COUNTIES MANUKAU HEALTH

Demographic Profile: 2018 Census, Population of Counties Manukau

Prepared: Population Health Team

Counties Manukau Health

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Double vowels are used rather than macrons where appropriate in Te Reo Maaori words in keeping with the Tainui convention, as mana whenua of the Counties Manukau district.

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Executive Summary

The Counties Manukau Health strategic goal is "achieving healthy equity for our community". It is critical that we understand and appreciate the demography of the population and context in which whaanau and communities live. This information supports health service design, advocacy and prevention initiatives of CM Health, to best meet the needs of the populations we serve.

The population served by Counties Manukau Health (CM Health) has many unique features compared to other District Health Board (DHB) populations. The population we serve is young, vibrant, connected and ethnically diverse. It is also a population that has many socioeconomic challenges.

The purpose of this report is to provide information about the demography and the social and economic conditions that impact the health and wellbeing of the CM Health population, using data from the 2018 Census, and population estimates based on the 2018 Census. Because of the limitations of the 2018 Census response rates and the different methodology used to produce the 2018 Census data, many variables are difficult to directly compare to the 2013 Census.

This summary focuses on whole of population data for the main (aggregated) ethnic groups of the CM Health population, along with a short section on the demography of the CM Health service localities.

Key findings

- CM Health has a large population relative to most other DHBs. In 2018, the estimated resident population served by CM health was 567,000 people, representing 11% of the total NZ population.
- The CM Health population is ethnically diverse. In 2018, 16% of the population served by CM Health identified as Maaori, 22% as Pacific, 28% as Asian and 34% as NZ European/Other groups (on the basis of prioritised ethnicity as commonly used in the health sector).
- The ethnic makeup of the population served by CM Health varies with age. Younger populations have higher proportions of Maaori and Pacific peoples compared with the population aged 75 years and over (where over two thirds are NZ European/Other groups).
- Compared with other DHBs, CM Health has the largest Pacific population, and the second largest Maaori population.
- Half (50%) of the Pacific population in CM Health identified as Samoan at the time of the 2018 Census, a quarter as Tongan (25%) and 21% as Cook Island Maaori (total response ethnicity).
- Around 21% of New Zealand's Asian population live in CM Health. Nearly half of these identified themselves as Indian in 2018 (48%) and a third as Chinese (32%).

- CM Health has a relatively young population. People aged 65 years and older made up 11% of the CM Health population, while 23% of the population was aged 14 years or younger in 2018. The respective figures for NZ population were 15% and 19%.

- CM Health is divided into four localities for planning and service provision – Maangere/Ootara, Manukau, Eastern and Franklin. These localities differ substantially in terms of population size and demography, with details in the body of this report.

- CM Health covers one of the fastest growing regions in New Zealand, adding on average 10,000 people per year over the past 10 years, around 2% per annum. Growth is higher in older age groups, with the population aged 65 years and over growing at approximately 4% per year.

- The ethnic populations of the CM Health area have been growing at different rates. The Asian population has had the fastest growth followed by Pacific, while the NZ European/Other group has actually reduced in size over time. This means the CM Health population in 2018 was considerably more multi-ethnic than in 2008.

- New Zealand was identified as the country of birth for 60% of the CM Health population in the 2018 Census. Approximately 60% of those born overseas had been living in NZ for 10 or more years at the time of the 2018 Census.

- Within CM Health, 22% of people who identified as Maaori aged 15 years and over were reported to be able to speak about everyday things in Te Reo Maaori. 42% of Maaori aged 65 years and older were reported to be able to speak about everyday things in Te Reo Maaori.

- A high proportion of those who identify with one or more of the Pacific and Asian populations in older age groups are reported to be able to speak their heritage language (e.g. over 80% of Samoan, Chinese and Korean residents aged 45 years and older, and over 70% of those who are Tongan of that age group).

