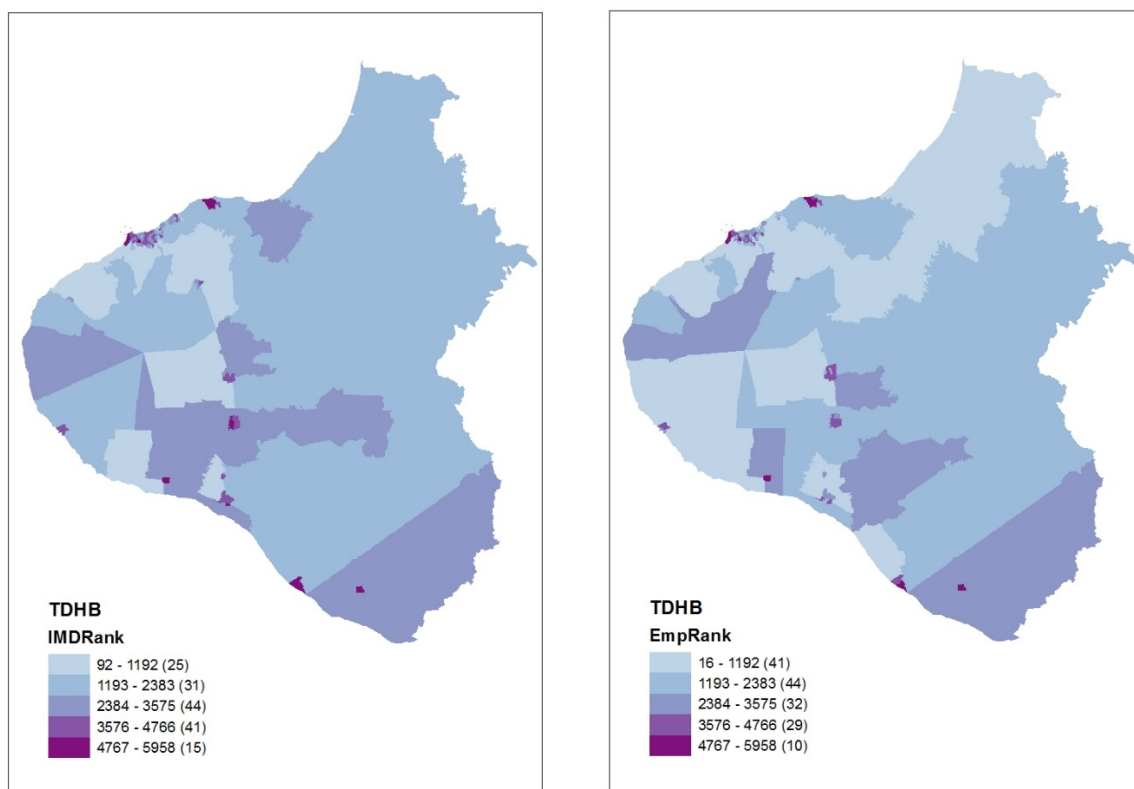
**Figure 2. Stacked bar chart showing overall deprivation and seven domains in the TDHB**

Table 1 shows summary statistics by domain for the 15 TDHB data zones that were among NZ's 20% most deprived (Q5) for the overall IMD and reveals the contributions of different domains. In descending order, high (Q5) median deprivation ranks for Education (5670), Income (5298) and Health (5015) and Employment (4941) were contributing to high overall IMD deprivation in these 15 data zones in 2013, bearing in mind that these domains carry different weights in the IMD (see Figure 1).

| Min, max and median <sup>1</sup> deprivation ranks by domain for 15 data zones with Q5 IMD |      |            |        |       |         |        |           |        |
|--|------|------------|--------|-------|---------|--------|-----------|--------|
|  | IMD  | Employment | Income | Crime | Housing | Health | Education | Access |
| Min  | 4956 | 3954       | 4341   | 2857  | 3286    | 4627   | 4969      | 1807   |
| Max  | 5676 | 5647       | 5835   | 5128  | 4977    | 5661   | 5816      | 5729   |
| Median   | 5217 | 4941       | 5298   | 3714  | 4096    | 5015   | 5670      | 3912   |

**Table 1. Minimum, maximum and median deprivation ranks by domain for 15 data zones in the TDHB with Q5 IMD deprivation**

