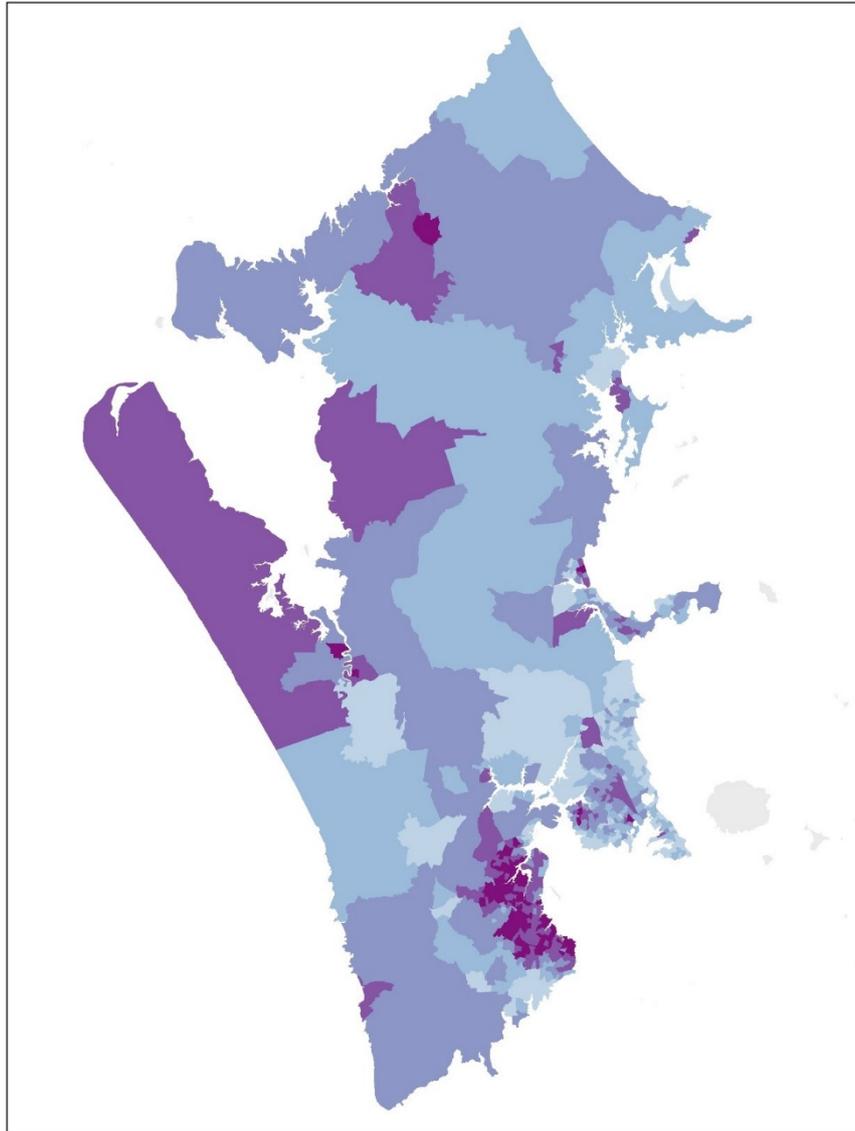


A deprivation and demographic profile of the Waitemata DHB



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

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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.

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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.

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A deprivation and demographic profile of the Waitemata 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.