- Overall, 92% of the CM Health population were reported as having conversational English. However, conversational English was less common for Pacific (90%), Asian (84%) and MELAA (Middle Eastern, Latin American and African) (87%) ethnic groups, particularly in older age groups (e.g. 73% of Samoan, 65% of Tongan and 69% of Indian residents aged 65 years and older were reported as having conversational English; only 40% of Chinese and 46% of Korean people of that age were reported as having conversational English).

- Family size differs by ethnicity, with smaller two to four person families being more common in NZ European/Other groups, while 15% of Maaori and 27% of Pacific families in CM Health consisted of six or more people in 2018.

- Multi-family households are more common in the CM Health district compared to the rest of NZ. Within CM Health, 14% of households contained two families, and 2% of households contained 3 or more families in 2018. This compared with 7% and 1%, respectively, for national data.

- Just over 45% of CM Health respondents identified with a Christian religion and almost 37% of respondents identified with no religion; these figures varied considerably across ethnicities.

- The CM Health population has high levels of socioeconomic hardship. In 2018, 37% of the CM Health population lived in NZDep2018 deciles 9 and 10 / quintile 5 (areas defined as the most socioeconomically challenged). 'All things being equal' this figure would be 20%. The percentage living in NZDep2018 Deciles 9 & 10 / quintile 5 was much higher for Maaori (58%) and Pacific peoples (74%) than for NZ European/Other (19%), Asian (24%) and MELAA (27%) groups, and higher for children (44% for those aged under 15 years) than for older people (25% for those aged 65 years and over).

- Just under 50% of the CM population aged 25 years and over did not own the residence they were living in; this was higher for Maaori (68%) and Pacific peoples (73%).

- Overcrowding is a significant issue for households in the CM Health district. Twenty two percent (22%) of Counties Manukau residents were living in a crowded or severely crowded household in 2018. This figure was higher for Maaori (32%) and Pacific peoples (48%) than for those in Asian groups (19%), and NZ European/Other groups (5%).

- Household crowding was patterned by age. Among CM Health residents less than 15 years old, 29% lived in a crowded or severely crowded home. In contrast, 9% of CM Health residents aged 65 years and over lived in a crowded or severely crowded home.

- Low incomes are more common in the CM Health district compared to the NZ population. Just under half (49%) of the CM Health population aged 15 years and over had a personal income of $30,000 or less per year. This compares with 35% for the total NZ population of that age.

- 50% of those aged 15 years and over were employed full time, 11-14% were in part time employment, 31% were not in the labour force, and 5% were unemployed. 9% of Maaori, 7% of Pacific people and 6% in MELAA groups in CM Health were unemployed at the time of the 2018 Census, compared with 3% and 4% for NZ European/Other and Asian populations.

- 27% of the CM Health population aged 15 years and older held a post-school qualification (excluding university) in 2018; for Maaori and Pacific peoples the figures were 35% and 29% respectively. 21% of the population aged 15 years and above held a L7 or Bachelor degree, or above, the highest levels being reported amongst Asian residents (35%). Maaori and Pacific peoples were less likely to hold a Bachelors/Level 7 qualification or above (9% and 9% respectively).

- 3% of residents reported no access to a motor vehicle; Maaori and Pacific residents were less likely to have access to a vehicle (7% and 5% respectively).

- Most CM Health residents have access to some form of telecommunication device in the place they live. Based on Census 2018 data approximately 1% of people in CM Health region had no access to telecommunications at home. Overall, 94% of Counties Manukau residents reported having access to a mobile phone and this was fairly consistent across ethnicities. Internet access at home was present for 90% of CM Health residents; this was notably lower for Maaori and Pacific peoples (83% and 81%) and patterned by age group with lower access at home for those who are older.