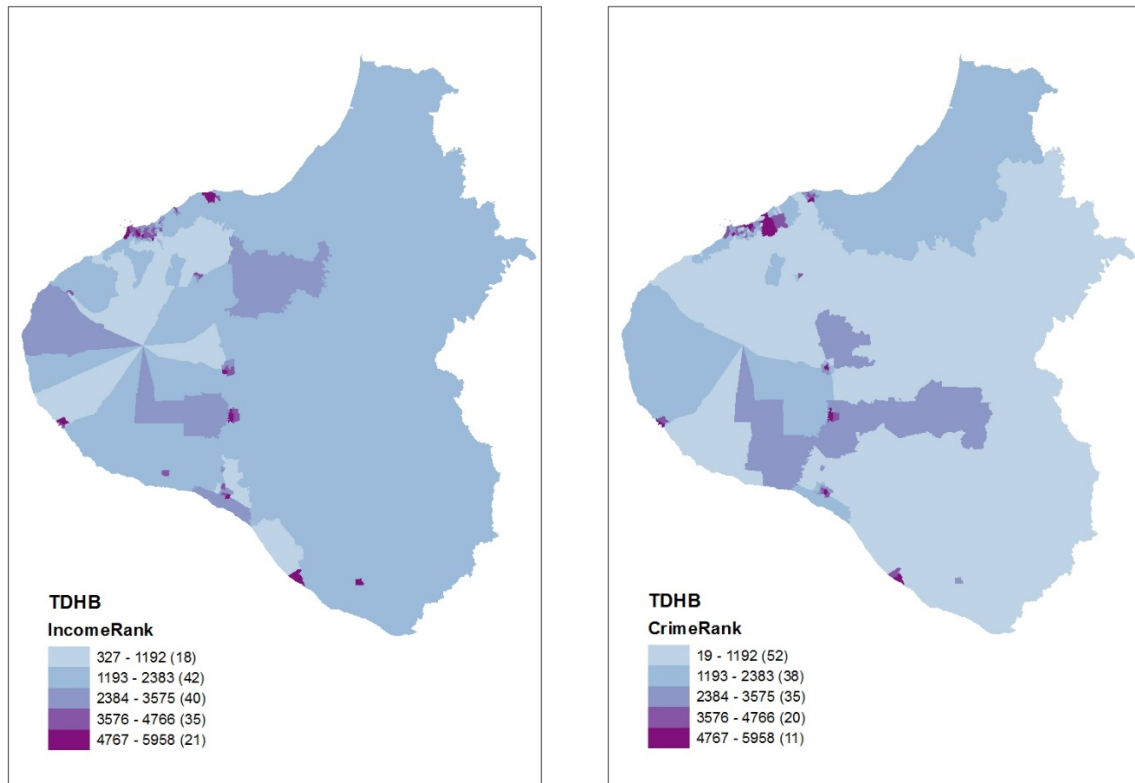
<sup>1</sup> When discussing the 20% most deprived data zones, ranks will usually be skewed, so it is better to discuss the median rank (the middle value) rather than the mean rank (the average, which can be disproportionately affected by very high values).



**Figure 3. Distribution of overall IMD and employment deprivation in the TDHB**

The values in brackets in the legends of the maps that follow are counts of data zones in the relevant quintile. The map for overall (IMD) on the left of Figure 3 shows moderate levels of Q5 deprivation in the TDHB. Only 9.6% (15/156) of its data zones were among the most deprived 20% in NZ (Q5), while 16% (25/156) were among the least deprived 20%. The median IMD rank was 2949, 0.5% (30 ranks) better than the NZ median of 2979. Most of the Q5 data zones were concentrated in the northwestern part of the DHB in places such as Waitara and New Plymouth, but they also occurred in Eltham, Manaia, Hawera, Patea and Waverley. Urban data zones are difficult to see on these maps, so we suggest that readers use the interactive maps at the [IMD website](#) to explore the TDHB further.