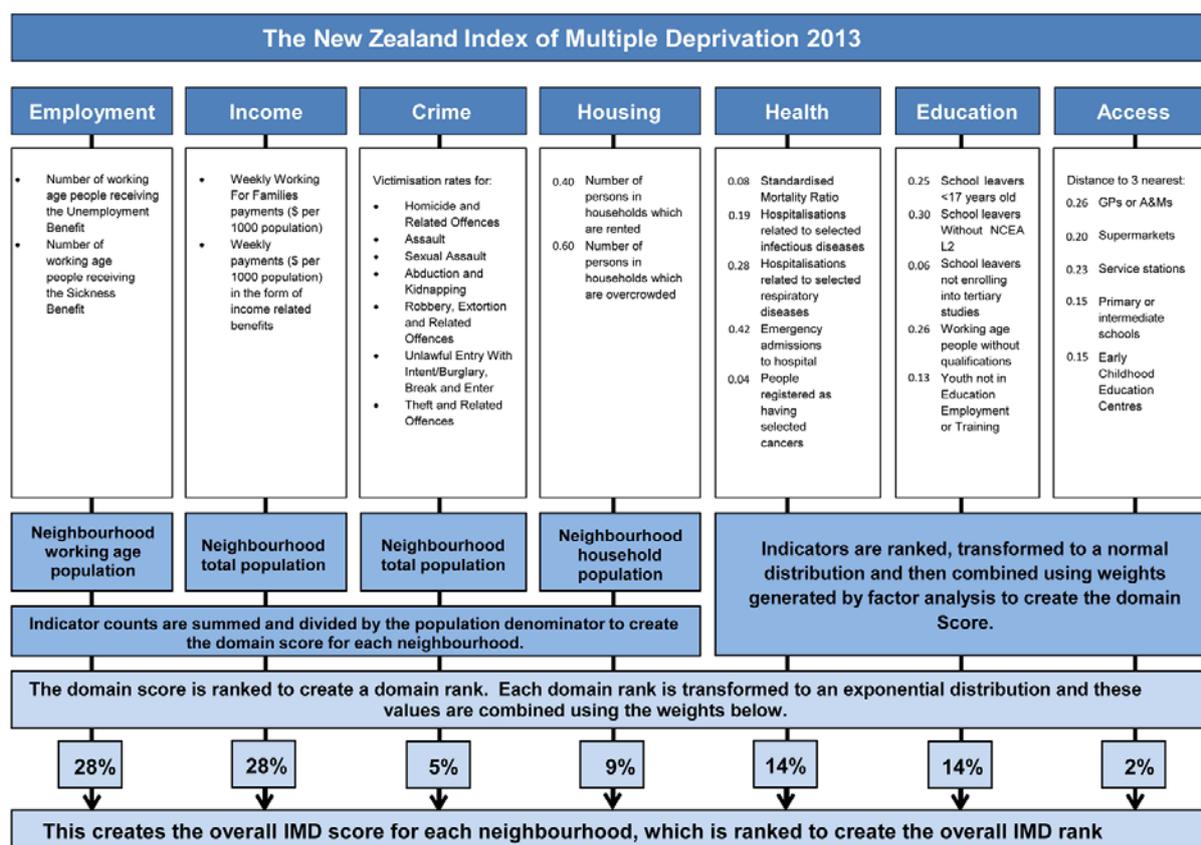


Figure 1. Flow diagram showing the IMD, its indicators, domains and weights. Adapted from Figure 4.2 SIMD 2012 Methodology, in Scottish Index of Multiple Deprivation 2012. Edinburgh: Scottish Government (Crown copyright 2012).

The stacked bar chart in Figure 2 shows the proportion of data zones in the Waitemata DHB (WDHB) that belonged to each deprivation quintile for overall IMD deprivation and the seven domains in 2013. If the deprivation circumstances in the WDHB were the same as for all of NZ, we would see 20% of the WDHB's 729 data zones in each quintile. However, Figure 2 shows that the proportion of data zones with Q5 deprivation was significantly less than 20% for the IMD and all seven domains. Q4 deprivation was also lower than average for the IMD and the Employment, Crime and Education Domains. The WDHB had moderate levels of overall IMD deprivation, with 32.4% (236/729) of its data zones in Q4 or Q5.