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Abbreviations

CM	Counties Manukau
CM Health	Counties Manukau Health = CMDHB
DHB	District Health Board
ER	Estimated resident population
IDI	Integrated data infrastructure - Stats NZ managed collation of NZ governmental datasets – see page 14
NZ	New Zealand
NZDep2018	New Zealand small-area index of relative socioeconomic deprivation based on the 2018 Census – see page 21
TR	Total response – people who have multiple ethnicities are counted in each category. Percentages add up to more than 100. Compare with the default for this report, where possible, to count each person once via a standard way of prioritising ethnicity used in the health sector – see page 18
UR	Usually resident population
SA1	Statistical Area 1 – new Stats NZ geographical area. Used for 2018 Census datasets, largely replacing the meshblock (MB) datasets released in previous censuses (although each SA1 is made up of a grouping of meshblocks) – see page 19
SA2	Statistical Area 2 – new Stats NZ geographical area, each SA2 is a grouping of SA1s, largely replacing the Census Area Unit (CAU) datasets released in previous censuses – see page 19
Stats NZ	Stats New Zealand, government department

Introduction

The population of CM Health is young, vibrant, connected and ethnically diverse. It is also a population that has many socioeconomic challenges.

The Counties Manukau Health strategic goal is to achieve health equity for our community. The purpose of this report is to provide information about the demography and the social and economic conditions that impact the health and wellbeing of the CM Health population. This information supports health service design, advocacy and prevention initiatives of CM Health, to best meet the needs of the populations we serve and achieve equitable health outcomes.

This report summarises information about the population living in the area served by CM Health. It provides information captured in the 2018 Census at the level of the whole CM Health district population, for the four main (level 0) ethnic groups reported in most health sector data (Maaori, Pacific, Asian, NZ European/Other). The ethnic make-up of the four CM Health localities is also provided. This report also uses population estimates based on the 2018 Census in describing the demography of the CM Health population.

In this report comparisons are also made between the Counties Manukau population and the total New Zealand population in the text narrative (for the most part, New Zealand data are not shown in the tables). This report is complementary to other publicly available reports on the demography and population profile of the Auckland region. Counties Manukau is part of Auckland city, but the southern part of the district also includes parts of Waikato and Hauraki local authorities. In addition, Auckland region analyses can mask the unique aspects of the Counties Manukau population and the differences across Auckland.

We recognise that the data in this report are important for health service planning, but are only one piece of the puzzle. These data do not provide an understanding of the details of individual lives and the values, strengths and challenges of the whaanau and communities in the CM Health region. Therefore, this profile is intended to be used in conjunction with other sources of information – in particular listening to the voices of the population we serve, about their priorities and values.

Use and interpretation of data

In reading and using the information presented in this report, it is important to understand some key issues about the populations described in relation to the census, the way ethnicity is recorded and used, and how the CM Health localities are defined.

Firstly, we recognise that much of the data in this profile speaks to the challenges faced by the populations we serve. Largely, the strengths, resourcefulness and resilience of the populations we serve are not well captured in these data. For example, these data do not provide much insight into community connection and cultural capital in our communities.

Additionally, material deprivation, education and employment challenges faced by many people in CM Health region have occurred in the context of a long history of systemic and structural barriers to equity, including colonisation, racism and discrimination in this country. It is critical that this historic context is understood when interpreting and using data in this profile. It is also important that this profile is used to progress our strategic goal of achieving health equity for the populations we serve.

The 2018 Census

The 2018 Census was the first 'digital-first' census undertaken in New Zealand. This change was a part of modernising and streamlining the census process. Unfortunately, the 2018 Census had very low response rates for Maaori and Pacific peoples. The response rate was approximately 68% for Maaori and 65% for Pacific peoples.[1]

As a result of the low response rates, administrative data from the New Zealand government integrated data infrastructure (IDI) was used to supplement census data and mitigate the impact of low response rates. The IDI incorporates data from tax, health, education, immigration and other government data sources including the 2013 Census. This has allowed Stats NZ to count people who were missed by the 2018 Census. In addition to using administrative data, data have also been imputed from population modelling. For example, language data are modelled based on household language use, age and sex.

