

Supplementary Material

Defining catchment boundaries and their populations for Aotearoa New Zealand's rural hospitals

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Supplementary Table S1. Māori and Pacific Peoples populations, by broad age group, for each rural hospital catchment

| Name | Māori <15 years | Māori 15-29 | Māori 30-64 | Māori 65+ | Pacific Peoples <15 years | Pacific Peoples 15-29 | Pacific Peoples 30-64 | Pacific Peoples 65+ |
|---|---------------------------|--------------------|--------------------|------------------|-------------------------------------|------------------------------|------------------------------|----------------------------|
| Thames Hospital | 3,708 32.1% | 2,430 21.0% | 4,368 37.8% | 1,050 9.1% | 552 36.8% | 315 21.0% | 525 35.0% | 108 7.2% |
| Te Nikau Grey Hospital | 1152 31.6% | 786 21.5% | 1461 40.0% | 249 6.8% | 159 35.1% | 123 27.2% | 162 35.8% | 9 2.0% |
| Kaitaia Hospital | 4,680 31.6% | 2,961 20.0% | 5,721 38.6% | 1,467 9.9% | 663 46.3% | 318 22.2% | 381 26.6% | 69 4.8% |
| Taupo Hospital | 3699 32.1% | 2499 21.7% | 4443 38.6% | 870 7.6% | 477 38.8% | 324 26.3% | 375 30.5% | 54 4.4% |
| Ashburton Hospital | 1,023 37.6% | 675 24.8% | 882 32.4% | 141 5.2% | 693 40.0% | 438 25.3% | 585 33.7% | 18 1.0% |
| Bay of Islands Hospital | 5232 31.2% | 3573 21.3% | 6498 38.8% | 1455 8.7% | 723 43.4% | 390 23.4% | 486 29.2% | 66 4.0% |
| Hawera Hospital | 2,994 34.6% | 1,926 22.3% | 3,141 36.3% | 591 6.8% | 291 43.3% | 165 24.6% | 198 29.5% | 18 2.7% |
| Oamaru Hospital | 645 34.0% | 459 24.2% | 639 33.7% | 153 8.1% | 369 43.5% | 186 21.9% | 267 31.4% | 27 3.2% |
| Tokoroa Hospital | 3,207 33.9% | 2,223 23.5% | 3,399 35.9% | 633 6.7% | 1,167 37.1% | 741 23.6% | 1,017 32.3% | 219 7.0% |
| Dunstan Hospital | 855 35.8% | 483 20.2% | 906 37.9% | 144 6.0% | 141 25.7% | 135 24.6% | 258 47.0% | 15 2.7% |
| Lakes District Hospital | 366 28.1% | 348 26.7% | 549 42.2% | 39 3.0% | 114 35.5% | 90 28.0% | 108 33.6% | 9 2.8% |
| Dargaville Hospital | 1293 31.1% | 900 21.6% | 1569 37.7% | 396 9.5% | 252 40.8% | 150 24.3% | 183 29.6% | 33 5.3% |
| Te Kuiti Community Hospital | 1,611 29.9% | 1,266 23.5% | 2,079 38.6% | 432 8.0% | 189 43.8% | 105 24.3% | 123 28.5% | 15 3.5% |
| Taumarunui Community Hospital | 1092 31.3% | 762 21.8% | 1329 38.1% | 309 8.8% | 90 44.1% | 48 23.5% | 60 29.4% | 6 2.9% |
| Gore Hospital | 759 35.4% | 504 23.5% | 747 34.9% | 132 6.2% | 72 36.4% | 48 24.2% | 63 31.8% | 15 7.6% |
| Buller Health | 288 35.0% | 150 18.2% | 318 38.7% | 66 8.0% | 48 43.2% | 18 16.2% | 42 37.8% | 3 2.7% |
| Hokianga Health - Rawene Clinic | 1,149 27.8% | 729 17.6% | 1,665 40.2% | 597 14.4% | 195 52.0% | 66 17.6% | 96 25.6% | 18 4.8% |
| Wairoa Hospital & Health Centre | 1626 29.6% | 1158 21.1% | 2118 38.5% | 597 10.9% | 123 44.1% | 63 22.6% | 78 28.0% | 15 5.4% |
| Clutha Health First | 441 33.1% | 291 21.8% | 510 38.3% | 90 6.8% | 66 26.5% | 75 30.1% | 96 38.6% | 12 4.8% |
| Kaikoura Hospital | 228 31.5% | 144 19.9% | 297 41.1% | 54 7.5% | 6 16.7% | 15 41.7% | 15 41.7% | 0 0.0% |
| Dannevirke Community Hospital | 618 33.9% | 447 24.5% | 648 35.6% | 108 5.9% | 54 41.9% | 33 25.6% | 36 27.9% | 6 4.7% |
| Maniototo Health Services | 63 39.6% | 36 22.6% | 51 32.1% | 9 5.7% | 3 25.0% | 6 50.0% | 3 25.0% | 0 0.0% |
| Te Whare Hauora O Ngati Porou - Te Puia Springs | 870 27.1% | 591 18.4% | 1,314 40.9% | 441 13.7% | 51 43.6% | 24 20.5% | 36 30.8% | 6 5.1% |
| Golden Bay Community Health | 120 28.4% | 81 19.1% | 180 42.6% | 42 9.9% | 12 26.7% | 12 26.7% | 15 33.3% | 6 13.3% |