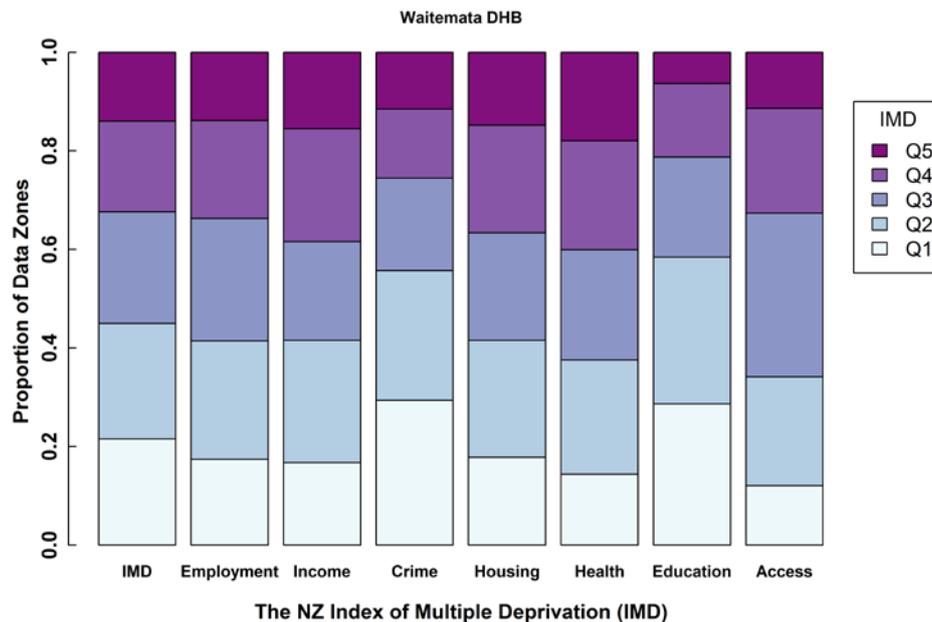


Figure 2. Stacked bar chart showing overall deprivation and seven domains in the Waitemata DHB

Table 1 shows summary statistics by domain for the 102 WDHB 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 Income (5323), Health (5254), Employment (5160) and Housing (5145) were contributing to high overall deprivation in these 102 data zones in 2013. Note: domains carry different weights in the IMD (see Figure 1).

Min, max and median ¹ deprivation ranks by domain for 102 data zones with Q5 IMD								
	IMD	Employment	Income	Crime	Housing	Health	Education	Access
Min	4768	2758	3187	1458	2380	3391	3197	20
Max	5908	5932	5942	5951	5812	5953	5667	5092
Median	5175	5160	5323	3770	5145	5254	4610	2647

Table 1. Minimum, maximum and median deprivation ranks by domain for 102 data zones in the WDHB with Q5 IMD deprivation

¹ 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).