The result of using the IDI to supplement census data is that total population counts and the subnational distributions (e.g. across DHBs) from Census 2018 are closer to other counts of the CM Health population (see later re the Health Service Utilisation population) than previous census outputs. This is particularly important for addressing historic undercounting of Maaori and Pacific peoples.[2] However, there is still an undercount, and there are key limitations in the quality of other variables in the 2018 Census.

[1] Stats NZ (2018) 2018 *Census collection response rates unacceptably low.* https://www.stats.govt.nz/methods/2018-census-collection-response-rates-unacceptably-low

[2] Despite the improved counts there remains an apparent shortfall between Census figures and counts of unique health service users with addresses in the CM Health district. This seems to particularly affect Pacific families, and will be examined more closely in a future document.

The 2018 Census External Data Quality Panel provided guidance on the quality of key variables in the Census.[3] Variables that are of special significance to this report, and their quality rating from the expert panel are summarised below (Table 1). In particular, data on iwi affiliation have not been released because of poor quality so are not available for this report. Where the expert data quality panel have not provided an assessment, the Stats NZ data quality rating has been used.

A discussion of the important changes to the design of the forms and questions, including new questions, can be found online.[4]

Table 1. External Panel data quality ratings for variables in the Census 2018 [5]

Quality rating	Variable
Very high	Age
	Sex
	Usually resident population count
High	Birthplace
	Maaori decent
	Personal income source
	Religious affiliation
	Total personal income
Moderate	Ethnicity
	Heating type
	Housing quality variables (access to basic amenities, dampness, and mould)
	Housing tenure
	Number of motor vehicles
	Telecommunication access
	Travel to education
	Work and labour force status
	Years since arrival in NZ
Moderate to poor	Qualification variables
	Study participation
Poor	Individual home ownership[6]
	Travel to work
	Usual residence five years ago
	Usual residence one year ago[7]
Very poor	Family type and household composition
	Iwi affiliation – these data have not been released because of poor quality
	Languages spoken – this ranges from very high to poor, depending on the language. See the discussion on language data (page 36) for more information.

[3] 2018 Census External Data Quality Panel (2020). *Final report of the 2018 Census External Data Quality Panel.* Retrieved from www.stats.govt.nz

[4] Stats NZ (2018). *2018 Census: Design of forms*. Retrieved from www.stats.govt.nz.

[5] 2018 Census External Data Quality Panel (2020). *Final report of the 2018 Census External Data Quality Panel*. Retrieved from www.stats.govt.nz

[6] Stats NZ Quality rating. https://www.stats.govt.nz/methods/data-quality-ratings-for-2018-census-variables

[7] Stats NZ Quality rating. https://www.stats.govt.nz/methods/data-quality-ratings-for-2018-census-variables

Census counts and populations

This report outlines key features of the CM Health population using data from the 2018 Census. Stats NZ report three distinct population measures that relate to census data Figure 1). These are the *census night* population count, the census *usually resident* population count (UR) and the *estimated resident* population (ER).

Figure 1 The definitions of the population measures from Stats NZ[8]

Census night population count	Census usually resident population count (UR)	Estimated resident population (ER)
Visitors from overseas in the area on census night		
Residents of other areas of New Zealand in the area on census night		
Residents of that area in the area on census night	Residents of that area in the area on census night	Residents of that area in the area on census night
	Residents elsewhere in New Zealand on census night	Residents elsewhere in New Zealand on census night
		Residents missed by census (net census undercount)
		Residents temporarily overseas on census night
		Births, deaths, and net migration since census night (to 30 June)

Unless otherwise stated, percentages in this report for social and economic variables are derived from census UR population counts as obtained in a customised 2018 Census extract from Stats NZ for use by the four Northern Region District Health Boards and their support organisation[9]. In calculating percentages, responses that cannot be classified (e.g., 'not stated', 'response unidentifiable', 'response out of scope') are excluded from the denominator.