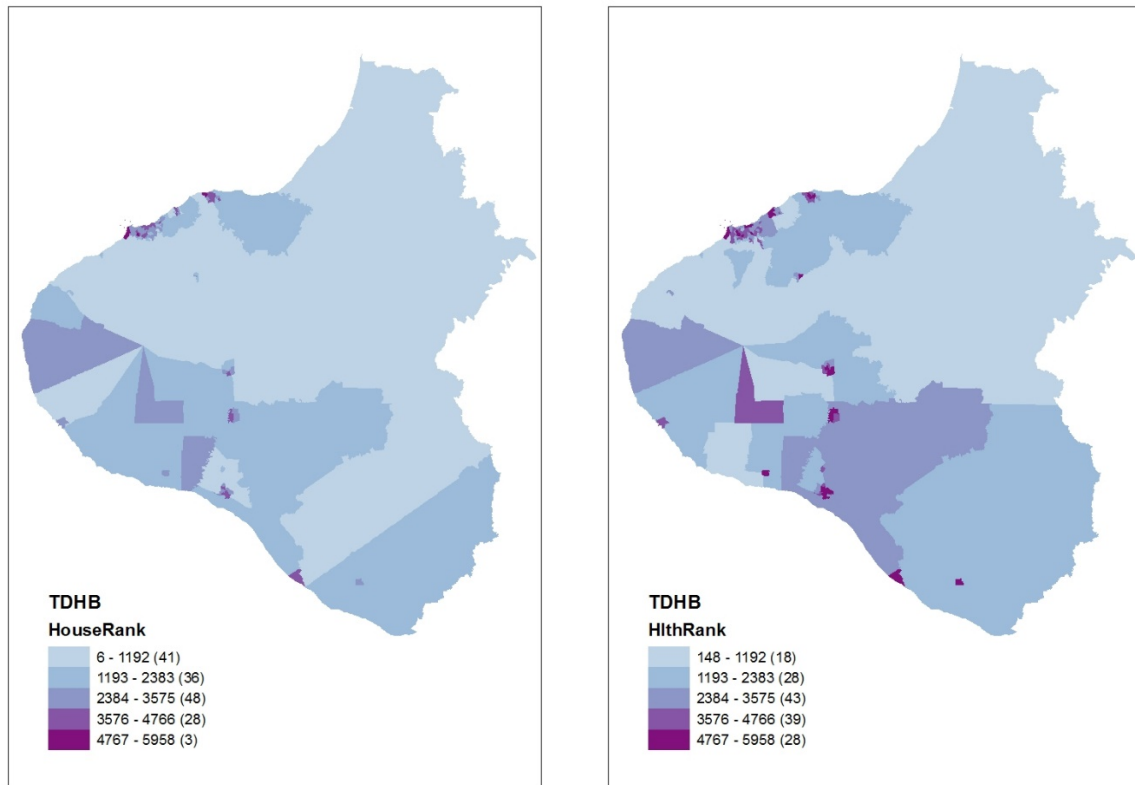
The map of the Employment Domain on the right of Figure 2 reflects the proportion of working age people who were receiving the Unemployment or Sickness Benefits in 2013. In the TDHB, only 6.4% (10/156) of data zones were among the 20% most employment deprived in NZ, while 26.3% (41/156) of data zones were in the least deprived 20%. The median employment deprivation rank in the TDHB was 2170, 13.6% (809 ranks) better than the NZ median. Q5 employment deprivation followed the general pattern of overall IMD deprivation, but with fewer Q5 data zones in places like Eltham and Hawera.



**Figure 4. Distribution of income and crime deprivation in the TDHB**

The Income Domain measures the amount of money per person paid by the State in the form of Working for Families payments and income-tested benefits. In the TDHB, 13.5% (21/156) of data zones were among NZ's 20% most income deprived, while 11.5% (18/156) of data zones were among the 20% least income deprived. The median income deprivation rank in the TDHB was 3118, 2.3% (139 ranks) worse than the NZ median. High (Q5) levels of income deprivation closely followed the pattern of Q5 overall deprivation, except there were a few more Q5 income deprived data zones in Cardiff, Opunake and Ferndale.

The Crime Domain measures victimisations per 1000 people and is largely driven by thefts (55%), burglaries (24%) and assaults (18%). In the TDHB, only 7.1% (11/156) of data zones were among the most deprived 20% for the Crime Domain, while 34.6% (54/156) were among the least deprived 20%. The median crime deprivation rank in the TDHB was 1892, 18.2% (1087 ranks) better than the NZ median. High (Q5) crime deprivation occurred in Hillsborough, New Plymouth, Spotswood and other towns such as Stratford, Waitara, Eltham, Hawera, Patea and Opunake.