Supplementary Table S2. Selected 2033 population projections for each rural hospital catchment

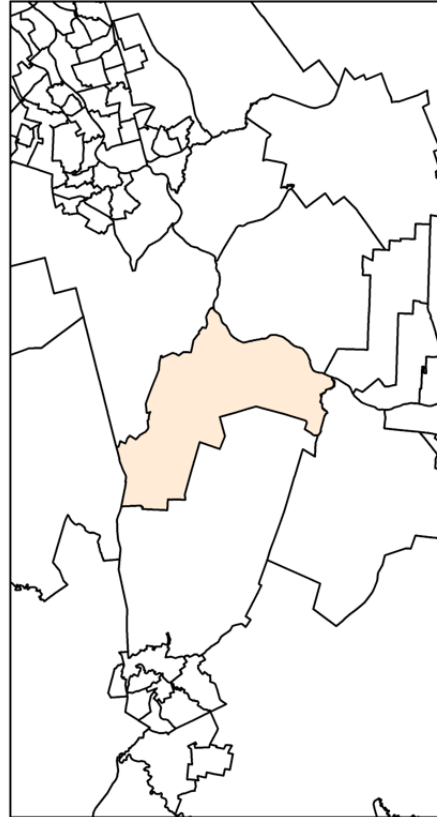
| Name | Total projected population 2033 | Projected 65+ population 2033 (n) | Projected 65+ population 2033 % | Projected NZDep Q5 2033 (n) | Projected NZDep Q5 2033 % |
|---------------------------------|--|--|--|------------------------------------|----------------------------------|
| Thames Hospital | 64,310 | 23,490 | 36.5% | 23,870 | 37.1% |
| Te Nikau Grey Hospital | 32,190 | 9,580 | 29.8% | 10,680 | 33.2% |
| Kaitaia Hospital | 33,120 | 9,050 | 27.3% | 25,170 | 76.0% |
| Taupo Hospital | 44,380 | 11,790 | 26.6% | 11,970 | 27.0% |
| Ashburton Hospital | 38,650 | 8,480 | 21.9% | | |
| Bay of Islands Hospital | 46,990 | 12,640 | 26.9% | 22,970 | 48.9% |
| Hawera Hospital | 36,990 | 8,550 | 23.1% | 14,840 | 40.1% |
| Oamaru Hospital | 24,830 | 7,040 | 28.4% | 320 | 1.3% |
| Tokoroa Hospital | 29,420 | 6,530 | 22.2% | 22,230 | 75.6% |
| Dunstan Hospital | 45,260 | 11,780 | 26.0% | | |
| Lakes District Hospital | 37,250 | 4,400 | 11.8% | | |
| Dargaville Hospital | 15,870 | 4,790 | 30.2% | 12,070 | 76.1% |
| Te Kuiti Community Hospital | 14,180 | 3,160 | 22.3% | 8,240 | 58.1% |
| Taumarunui Community Hospital | 8,190 | 2,180 | 26.6% | 4,830 | 59.0% |
| Gore Hospital | 18,240 | 4,630 | 25.4% | 1,690 | 9.3% |
| Buller Health | 7,110 | 2,520 | 35.4% | 5,900 | 83.0% |
| Hokianga Health - Rawene Clinic | 6,690 | 1,900 | 28.4% | 6,690 | 100% |
| Wairoa Hospital & Health Centre | 9,210 | 2,140 | 23.2% | 8,300 | 90.1% |
| Clutha Health First | 11,390 | 2,950 | 25.9% | | |
| Kaikoura Hospital | 4,480 | 1,440 | 32.1% | | |
| Dannevirke Community Hospital | 6,030 | 1,710 | 28.4% | 3,690 | 61.2% |
| Maniototo Health Services | 1,770 | 570 | 32.2% | | |

