

Public Registration and Inquiry Database for Emergencies Summarised results of registrations from 22 February 2011 At 28 March 2011

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Introduction

The aim of this report is to highlight some main results from a preliminary analysis of the Public Registration of Inquiry Database for Emergencies (PRIDE). Results are based on a download of the PRIDE database at 28 March 2011 or about 5 weeks following the Christchurch earthquake on 22 February 2011.

Prior to the analysis only minor data cleaning has been undertaken. So tabulations presented can only be taken as an indicator of main results and not as an accurate record of the specific tabulation. For this reason the report only presents some higher level findings.

Summary

- A small proportion of all registrants following the 22 February quake were not usual residents of Christchurch City (8 percent).
- Just over ten percent recorded their home was damaged and registered due to accommodation needs. Similarly, seven percent recorded being displaced from Christchurch and six percent were visitor to the city, and for this reason were seeking emergency help.
- More than sixty percent of registrations were initiated at Christchurch Red Cross registration sites. A further 10 percent registered in northern regions of the North Island and 9 percent registered in districts of the southern part of the Canterbury region.
- There were higher registration rates recorded among children and young adults.
- Registrations in Canterbury region outside Christchurch city and in the North Island indicated that many families with young children had relocated away from Christchurch.
- Registrants, who stated being Maori, or Maori and other, represented around 7 percent of the Maori population of Christchurch City whereas a significant proportion of the Christchurch Pacific Island population registered following the quake (44 percent). For some suburbs, the proportion of Pacific Island registrations accounted for around a quarter of registrations.

Reason for registration

Table 1
Distribution of permanent residence

Permanent residence of registrant	Count	Percent
Christchurch	43,701	92
Overseas	2,954	6
New Zealand, outside Christchurch	625	1
Not identifiable/ not stated	439	1
Total	47,719	100

- A small proportion of all registrants following the 22 February quake were not usual residents of Christchurch City (8 percent). A significant proportion recorded as overseas visitors to the city.
- The distribution of permanent residence was reflected in the stated reason for registration.

Table 2
Distribution of classifications of reason for registration

Reason for registration	Number	Percent
Financial assistance	35,716	74.8
Accommodation (due to damaged home)	5,370	11.3
Displaced from Christchurch	3,190	6.7
Accommodation (visitor to city)	2,605	5.5
Medication/first aid	340	0.7
Victim support	329	0.7
Evacuee	135	0.3
Missing person	27	0.1
Refugee from Christchurch	5	0.0
Respite Accommodation	1	0.0
Total stated	47,718	100.0

- Registrants were required to record the reason for registration with the NZ Red Cross and the reason stated were classified accordingly to one of ten categories as illustrated by Table 2.
- Around three-quarters of registrants stated 'Financial assistance' as the reason for registration. However, when including the supplementary information provided by these registrants in the 'Notes' field, this was most commonly stated as just 'earthquake' related.
- Just over ten percent recorded their home was damaged and registered due to accommodation needs.
- Similarly, seven percent recorded being displaced from Christchurch and six percent were visitor to the city, and for this reason were seeking emergency help.

Table 3
Selected classifications of reason for registration
By suburb of permanent residence