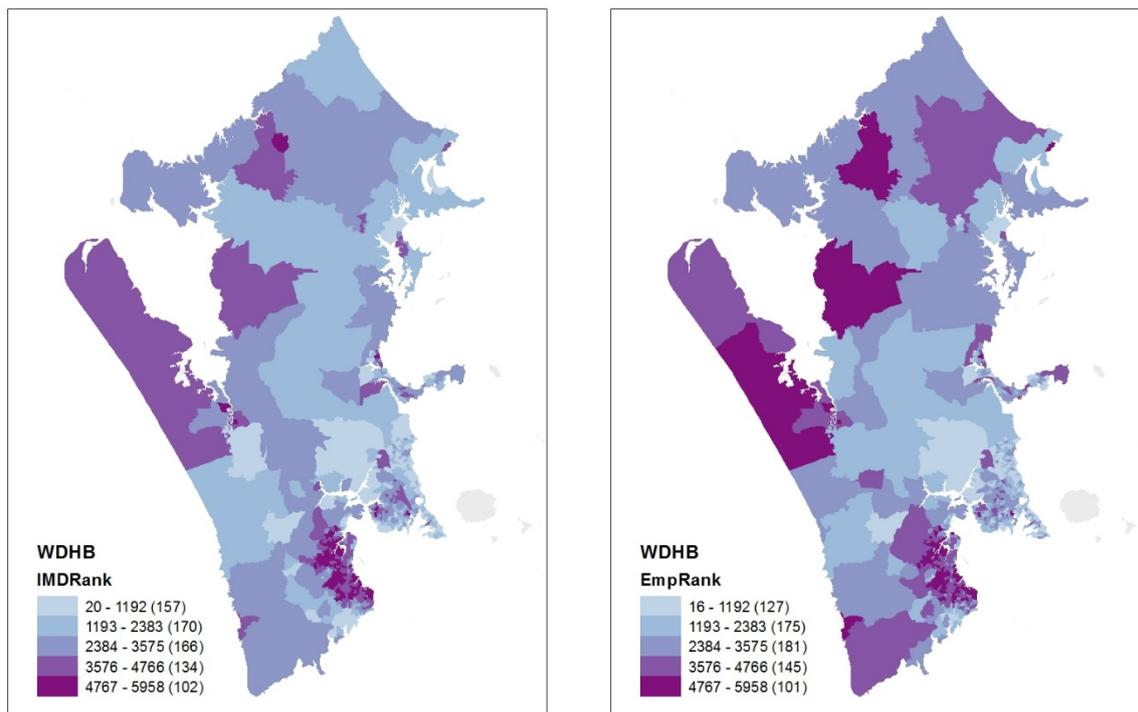


Figure 3. Distribution of overall IMD and employment deprivation in the WDHB

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 deprivation (IMD) on the left of Figure 3 shows relatively low levels of Q5 deprivation in the WDHB in 2013, with 13.9% (102/729) of data zones among the most deprived 20% in NZ (Q5), and 21.5% (157/729) in the least deprived 20% in NZ (Q1). The median IMD rank in the WDHB was 2626, 5.9% (353 ranks) better than the NZ median of 2979. The majority of Q5 data zones were in Henderson, Ranui, Sunnyvale and Glen Eden. There were also some in Beach Haven (3), Northcote (2), Helensville (1), Parakai (2), Oweria (1) and Wellsford (2). 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 WDHB further.

The map of the Employment Domain on the right of Figure 3 reflects the proportion of working age people who were receiving the Unemployment or Sickness Benefits in 2013. In the WDHB, 13.9% (101/729) of data zones were in the 20% most deprived in NZ for the Employment Domain, and 17.4% (127/729) of data zones were among the least deprived 20%. The median employment deprivation rank in the WDHB was 2777, 3.4% (203 ranks) better than the NZ median of 2979. The distribution of Q5 employment deprivation followed a similar pattern to overall IMD deprivation, except that some Q5 data zones were in areas such as Piha, Muriwai, Parakai, the Kaipara Coast and Wellsford.