[8] Chan, WC. (2019) *Census technical summary*. Population Health Team, Counties Manukau Health.
[9] Supplied to CM Health, Auckland District Health Board, Waitematā District Health Board, Northland District Health Board, and Northern Regional Alliance

To calculate the absolute numbers for these variables for planning purposes, the percentages derived from the 2018 Census UR population data have been applied to the estimated resident population for 2018 (ER). For the ethnicity and age group description in the first section, the ER population has been used (see further page 22).

A more detailed explanation of the interpretation of census data can be found in the 'Census technical summary (2019)' produced by the CM Health Population Health Team.[10]

Because of the limitations of the 2018 Census response rates and the different methodology used to produce the 2018 Census data, many variables are not able to be directly compared to the 2013 Census.

Numbers in this report have been rounded to protect confidentiality and also, for the population numbers, to reinforce the estimated nature of the figures presented. Individual figures may not add up to totals, and values for the same data may vary in different tables because of this rounding.

Some analyses produced by CM Health also use another population, the Health Service Utilisation (HSU) population. The HSU population is constructed through linkage of anonymised health system data, identifying all people who had some contact with the health system within the year in question. Essentially this is a large subset of the administration data from the IDI that Stats NZ drew on to supplement the Census 2018 responses as described above. HSU data is not reported in this profile, but has been used to cross check a number of the variables reported, where appropriate.

Sex and gender data

Despite the fact that 'sex' and 'gender' are often used interchangeably in general use, these are distinct concepts. Gender refers to a social and personal identity, whereas sex refers to biological characteristics. [11]

The 2018 Census asked whether respondents were male or female. No other response options were available. This question is likely to be interpreted in a range of ways by respondents because there is a lack of clarity about whether sex or gender data are being sought. For example, it is unclear for transgender people whether this question is referring to sex at birth, or identified gender. Additionally, the responses to this question align with a binary approach to gender identity and are not inclusive of people who identify as gender diverse, intersex, transgender or with an indigenous sexual and gender identity[12].

[10] Chan, W. C. (2019) *Census technical summary*. Population Health Team, Counties Manukau Health.
[11] *Sex and gender identity statistical standards: Consultation*. 2020. Tatauranga Aotearoa - Stats New Zealand. https://www.stats.govt.nz/consultations/sex-and-gender-identity-statistical-standards-consultation
[12] There are a range of Maaori and Pacific terms commonly used in Aotearoa New Zealand to describe indigenous sexual and gender identities. These include: Maaori - whakawahine, tangata ira tāne, takatāpui, Samoan – Fa'afafine, Tongan – fakaleiti, Cook Islands – 'akava'ine, Fijian – vakasalewalewa, Niuean – fakafifine.

In line with census data collection, this report presents demography data by male and female. However, we recognise the above issues and limitations to its interpretation. Stats NZ is currently reviewing sex and gender data to bring this in line with best practice and the values and experience of people in Aotearoa New Zealand.[13]

Ethnicity data

Ethnic identity is an important dimension of social and cultural experience, and plays a significant role in health and wellbeing. Importantly, ethnicity is 'a social construct of group affiliation and identity'.[14] It is distinct from one's ancestry/heritage or one's nationality. Ethnicity data is critical for monitoring progress on achieving health equity and to support service design and planning.

In the 2018 Census, people were asked to self-identify the ethnic group or groups which they belong to, with the ability to mark more than one ethnicity. This standard ethnicity collection question has been consistently used since the 2001 Census and is also the standard for the health and disability sector. This report preferentially presents prioritised ethnicity data where this is available; this is routine in the health sector (in most other settings total response ethnicity is used).[15]

The population served by CM Health is multi-ethnic with high numbers and proportions of Maaori, Pacific and Asian peoples compared to other DHBs. This report outlines the ethnicity profile of the CM Health population at a district level. Throughout this report, the four aggregated ethnicity groups used in most health system reporting (Maaori, Pacific, Asian and NZ European/Other; level 0 groups) are predominantly used.