Suburb of permanent residence in Christchurch	Reason for registration					Total	
	Financial assistance	Accommodation (due to damaged home)	Displaced from Christchurch	Accommodation (visitor to city)	Other reasons	Number	Percent
Aranui	2,496	484	113	4	48	3,145	7.5
Linwood	2,118	372	155	12	44	2,701	6.4
Burwood	1,884	148	114	1	31	2,178	5.2
Woolston	1,343	188	88		18	1,637	3.9
Shirley	1,275	147	102	5	28	1,557	3.7
New Brighton	1,176	146	90		25	1,437	3.4
C.B.D.	828	328	106	40	19	1,321	3.1
Spreydon	1,037	113	81	7	41	1,279	3.0
Hoon Hay	1,014	123	65	2	24	1,228	2.9
Addington	946	115	31	1	27	1,120	2.7
Parklands	960	48	85	2	21	1,116	2.7
Avondale	983	69	44		14	1,110	2.6
St Albans	814	147	110	6	18	1,095	2.6
Bexley	842	162	78		8	1,090	2.6
Dallington	917	93	69	3	5	1,087	2.6
Bromley	738	136	43		21	938	2.2
Wainoni	657	98	22		15	792	1.9
Riccarton	634	53	24	1	44	756	1.8
Richmond	607	69	59	7	13	755	1.8
Papanui	641	44	55	2	12	754	1.8
Sydenham	593	78	65	2	16	754	1.8
Avonside	533	63	56		16	668	1.6
Hornby	516	31	54	1	11	613	1.5
Philipstown	484	77	35	1	8	605	1.4
Bryndwr	489	74	24		14	601	1.4
Waltham	446	84	28	2	8	568	1.3
North New Brighton	444	41	57	5	15	562	1.3
Burnside	446	55	34	1	9	545	1.3
Bishopdale	378	36	62	2	12	490	1.2
Lyttleton	348	82	17	3	3	453	1.1
Sommerfield	335	46	26	3	18	428	1.0
Redwood	365	19	23	1	3	411	1.0
Other suburbs	6,518	719	840	71	160	8,308	19.7
Total	33,805	4,488	2,855	185	769	42,102	100.0

Note: Only suburbs with highest number of registrations have been included.

Table 4
Selected classifications of reason for registration
By site of registration

Registration site	Reason for registration					Total	
	Financial assistance	Accommodation (due to damaged home)	Displaced from Christchurch	Accommodation (visitor to city)	Other reasons	Number	Percent
Christchurch	24,793	4,010	20	2,018	597	31,438	63.1
North Canterbury	1,339	159	3	8	10	1,519	3.0
South Canterbury	1,894	397	2,112	16	4	4,423	8.9
West Coast, South Island	431	21	7	0	27	486	1.0
Tasman/Nelson/Marlborough	789	51	87	47	0	974	2.0
Otago/Southland	829	7	1,160	5	1	2,002	4.0
Northland/Auckland/Waikato	4,325	414	422	24	24	5,209	10.5
Central North Island	1,209	72	291	0	12	1,584	3.2
Southern North Island	996	410	132	540	17	2,095	4.2
Other	35	70	11	0	0	116	0.2
Total	36,640	5,611	4,245	2,658	692	49,846	100.0

- Over sixty percent of registrations were initiated at Christchurch Red Cross registration sites (63 percent). A further 10 percent registered in northern regions of the North Island and 9 percent registered in districts of the southern part of the Canterbury region.

Demographic characteristics

The NZ Red Cross registration form also requests information about date of birth, sex, nationality and relationship to prime registrant. This allows a simple demographic analysis of registrants as presented in following tables and graphs.

Table 5
Registrants by broad age group and sex

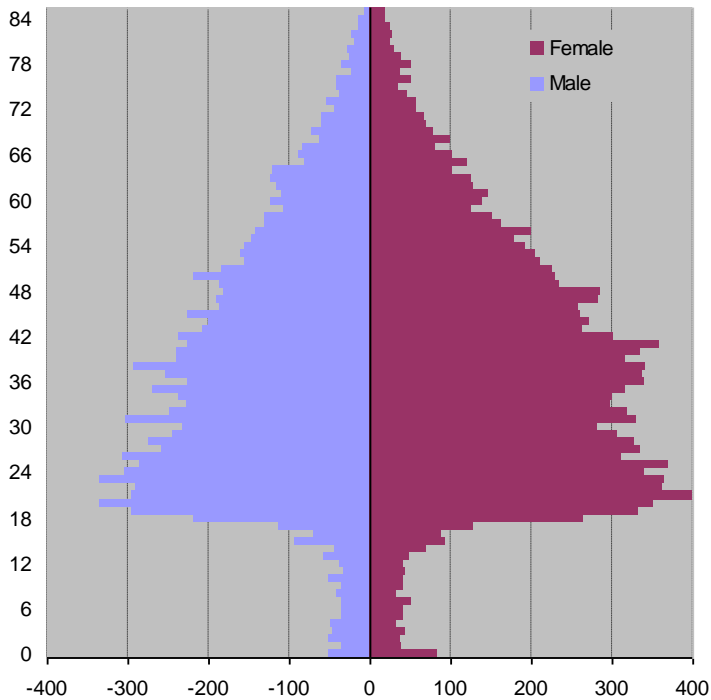
Age group	Number			Percent		
	Male	Female	Total	Male	Female	Total
0-14	6,151	5,917	12,068	28.6	24.3	26.3
15-24	3,744	4,259	8,003	17.4	17.5	17.4
25-34	3,159	3,891	7,050	14.7	15.9	15.3
35-44	3,106	3,907	7,013	14.4	16.0	15.3
45-54	2,390	2,873	5,263	11.1	11.8	11.5
55-64	1,627	1,886	3,513	7.6	7.7	7.6
65+	1,362	1,663	3,025	6.3	6.8	6.6
Total	21,539	24,396	45,935	100.0	100.0	100.0