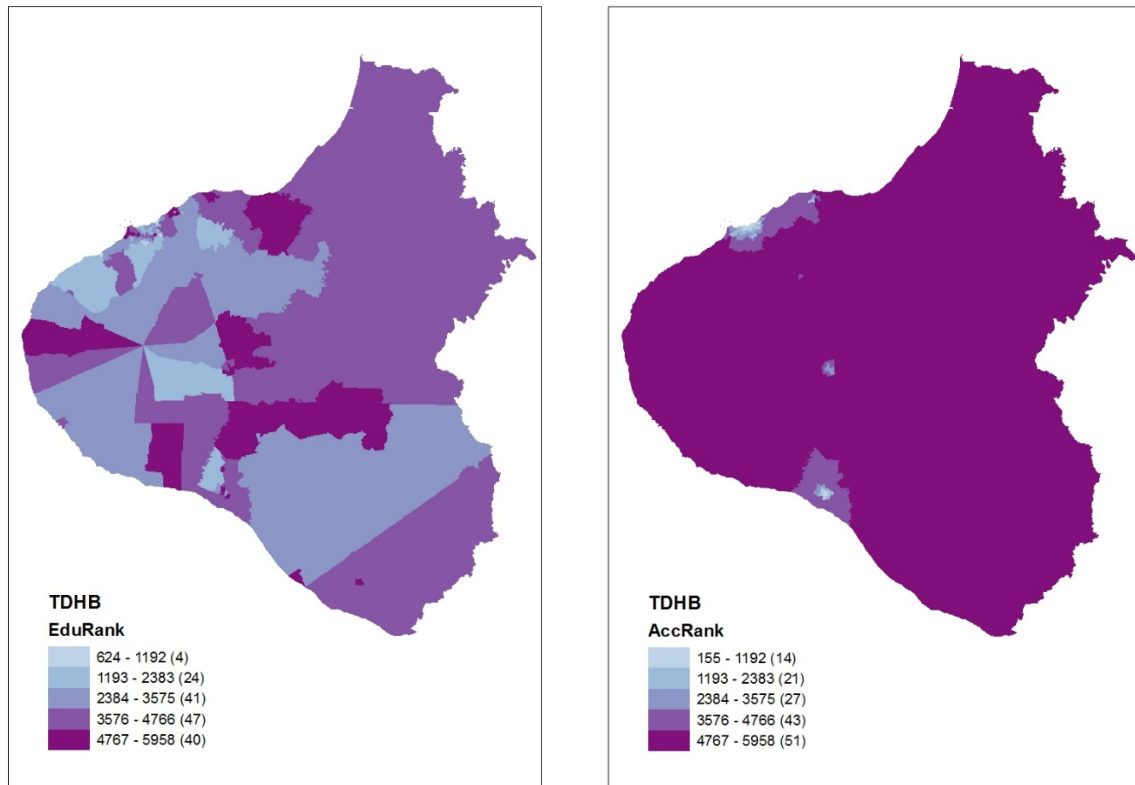


**Figure 5. Distribution of housing and health deprivation in the TDHB**

The Housing Domain measures the proportion of people living in overcrowded households (60% of the weighting) and rented dwellings (40%). In the TDHB, only 1.9% (3/156) of data zones were among the most housing deprived 20% in NZ, while 26.3% (41/156) of data zones were among the least deprived 20%. The median housing deprivation rank in the TDHB was 2389, 9.9% (591 ranks) better than the NZ median. High (Q5) levels of housing deprivation occurred in Waitara, Marfell and Spotswood.

The Health Domain consists of five indicators: standard mortality ratio, acute hospitalisations related to selected infectious and selected respiratory diseases, emergency admissions to hospital, and people registered as having selected cancers. In the TDHB, 17.9% (28/156) of data zones were among the 20% most health deprived in NZ, while 11.5% (18/156) were among the least deprived 20%. The median health deprivation rank in the TDHB was 3266, 4.8% (287 ranks) worse than the NZ median. High (Q5) levels of health deprivation closely followed the pattern of Q5 overall deprivation, but with 13 additional Q5 data zones located in New Plymouth, Eltham, Waitara, Inglewood and Hawera.





**Figure 6. Distribution of education and access deprivation in the TDHB**

The Education Domain measures retention, achievement and transition to education or training for school leavers; as well as the proportion of working age people 15-64 with no formal qualifications; and the proportion of youth aged 15-24 not in education, employment or training (NEET). In the TDHB, 25.6% (40/156) of data zones were among NZ's 20% most education deprived, while only 2.6% (4/156) were among the least deprived 20%. The median education deprivation rank in the TDHB was 3833, 14.3% (854 ranks) worse than the NZ median. High (Q5) levels of education deprivation occurred in urban areas, but also in large rural data zones around Urenui, Parihaka, Midhirst, Kapuni, Te Roti and Moeroa. The Education Domain had 25 more Q5 data zones than the overall IMD.