The Pacific and Asian population groups in New Zealand are heterogeneous. The main subgroups of each of the aggregate Pacific and Asian populations are described in this report. Ideally data are presented for all Pacific and Asian subgroups; however, this is outside of the scope of this report. Previous analyses indicate that many demographic and socioeconomic factors are similar across Pacific subgroups.[16] However, there are substantial differences across Asian subgroups for these variables.[17] In particular, Indian communities (the largest South Asian subgroup in the Auckland population) have different health and socioeconomic profiles to Chinese and other Asian groups. Because of these differences, some analyses in this report are also disaggregated for the Asian population..

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[13] Sex and gender identity statistical standards: Consultation. 2020. Tatauranga Aotearoa - Stats New Zealand. https://www.stats.govt.nz/consultations/sex-and-gender-identity-statistical-standards-consultation

[14] Ministry of Health (2004) *Ethnicity data protocols for the Health and Disability Sector*. Wellington: Ministry of Health.

[15] Each respondent is allocated to a single ethnic group based on a prioritising system. For health this is as follows: Maaori, Pacific peoples, Asian, other groups except NZ European, and NZ European.

[16] Novak B. (2007) *Ethnic-Specific Health Needs Assessment for Pacific People in Counties Manukau*. Manukau City: Counties Manukau District Health Board. Jackson G, Minster J. (2012) *Metro-Auckland Pacific Population Health Profile*. Auckland: Health Partners Consulting Group.

[17] Mehta S (2012) *Health needs assessment of Asian people living in the Auckland region*. Auckland: Northern DHB Support Agency

Maaori and NZ European/Other groups are also aggregate groups. As noted above, iwi data has not been released for Census 2018 because of low quality, so those of Maaori ethnicity are not further broken down in this report. The NZ European/Other group includes the group termed MELAA by Stats NZ (Middle Eastern, Latin American and African). Clearly the ethnic groups included in MELAA are widely diverse. The overall make-up of the MELAA group in Counties Manukau is reported, but numbers are small and are not otherwise disaggregated in this report[18].

Geographic boundaries and locality data

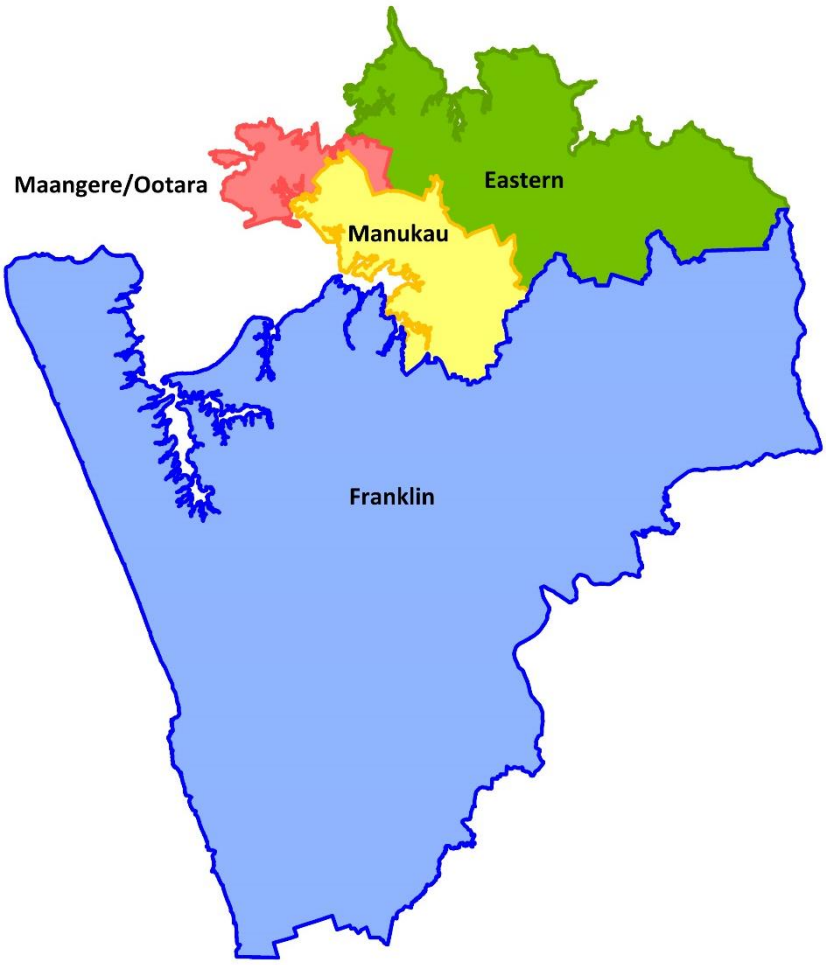
Statistical Area 1 (SA1) and Statistical Area 2 (SA2) are units used by Stats NZ to analyse data in geographic units. SA1 typically have about 100-200 residents, and a maximum of 500 residents. They are made up of one or more meshblocks, and are now the smallest geographic unit by which Census data is usually presented. SA2s are an aggregate of SA1s, equating to small suburbs. SA2s will have varying number of residents. It may be fewer than 1,000 residents in rural areas, or between 2,000 to 4,000 residents in urban centres.