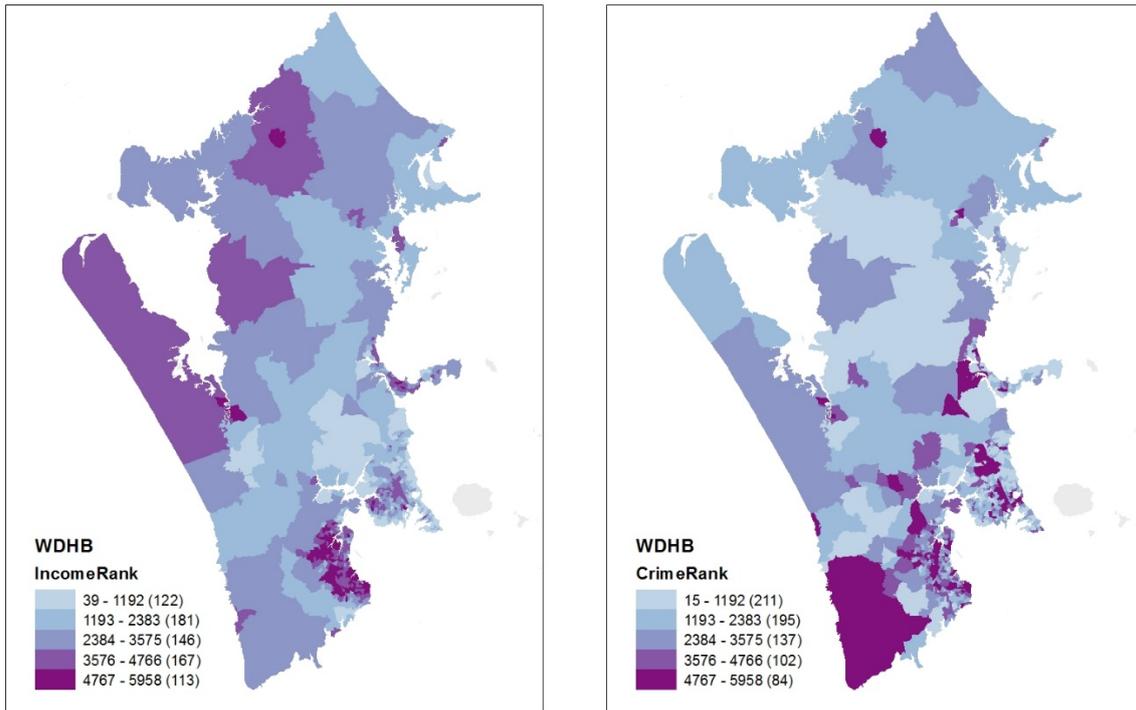


Figure 4. Distribution of income and crime deprivation in the WDHB

The Income Domain measures the amount of money per person paid by the government in the form of Working for Families payments and income-tested benefits. In the WDHB, 15.5% (113/729) of data zones were among NZ's 20% most income deprived, and 16.7% (122/729) were among the 20% least income deprived. The median income deprivation rank in the WMDHB was 2835, 2.4% (144 ranks) better than the NZ median. The distribution of large rural data zones with Q5 income deprivation shows a very similar pattern to overall (IMD) deprivation, and the same is true of urban West Auckland and the North Shore when you zoom in to these areas.

The Crime Domain measures victimisations per 1000 people and is largely driven by thefts (55%), burglaries (24%) and assaults (18%). In the WDHB, 11.5% (84/729) of data zones were among the most deprived 20% for the Crime Domain, while 29.4% (214/729) were among the least deprived 20%. The median crime deprivation rank in the WDHB was 2022, 16.1% (958 ranks) better than the NZ median. Q5 rates of crime victimization occurred in urban areas such as Kumeu, Henderson, Te Atatu South, Ranui, Swanson, Chatswood, Northcote and Albany. They also occurred in more rural areas such as Anawhata, Piha, Karekare, Muriwai, Silverdale, Wellsford, Warkworth, Parakai and Helensville.

