



Environmental Health Indicators for New Zealand

Indicator: Household crowding in New Zealand, 2006

Background

Household crowding* has for a long time been an important issue among policy makers seeking to reduce inequalities and ill-health among deprived social groups. Historically, large public health gains have been made through improved housing conditions such as reductions in crowding, insulation and sanitation. Yet, it is difficult to separate the relationship between household crowding and health from the influence of other factors such as income, education and occupation.¹ Recent research has identified a strong association between household crowding and rates of infectious disease including tuberculosis,² meningococcal disease,³ acute rheumatic fever,⁴ *haemophilus influenza*,⁵ pneumonia^{6,7} and middle ear infections.⁸⁻¹⁰ Children living in crowded homes are more at risk of developing infections and disease than older household members.¹¹

Household crowding does not directly cause infectious disease. Rather, individuals living in crowded conditions are more likely to catch infections through increased exposure to pathogens. Families who live in crowded households are also a source of transmissible disease in their wider community.¹

Variations by community deprivation, 2006

In New Zealand, there is evidence of large variations in the percentage of the resident population living in crowded households based on neighbourhood deprivation levels (NZDep¹²), measured as deciles from high (10) to low (1) deprivation (Figure 1). Across New Zealand the mean percentage of crowded households in the least deprived areas (2.6%) is much lower than in the most deprived areas (27.8%). The relationship between NZDep and household crowding rates is relatively linear until NZDep decile 8, when there is a large upward trend up to NZDep decile 10.

* See notes on p4 for technical definition of household crowding

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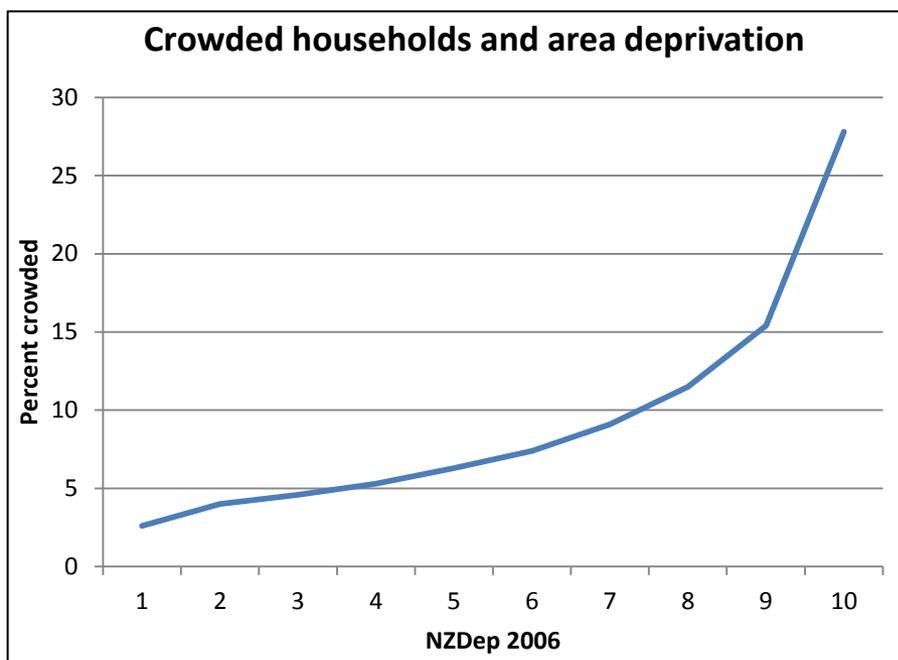


Figure 1: Percent of the population living in crowded households by NZDep 2006



Variations in household crowding and the social environment, 2006

After ranking census area units (CAUs) into quintiles of high (5) to low (1) levels of crowded households, there is large variation in mean neighbourhood deprivation (Table 1). The average NZDep of CAUs with the smallest proportion of crowded households was 2.9 compared to 7.8 in the most crowded quintile.

There was also evidence of differences in the ethnic composition of the population living in highly crowded and non-crowded neighbourhoods. Table 1 shows that among CAUs in the least crowded quintiles there is a higher proportion of residents who identify as European. In contrast, there are higher proportions of Maori, Pacific Peoples and Asian people in CAUs with higher percentages of crowded households.

Table 1: Household crowding in New Zealand, 2006

| Household crowding by CAU | | | | | |
|----------------------------------|---------|------|------|------|----------|
| % households crowded (quintiles) | 1 (Low) | 2 | 3 | 4 | 5 (High) |
| NZDep06, mean | 2.9 | 3.9 | 5.3 | 6.9 | 7.8 |
| %European, mean | 78.2 | 75.8 | 72.6 | 65.0 | 48.5 |
| %Maori, mean | 7.0 | 9.0 | 12.9 | 17.5 | 25.9 |
| %Pacific Peoples, mean | 1.0 | 1.4 | 2.2 | 4.0 | 12.9 |
| %Asian, mean | 3.0 | 4.2 | 5.2 | 8.8 | 8.8 |

Geographic variations, 2006

All areas within the highest quintile of household crowding are found in the North Island with the highest level of crowding being 63% in a Manukau City CAU (Figure 2). In the South Island, the highest level was much lower at 12% in a neighbourhood on the West Coast.