- Females were more likely to have registered following the quake compared with the male population. The sex ratio of all registrants was 114 women per 100 men. This compared with 105 women per men for Christchurch residents overall (estimate at 30 June 2010 by Statistics NZ).



- About one-quarter of registrants are children (aged less than 15 years) and a further 17 percent are of student and young adult ages (aged 15-24 years).
- About 30 percent of registrants are of young working ages (aged 25-44 years).

Figure 1
Age distribution by sex for prime registrants

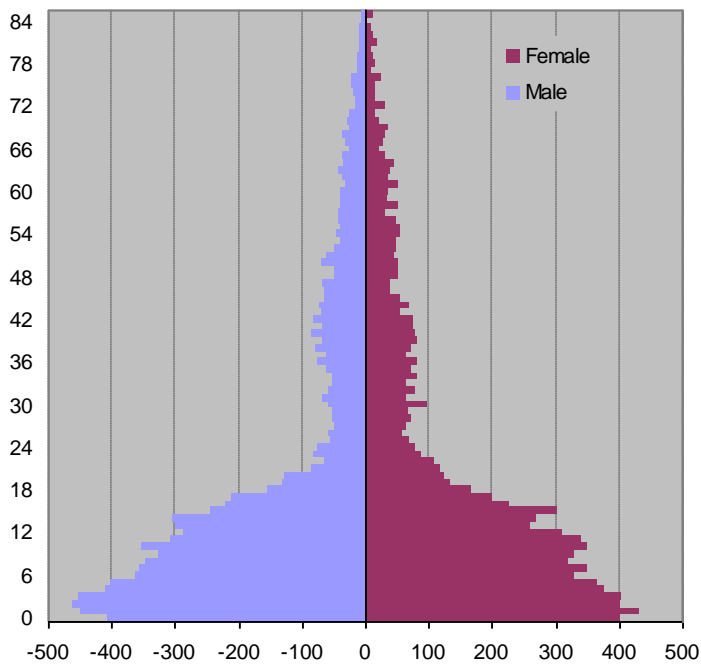


- Prime registrants are able to register other family members who are with the person and who have the same family name. Members who are with the prime registrant but carry another family name will register separately.
- The age distribution of prime registrants is shown in Figure 1. As expected prime registrants are of mature ages.

Figure 2

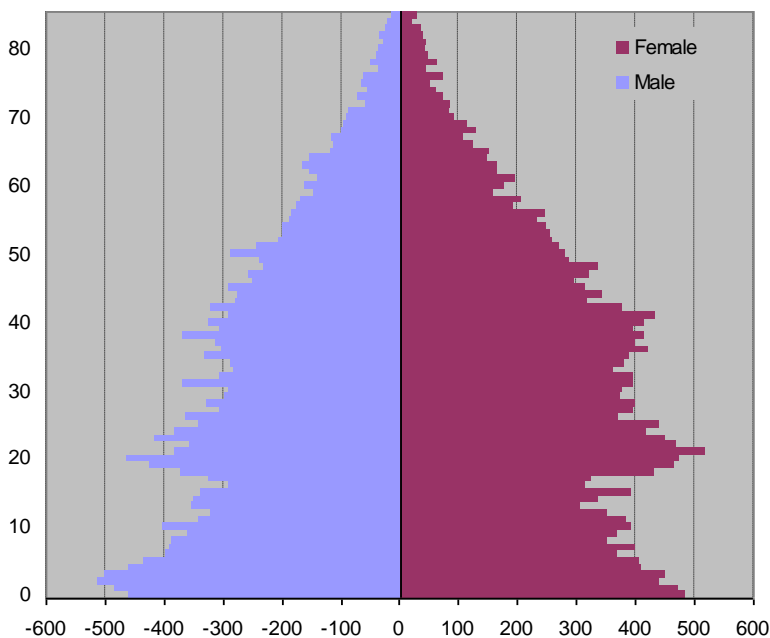


Age distribution by sex for non-prime registrants



- In contrast, non-prime registrants are of dependant ages (aged less than 18 years).