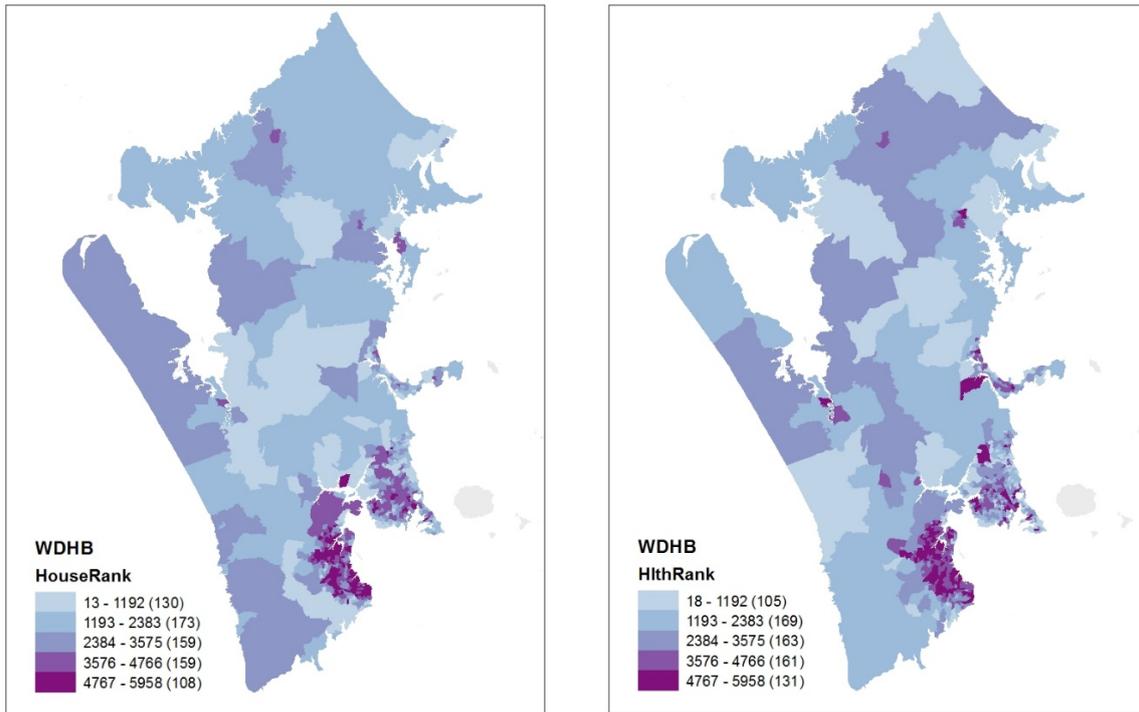


Figure 5. Distribution of housing and health deprivation in the WDHB

The Housing Domain measures the proportion of people living in overcrowded households (60% of weighting) and rented dwellings (40%) in 2013. In the WDHB, 14.8% (108/729) of data zones were among the most deprived 20% in NZ, and 17.8% (130/729) of data zones were in the least deprived 20%. The median housing deprivation rank in the WDHB was 2854, 2.1% (125 ranks) better than the NZ median. High (Q5) levels of housing deprivation occurred exclusively in urban areas, except for the rural area around Paremoremo. There were 16 Q5 data zones in the urban North Shore and 91 in urban West Auckland.

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 WDHB, 18.0% (131/729) of data zones were among the 20% most health deprived in NZ, and 14.4% (105/729) were among the least deprived 20%. The median health deprivation rank in the WDHB was 2968, 0.2% (11 ranks) better than the NZ median. High (Q5) levels of health deprivation occurred primarily in urban parts of West Auckland and the North Shore, but they also occurred in Parakai, Silverdale, Manly, Orewa and Warkworth.

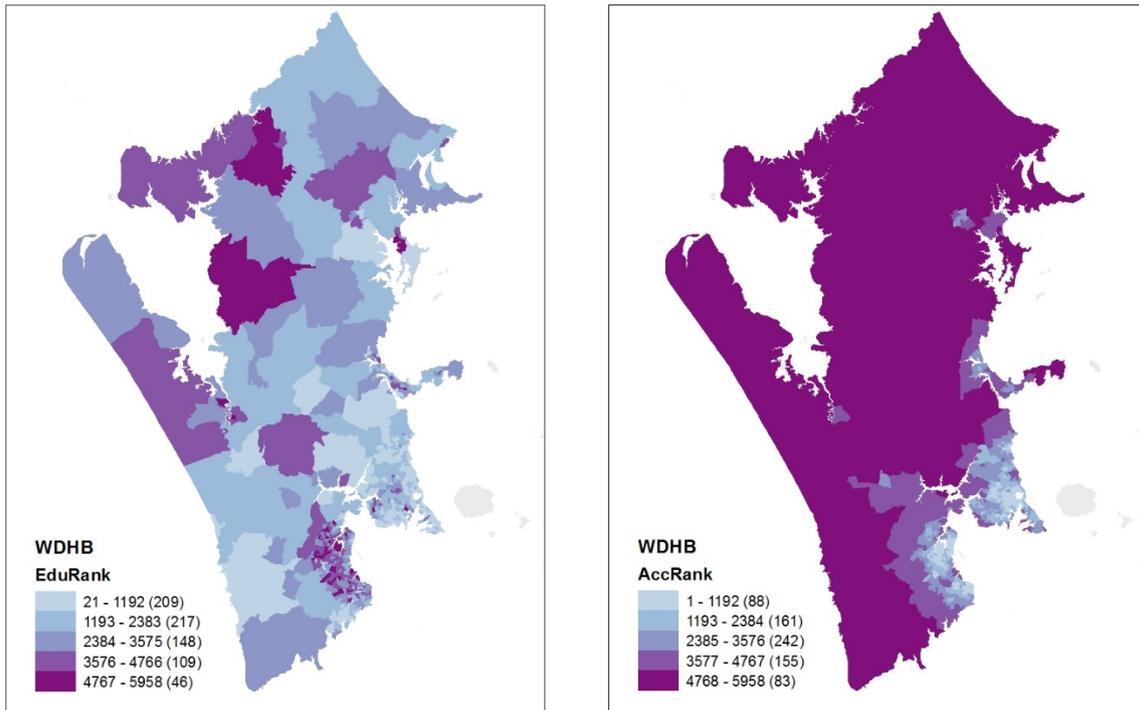


Figure 6. Distribution of education and access deprivation in the WDHB

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 WDHB, only 6.3% (46/729) of data zones were among NZ's 20% most education deprived, while 28.7% (209/729) were among the least deprived 20%. The median education deprivation rank in the WDHB was 1950, 17.3% (1029 ranks) better than the NZ median. Data zones with Q5 education deprivation were distributed primarily in urban areas in the southeastern parts of the DHB. Some also occurred in rural areas such as the Kaipara Coast, Mahurangi East and to the west of Wellsford.