Crowding varies largely within cities. Christchurch and Auckland (Figure 1) are both examples of how household crowding measures are a good proxy for the socio-economic status of neighbourhoods. Such low level differences in crowding by CAU allow for targeted intervention and policies aimed at improving housing conditions at a local government level.

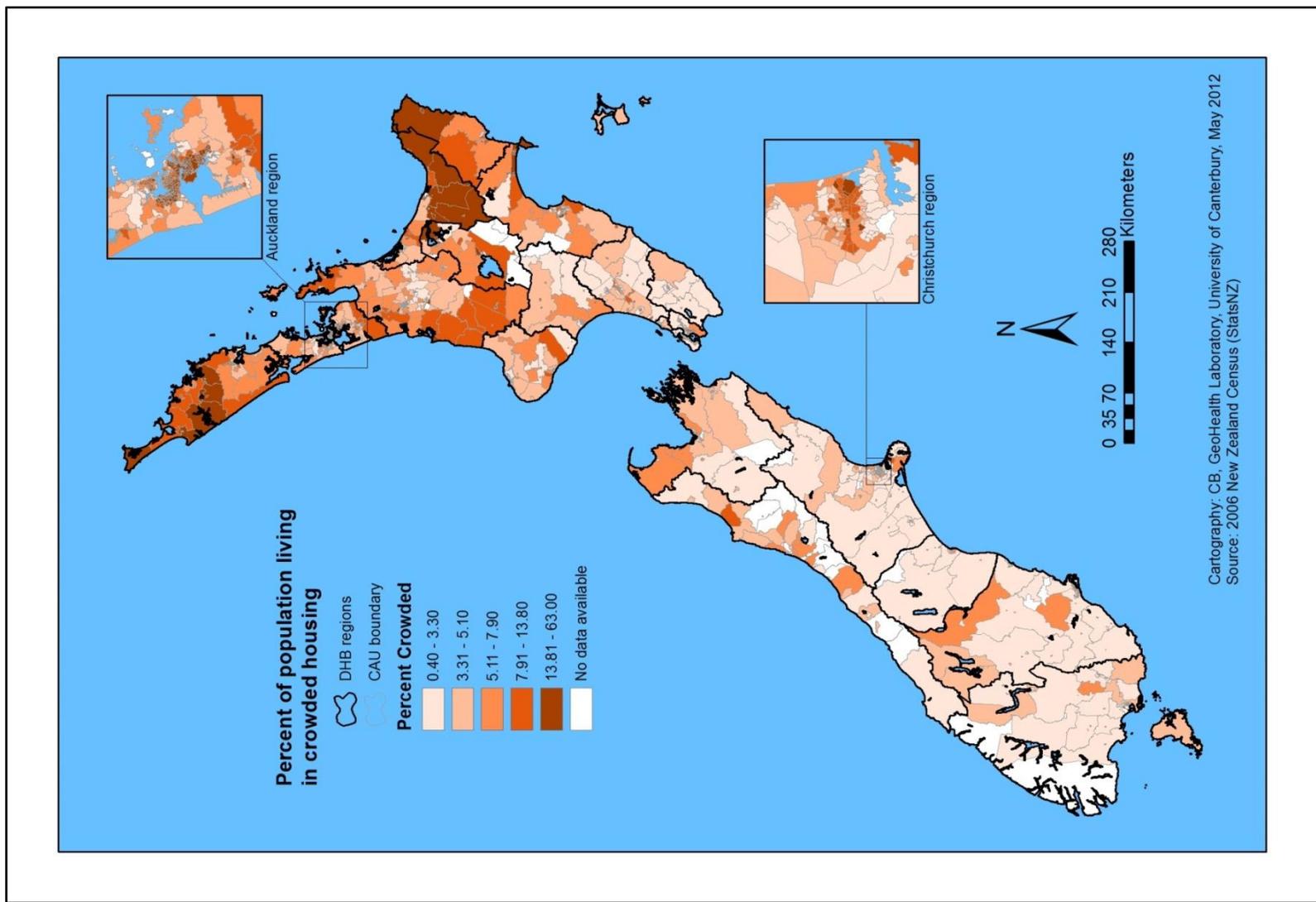


Figure 2: Proportion of the population living in crowded housing by census area unit and District Health Board, 2006



Notes

Crowding is measured by the Canadian Household Crowding standard which states:

1. There should be no more than two people per bedroom
2. Parent or couples share a room
3. Children under 5 years, either of same or opposite sex, may reasonably share a bedroom
4. Children under 18 years of the same sex may reasonably share a bedroom
5. A child aged 5 to 17 years should not share a bedroom with one under 5 of the opposite sex
6. Single adults 18 years and over and any unpaired children require a separate bedroom

Additional information relevant to household crowding in New Zealand can be found at <http://socialreport.msd.govt.nz/economic-standard-living/household-crowding.html>

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References

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