The Access Domain measures the distance from the population weighted centre of each data zone to the nearest three GPs, supermarkets, service stations, schools and early childhood education centres. In the TDHB, 32.7% (51/156) of data zones were among NZ's 20% most access deprived, while only 9% (14/156) were among NZ's 20% least deprived. The median access deprivation rank in the TDHB was 4116, 19.1% (1137 ranks) worse than the NZ median. High (Q5) levels of access deprivation occurred in all rural parts of the TDHB.



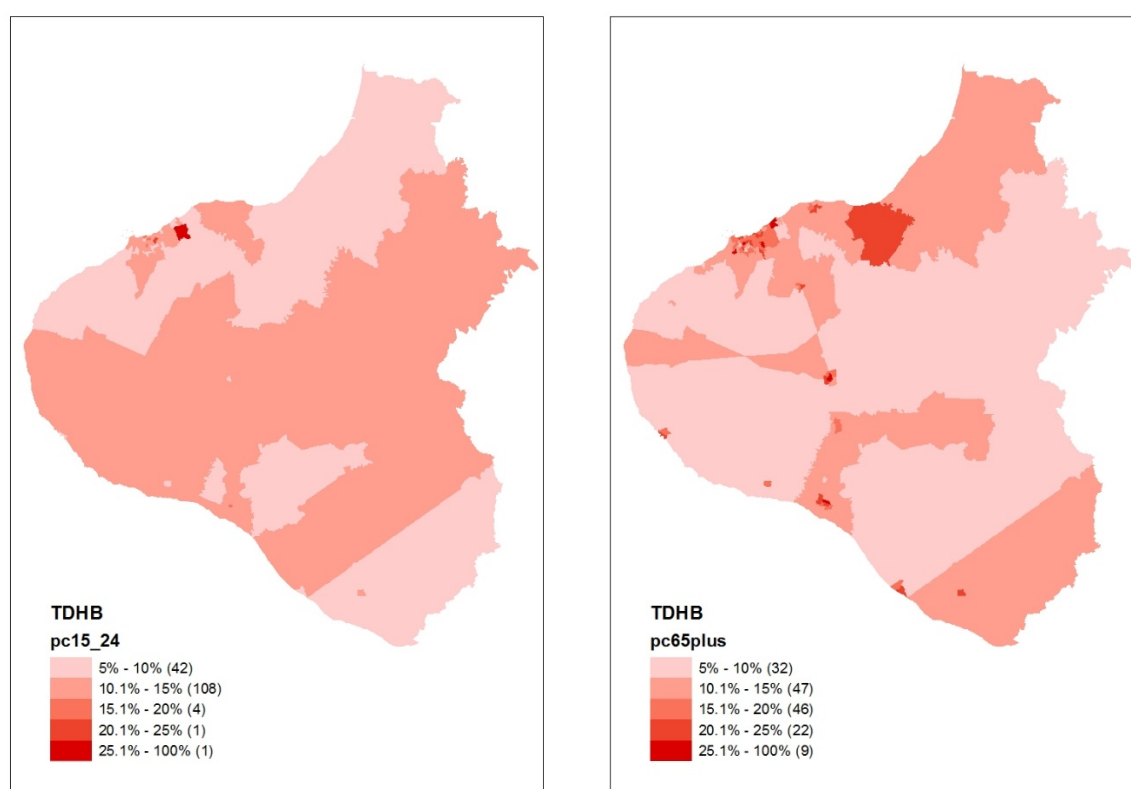
## Age profile of the Taranaki

According to the 2013 census, the TDHB had a total population of 109,725 people living in 156 data zones, with a mean of 703 people each (range: 504 to 987).

| Mean data zone proportions for five age groups in the TDHB |       |       |       |       |       |
|--|-------|-------|-------|-------|-------|
| Age group  | 0-14  | 15-24 | 25-44 | 45-64 | 65+   |
| Taranaki   | 21.1% | 11.8% | 24.3% | 26.6% | 16.2% |
| New Zealand <sup>2</sup>                                   | 20.4% | 13.8% | 25.6% | 25.8% | 14.3% |
| Difference   | 0.7%  | -2.0% | -1.3% | 0.8%  | 1.9%  |

**Table 2. Mean data zone proportions for five age groups in the TDHB**

Table 2 shows that the age profile of the TDHB differs most from the national age profile in that it has 2.0% fewer people aged 15-24 and 1.9% more people aged 65+. Figure 7 shows the distribution of people in these two age groups.