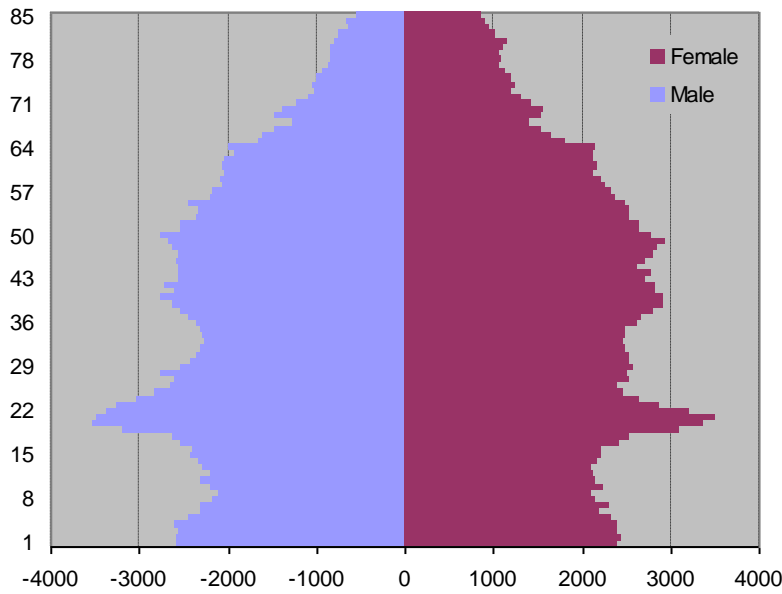
Figure 3
Population by age and sex of all registrants



- The age-sex distribution of all registrants (above figure) is compared with the age-sex distribution for the residents of Christchurch City (as estimated at 30 June 2010) (Figure 4). Relatively speaking, registrants following the quake were more likely to be families with younger children and less likely to be of older ages.

Figure 4

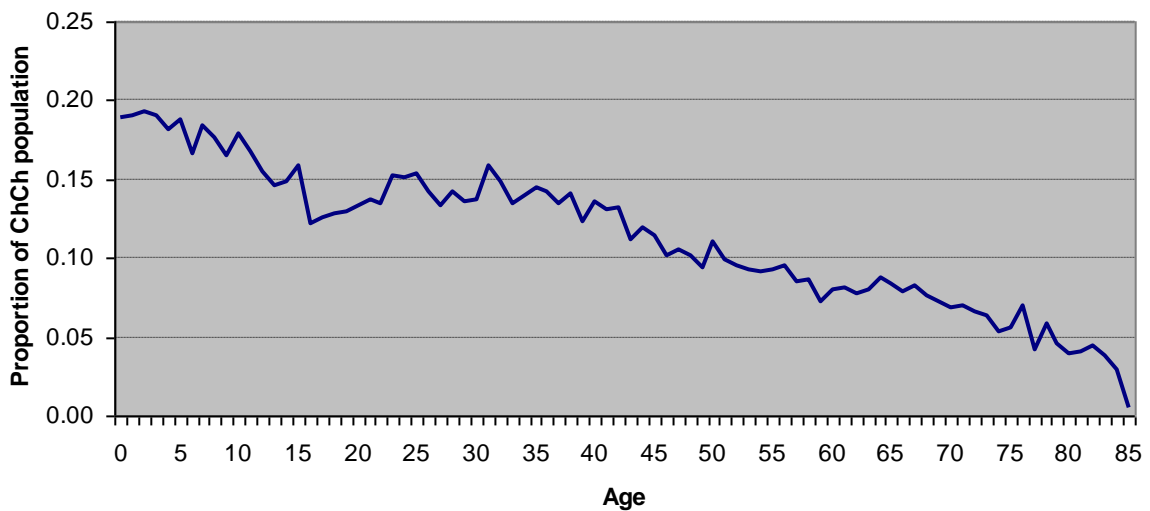
Population by age and sex for Christchurch City
At 30 June 2010