The Access Domain measures the distance from the centre of each neighbourhood to the nearest three GPs, supermarkets, service stations, schools and early childhood education centres. In the WDHB, 11.4% (83/729) of data zones were among NZ's 20% most access deprived, while 12.1% (88/729) were in NZ's 20% least deprived. The median access deprivation rank in the Waitemata DHB was 2958, 0.4% (21 ranks) better than the NZ median. Access to services was very good (Q1) in and around urban areas in the southeastern part of the DHB and moderate (Q3) in parts of Whangaparaoa, Warkworth and Huapai. Access was poor in rural parts of the DHB.

Age profile of the Waitemata DHB

According to the 2013 census, the WDHB had a total population of 525,357 people living in 729 data zones, with a mean of 721 people each (range: 501 to 1086).

Mean data zone proportions for five age groups in the WDHB					
Age group	0-14	15-24	25-44	45-64	65+
Waitemata DHB	20.5%	13.6%	27.1%	25.7%	13.1%
New Zealand ²	20.4%	13.8%	25.6%	25.8%	14.3%
Difference	0.1%	-0.2%	1.5%	-0.1%	-1.2%

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

Table 2 shows that the age profile of the WDHB differs most from the national age profile in that it has 1.5% more people aged 25-44 and 1.2% fewer people aged 65+. Figure 7 shows the distribution of people in these two age groups.