Most of the geographic area served by CM Health is part of the territorial authority of Auckland Council. However small areas of the southern aspect of CM Health rohe are part of Waikato District and Hauraki District territorial authorities.

For the purposes of service planning and integration, the area served by CM Health is divided into four localities – Maangere/Ootara, Eastern, Manukau and Franklin (Figure 2). Within each locality, there are two populations of note in relation to planning – the people who live in the locality and the people who are enrolled in primary care practices in the locality. These two populations overlap but are not the same. This report focuses on the population who live in the locality.

[18] A report on the health status of people in the MELAA group in the Auckland region can be found at https://countiesmanukau.health.nz/assets/About-CMH/Performance-and-planning/health-status/8c7903cc7e/2011-health-assessment-middle-east-latin-american-african-people-living-in-auckland.pdf

Figure 2 Service localities for Counties Manukau Health



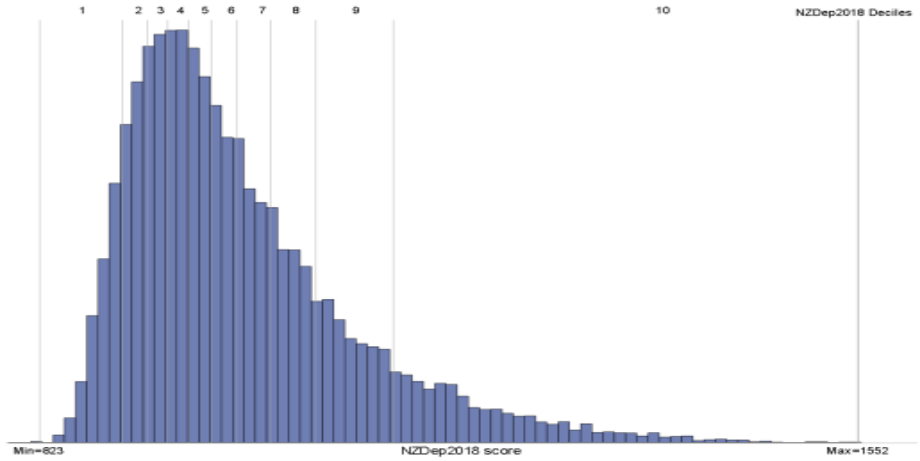
NZDep2018

NZDep2018 is an area-based measure of relative socioeconomic deprivation. It is based on nine variables from the 2018 Census which cover eight different dimensions of socioeconomic hardship. These variables relate to home internet access, receipt of welfare benefits, household income, employment, qualifications, home ownership, family structure, household crowding and housing quality. NZDep2018 gives a deprivation score for each meshblock, and for each SA1.[19]

Meshblock scores are grouped into deciles. Decile 1 represents the 10% of areas with the least socioeconomic deprivation and decile 10 the 10% of areas with the most socioeconomic deprivation.[20] The NZDep deciles are often combined and reported as five quintiles, with quintile 1 representing the 20% of areas with the least and quintile 5 the 20% of areas with the most socioeconomic deprivation. Importantly, NZDep scores refer to areas, not individuals, and are relative - 10% of areas will always be the most socioeconomically deprived, relative to other areas in New Zealand.