| | | | | | |
|---|-------|-------|-------|-------|------|
| Te Whare Hauora O Ngati Porou - Te Puia Springs | 4,020 | 830 | 20.6% | 4,020 | 100% |
| Golden Bay Community Health | 5,840 | 2,050 | 35.1% | | |

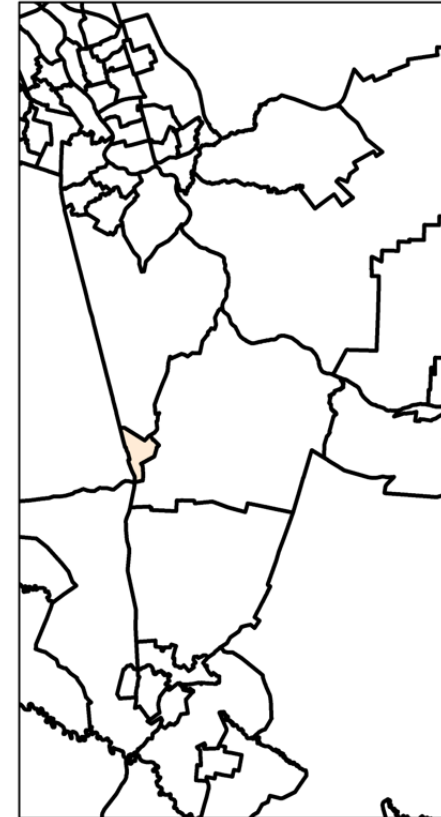
Statistical Area 1



Statistical Area 2



Domicile

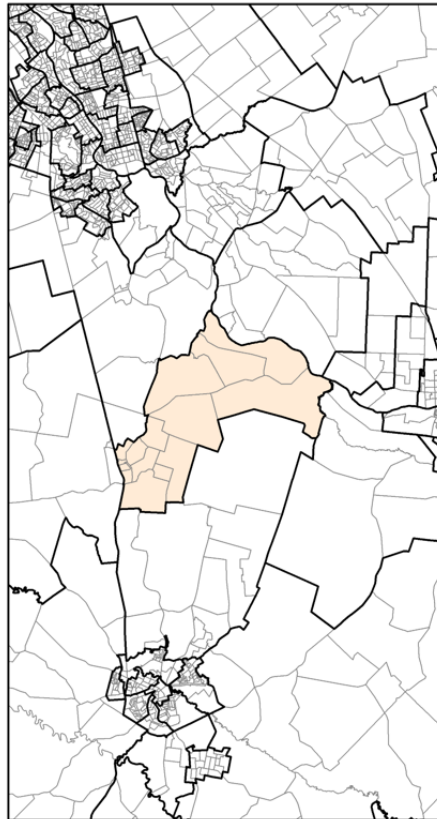


Supplementary Figure S1. Visualisation of the geographic differences between SA1, SA2 and Domicile. The area highlighted – Ōhaupō – covers a different geographic region, and includes different populations, depending on the geographic unit used.