Source: Statistics New Zealand

- Figure 5 (below) shows the ratio of registrants to the total population of Christchurch City (as estimated at 30 June 2010) at each age.
- Around 15 percent of children (of ages less than 15 years) were registered at a NZ Red Cross site following the quake.
- Similarly there were also high registration rates among student and young adult ages (between 10 and 15 percent).

Figure 5
Registrants as a proportion of Christchurch City population by single year of age

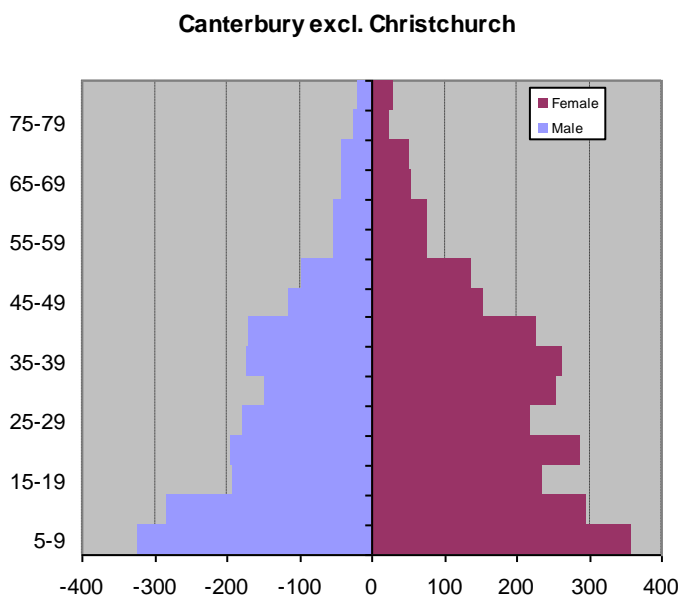
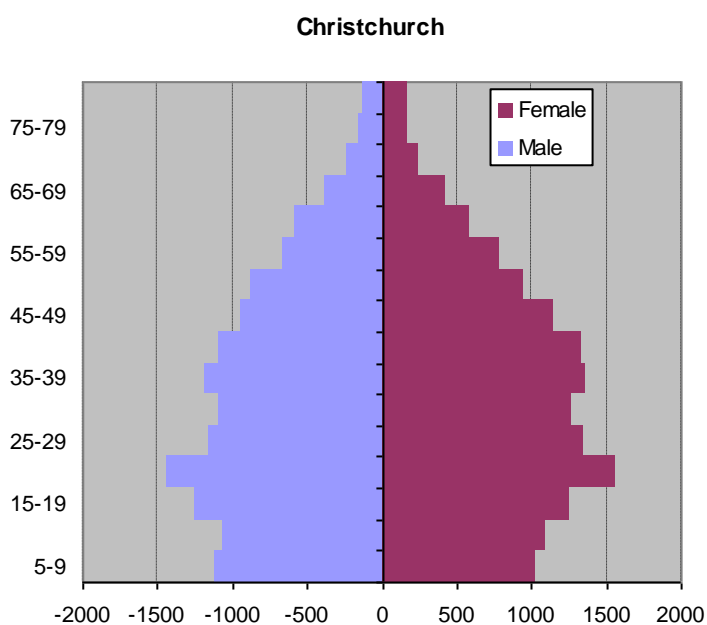