**Figure 7. Distribution of people aged 15-24 and people aged 65+ in the TDHB**

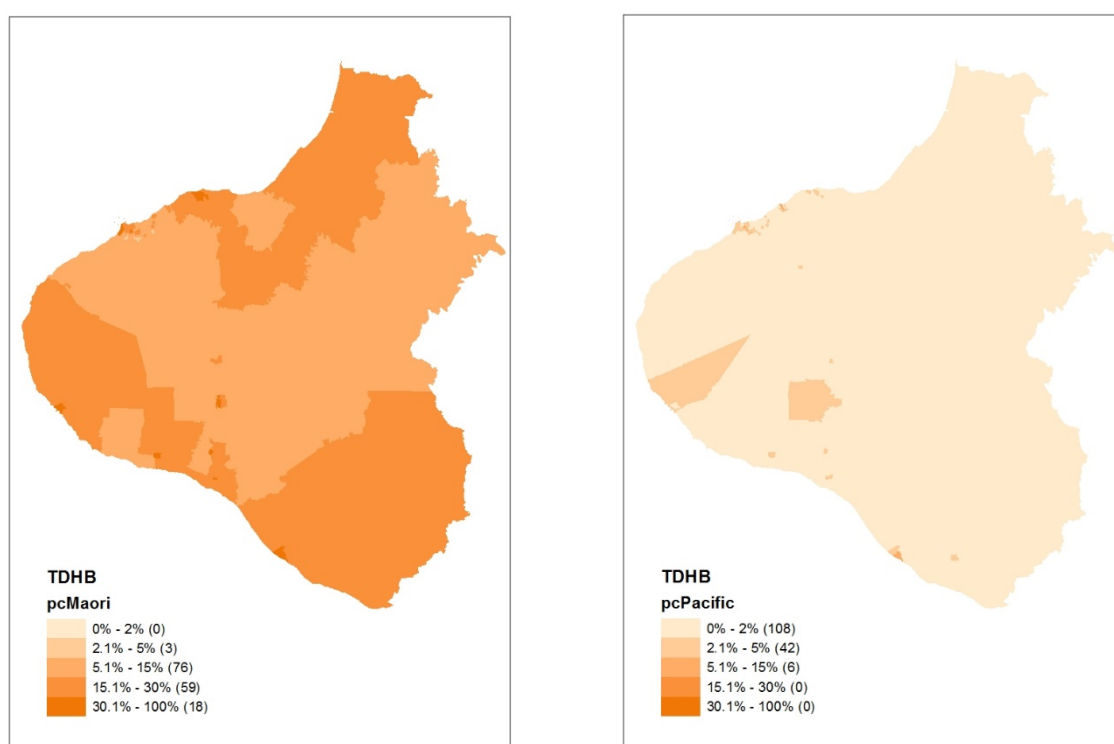
<sup>2</sup> Proportions for age groups and ethnicities at the national level are calculated using data zone counts to ensure fair comparison with DHB values, which also use data zone counts.

## Ethnicity profile of the Taranaki DHB

This section uses the Total Response method to calculate proportions for each ethnicity from the 2013 census. Individuals who identify as more than one ethnicity are counted in more than one category. The proportion of Māori living in data zones within the TDHB ranged from 3.9% to 52.1%. The overall proportion of Māori in the TDHB was 17.4% higher than the national proportion of 14.9%. The proportion of Māori per data zone was greatest in a data zone located in Patea (52.1%), followed by one in Waitara (51.6%).

The proportion of Pacific ethnicity living in data zones within the TDHB ranged from 0.0% to 6.4%. The overall proportion of Pacific ethnicity in the TDHB was 1.5%, significantly lower than the national proportion of 7.3%. The greatest proportions of Pacific were located in New Plymouth and in smaller towns such as Bell Block, Waitara, Normanby, Hawera and Patea. A data zone in Blagdon had the greatest proportion of Pacific (6.4%).

The percentage of New Zealand European and Other ethnicities (NZE0) in the TDHB ranged from 56.4% to 99.5%. The overall proportion of NZEO was 91.3%, which was greater than the national proportion of 87.5%. The lowest proportions of NZEO (<70%) lived in data zones in Patea, Hawera and Waitara.



**Figure 8. Distribution of Māori and Pacific people in the TDHB**

For more information about the IMD, NZ data zones or this profile, please contact Dan Exeter at [d.exeter@auckland.ac.nz](mailto:d.exeter@auckland.ac.nz). For a downloadable spreadsheet of the IMD, online interactive maps, publications and technical documentation, please go to the [IMD website](#).