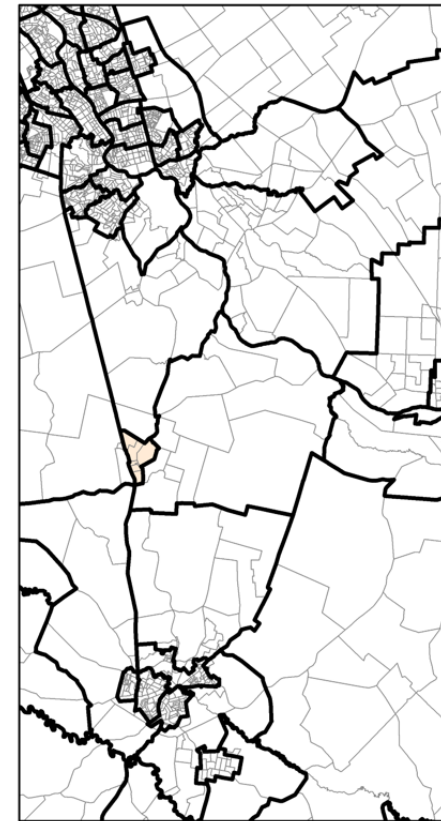
Statistical Area 1



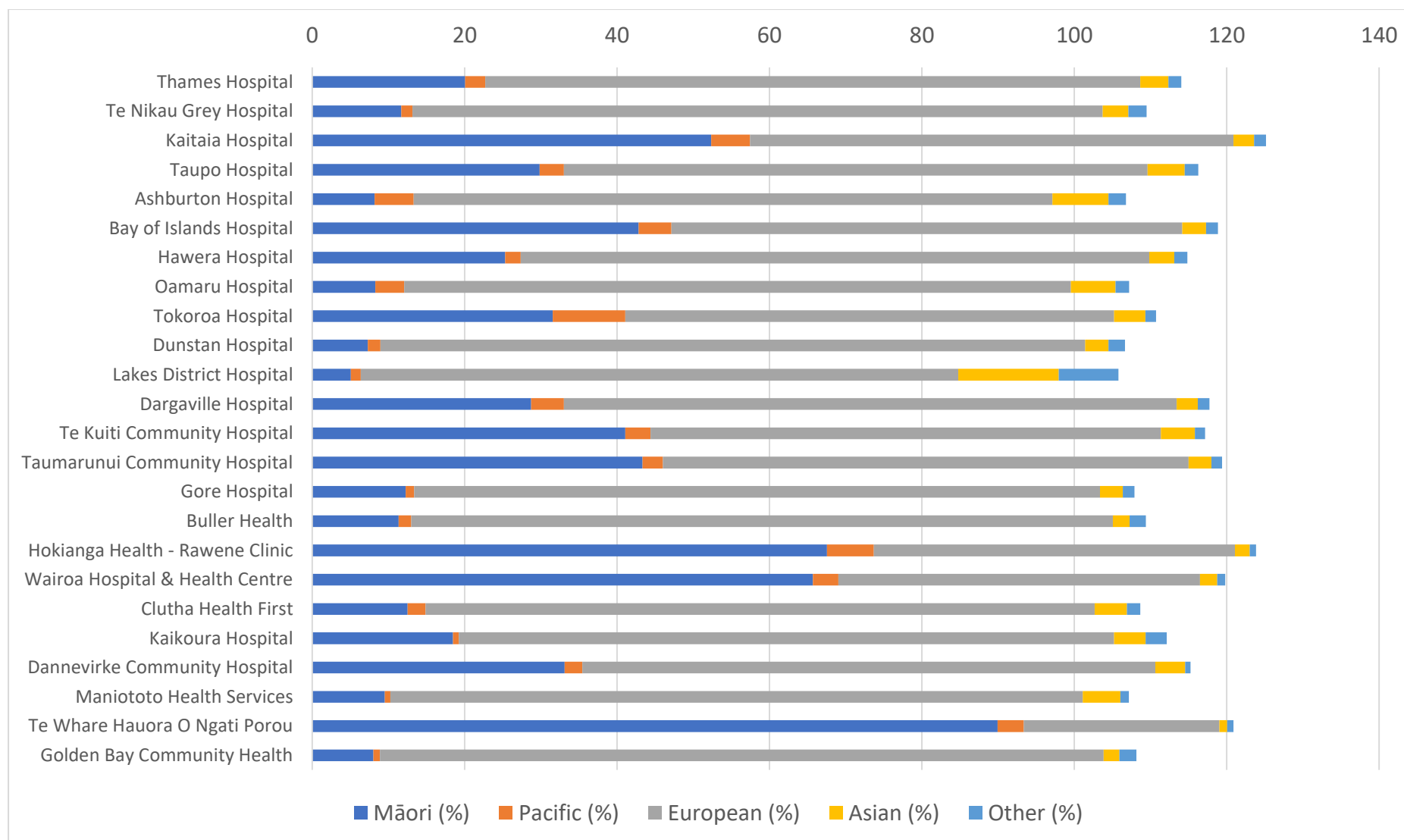
Statistical Area 2



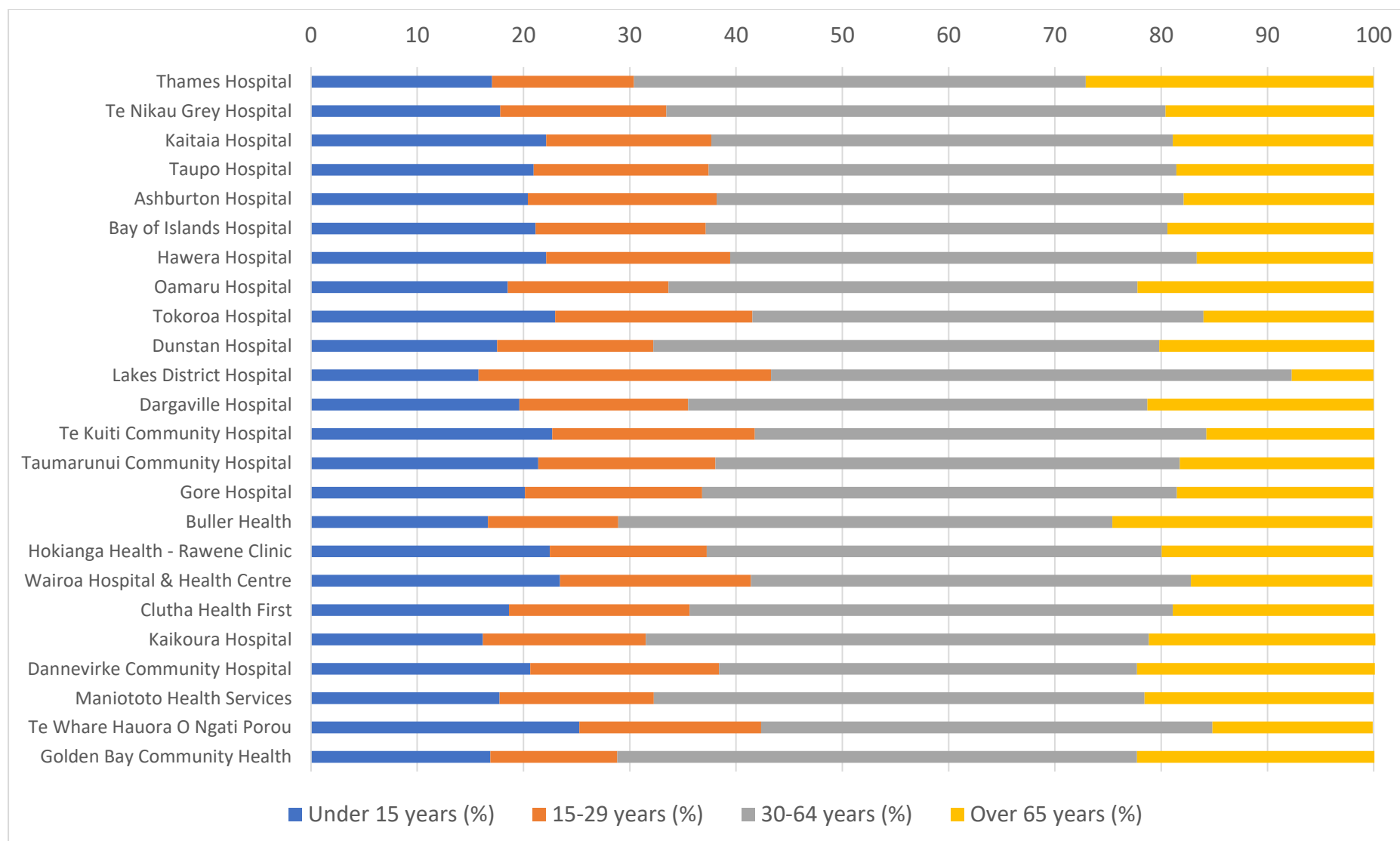
Domicile



Supplementary Figure S2. Visualisation of the differences between SA1, SA2 and Domicile, with meshblocks overlaid to indicate how it can be possible to join data from different statistical geographies.



Supplementary Figure S3. Ethnicity profiles of the population residing within each rural hospital catchment. Note that identification with multiple ethnicities is possible and as such totals add to more than 100%.



Supplementary Figure S4. Age profiles of the population residing within each rural hospital catchment.