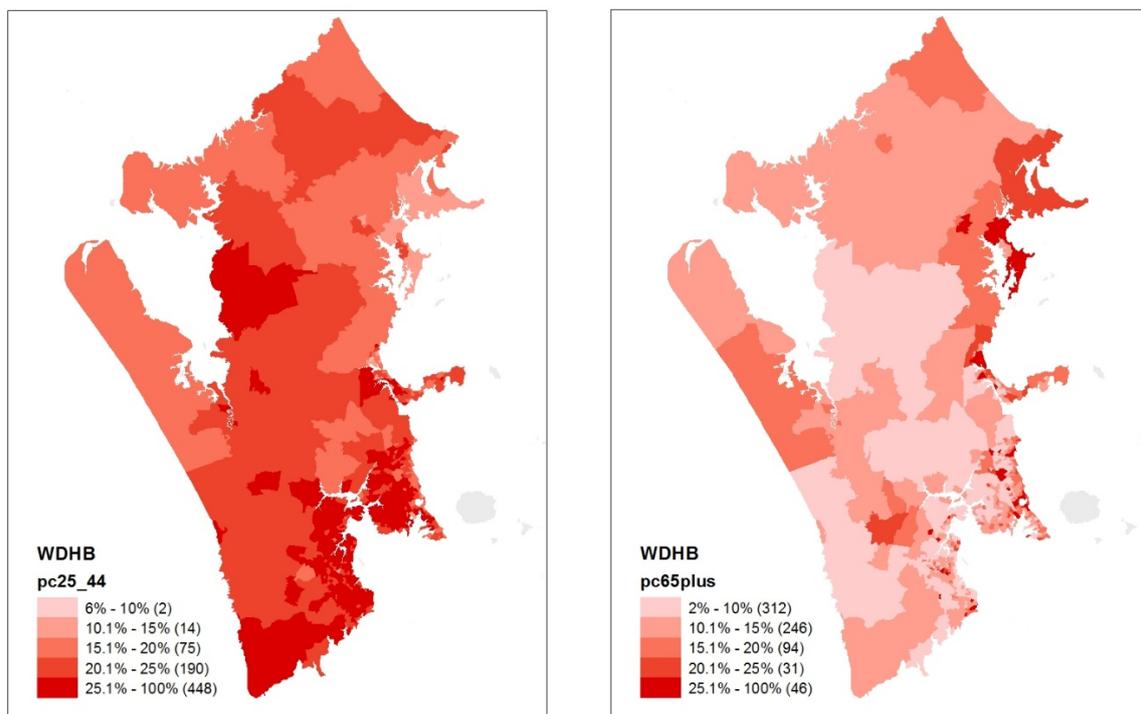


Figure 7. Distribution of people aged 65+ and people aged 25-44 in the WDHB

² 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 Waitemata 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 WDHB ranged from 0.0% to 31.1%. The overall proportion of Māori in the WDHB was 9.3%, much lower than the national proportion of 14.9%. The proportion of Māori per data zone was greatest in a data zone located in Parakai (31.3%), followed by Beach Haven (30.0%) and Paremoremo (27.1%).

The proportion of Pacific ethnicity living in data zones within the WDHB in 2013 ranged from 0.0% to 48.5%. The overall proportion of Pacific ethnicity was 8.0%, which is higher than the national proportion of 7.3%. The proportion of Pacific was greatest in a data zone located in Ranui (48.5%), followed by Northcote (44.7%) and Henderson Valley (42.5%).

The percentage of New Zealand European and Other ethnicities (NZE0) living in data zones within the WDHB ranged from 47.7% to 100.0%. The overall proportion of NZEO was 91.4%, which is greater than the national proportion of 87.5%. The lowest proportions of NZEO (<50%) lived in Ranui and Northcote.

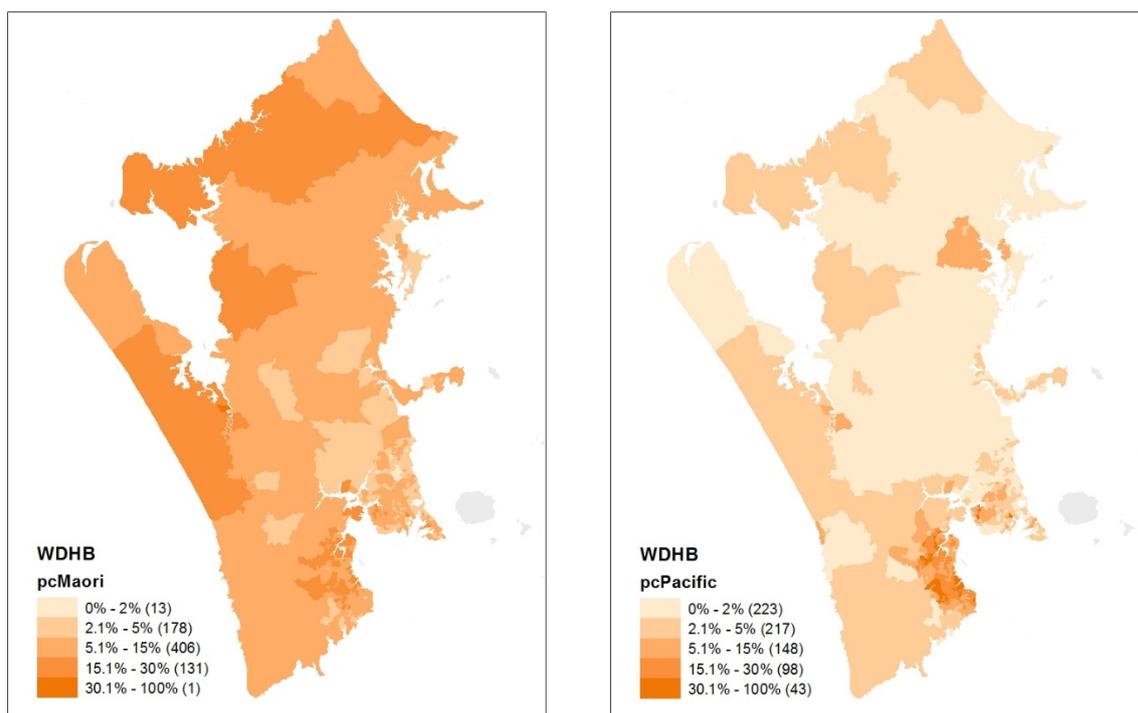


Figure 8. Distribution of Māori and Pacific people in the WDHB

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