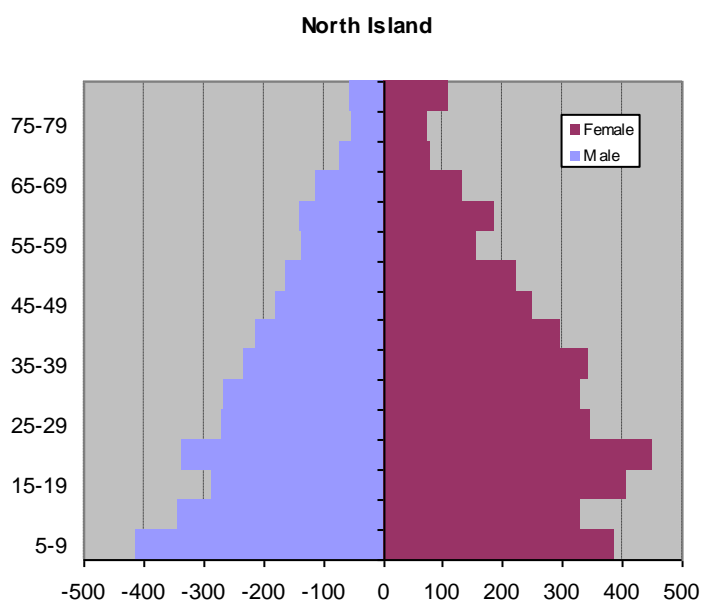
Source: Statistics New Zealand



- Figure 6 compares the age-sex distribution of registrants for selected geographic regions of registration.
- Registrations within Christchurch were more evenly distributed across the younger and middle aged working population. In comparison, registrations in Canterbury region outside Christchurch City and in the North Island indicated that many families with young children had relocated away from Christchurch.

Figure 6
Age and sex distribution by site of registration
For selected geographic region of registration





- More than a half was prime registrants. The ratio of prime registrants to total registrants was 0.58.
- Information giving the relationship to prime registrant showed a typical pattern with around 60 percent being son, daughter or other dependant, and 20 percent being a spouse or partner of the prime registrant (Table 6).

Table 6
Distribution of stated relationship to prime registrant

Relationship to prime registrant (summarised categories)	Number	Percent
Son/daughter/child/other dependant	12,414	62.0
Grandchild	342	1.7
Mother/father/caregiver	847	4.2
Partner/Husband/Wife/Spouse	4,246	21.2
Grandparent	35	0.2
Brother/sister	1,156	5.8
Other family	256	1.3
Friend	64	0.3
Boarder/flatmate	39	0.2
Other	271	1.4
Not stated	352	1.8
Total	20,022	100.0

- It is not possible to identify families and family types based on registration information. However, aggregating information based on same permanent residence makes it possible to identify the number of people registering with same permanent residence.
- Just over a half registered singly based on the stated permanent residence and around 21 percent had 2 people registered under the same address. Around one-quarter of addresses registered three or more people as living in the same home.

Table 7
Distribution of addresses registered under same permanent residence

Number of people registered under same permanent address	Number	Percent
1	11,856	53.2
2	4,680	21.0
3	2,308	10.4
4	1,700	7.6
5	870	3.9
6	394	1.8
7	163	0.7
8	94	0.4
9	68	0.3
10	39	0.2
11+	118	0.5
Total number of addresses registered	22,290	100.0

- The registration form requests information on ‘Nationality’. Responses to this field represented different interpretations of this type of information. For example, many responses stated ethnicity rather than nationality based on country of usual residence. For this reason responses to this field were not consistent. Figures stated in Table 8 therefore represent a summary of stated responses to the ‘Nationality’ field.

Table 8
 Most frequent nationality groupings stated

Nationality stated	Number
New Zealand/Kiwi/NZ and other	30,165
NZ Samoan/Samoa/Samoa and other	3,420
Maori/NZ Maori/Maori and other	1,834
Philippines/Filipino	1,196
United Kingdom/Britain	1,145
Afghanistan	966
Australia, Australia NZ	755
Tonga	647
NZ European/European	619
Europe (continental)	531
Fiji	404
India	352
Japan	346
USA	282
China	205
Bhutan	196
Korea	181
Canada	161
South Africa	144
Cook Island	126
Ethiopia	120
Iran	116
Fiji Indian	73
Malaysia	68
Thailand	51
Ireland	48
Chile	47
Pakistan	46
Nepal	38
Bangladesh	25
Indonesia	25
Egypt	19
Other nationalities	1,903
Not stated	1,465
Total	47,719

- About 31,000 NZ European/New Zealander registered or almost two-thirds of all registrations.
- Registrants, who stated Maori, or Maori and other, represented around 7 percent of the Maori population of Christchurch City (the Maori ethnic group recorded 25,700 usual residents in Christchurch City at the 2006 Census).
- A significant number of the Pacific Island population of Christchurch City registered (4,200) following the 22 February quake. At the 2006 Census, 9,500 Christchurch residents recorded Pacific Island ethnicity. Using this as an approximation of the number of Pacific Islanders living in Christchurch at the time of the quake indicates that a significant proportion of the Pacific Island population registered following the quake (44 percent).

Table 9



Maori and Pacific Island registrations By suburb of permanent residence

Suburb of permanent residence	Registrations by selected nationality groupings		Total registrations	Percent of total registrations for suburb	
	Maori	Pacific Island		Maori	Pacific Island
Aranui	281	789	3,145	8.9	25.1
Linwood	180	321	2,705	6.7	11.9
Burwood	48	49	2,178	2.2	2.2
Woolston	100	280	1,638	6.1	17.1
Shirley	78	151	1,557	5.0	9.7
New Brighton	58	65	1,437	4.0	4.5
C.B.D.	50	31	1,324	3.8	2.3
Speydon	59	110	1,279	4.6	8.6
Hoon Hay	30	349	1,228	2.4	28.4
Addington	40	120	1,120	3.6	10.7
Parklands	18	32	1,116	1.6	2.9
Avondale	9	15	1,110	0.8	1.4
St Albans	25	64	1,095	2.3	5.8
Bexley	25	97	1,090	2.3	8.9
Dallington	14	30	1,087	1.3	2.8
Bromley	46	164	938	4.9	17.5
Wainoni	34	110	792	4.3	13.9
Riccarton	13	163	756	1.7	21.6
Richmond	35	13	755	4.6	1.7
Papanui	32	74	754	4.2	9.8
Sydenham	35	81	754	4.6	10.7
Avonside	30	35	668	4.5	5.2
Hornby	36	185	613	5.9	30.2
Philipstown	48	58	605	7.9	9.6
Bryndwr	16	83	601	2.7	13.8
Waltham	42	21	569	7.4	3.7

Note: Only suburbs with highest number of registrations have been included.

- Numbers of registrants stating Maori in the ‘Nationality’ field were highest in the suburbs named as Aranui, Linwood and Woolston. Numbers of Pacific Islander registrants were highest in Aranui, Hoon Hay, Linwood, Woolston and Hornby.
- The proportion of Pacific Island registrations was around a quarter for some suburbs. For example, in Hornby, Hoon Hay and Aranui Pacific Island residents represented between 30 and 25 percent of all registrations.
- Registrations by Maori were not concentrated in a few suburbs but were more evenly spread across all suburbs.

Technical notes

Overview of PRIDE variable content

Geographic information:

Address of permanent residence, suburb and town/city of permanent residence

Address of temporary location at time of registration

Place of registration

Demographic information:

Date of birth (age), sex, nationality, family name

Prime registrant (yes/no), relationship to prime registrant

Other information:

Reason for registration (classified to 13 options)

Date and time of registration

Notes (other relevant information provided by registrant)

Database identifiers:

Registration number by primary registrant

(listing of names under prime registrant only possible for those with same family name)

Person number (associated with prime registrant)

Person identifiers and contact:

Name, phone number, email, temporary phone, ID type and number

Data quality

For the purposes of this report it was necessary to undertake some cleaning of information content. For example, suburb of permanent residence was self-named and for reporting purposes these were aggregated into a list of main suburbs.

Age of registrant was derived based on date of birth information or age stated. However, reluctance to state actual age resulted in some inaccuracy associated with ages 0-1 years and some analysis presented in this excludes the youngest ages.

Limitations of this study

The permanent residence of registrants has not been coded to meshblock or other standard geographic classification units. For this reason it was not possible to compare registrations by suburb with other population data for standard suburbs (area unit classification).

The residence of temporary location given at time of registration was not included in this preliminary analysis. As expected, this information content was often incomplete and not stated at such a time of an emergency situation.

Acknowledgement

NZ Red Cross wishes to acknowledge the support of Statistics New Zealand in the preparation of this report. Data analysis of PRIDE following the 22 February 2011 quake and summarised results as presented in this report was prepared by Kirsten Nissen, Research and Evaluation, Population Statistics Unit, Statistics NZ.