It is also necessary to understand that for both decile 1 and 10 there is no outer bound. This means that for decile 1 and 10, there is a much larger range in the underlying level of deprivation (or advantage) compared with other deciles. This is particularly important when considering decile 10 in the CM Health region. Within decile 10 there is a 'long tail' of very high deprivation scores (Figure 3), indicating that some of the areas within this decile have significantly higher levels of deprivation on a range of measures compared with those at the lower end of the decile threshold. CM Health analyses have demonstrated that the scores in decile 10 are particularly skewed towards higher levels of socioeconomic deprivation for the CM Health population compared with other DHBs.

Figure 3 Distribution of NZDep2018 scores for the whole of NZ, with the NZDep2018 decile scale superimposed[21]



[19] Atkinson J, Salmond C, Crampton P (2019). *NZDep2018 Index of Deprivation, Interim Research Report, December 2019.* Wellington: University of Otago.
[20] Note the NZDep scores are the opposite of the decile system used in the education sector.
[21] Atkinson J, Salmond C, Crampton P (2019). *NZDep2018 Index of Deprivation, Interim Research Report, December 2019*. Wellington: University of Otago.

Demography

Age, sex and usually resident (UR) population count are rated as very high quality data by the 2018 Census External Data Quality Panel. However, as discussed in the chapter on use and interpretation of data, ethnicity data from the 2018 Census have been graded as moderate quality (page 14). Importantly, the Census is likely to underestimate the proportion of the CM Health population who identify as Maaori, Pacific and Asian ethnicities.

For this section on ethnic and age composition, the estimated resident (ER) population for 2018 of the CM Health rohe (area) has been used rather than the census UR population. This is in keeping with Stats NZ advice, that where available, the ER population is the most appropriate source to use for planning purposes[22].

Gender composition by age

As for the total New Zealand population, the gender composition of the CM Health population is relatively equally split between female and male for younger and middle-aged populations. However, in those aged 75 years and over, 56% of the population are female (Table 2). This reflects the shorter life expectancy of males; for example, in 2019 the life expectancy at birth for females in the CM Health population was 83.2 years compared with 79.4 years for males.

Table 2 Gender composition within age groups of the ER population of CM in 2018

	0-14 yrs	15-24 yrs	25-44 yrs	45-64 yrs	65-74 yrs	75 yrs & over	Total
Female	62,070	40,230	80,970	67,840	19,200	13,710	284,020
	49%	48%	51%	51%	51%	56%	50%
Male	65,870	43,990	78,960	65,170	18,220	10,780	282,889
	51%	52%	49%	49%	49%	44%	50%
Total	127,940	84,220	159,930	133,010	37,420	24,490	567,010
	100%	100%	100%	100%	100%	100%	100%

Source: 2020 Stats NZ Pop Projections. Projections produced by Statistics New Zealand according to assumptions specified by the Ministry of Health.

Ethnic composition and age structure

The CM Health population is a young and ethnically diverse population. In 2018 the ER population served by CM Health was 567,000 people, 11% of the New Zealand population. In the CM Health region, based on the ER population for 2018, 16% of people identified as Maaori, 22% identified as Pacific, 28% as Asian and 34% as NZ European or an 'Other' ethnicity (Table 3). Compared with other DHBs in the Northern Region and the NZ population as a whole, the population of CM is considerably more multi-ethnic, with a much lower percentage of the population identified as part of the NZ European/Other group (Table 3 and Figure 4).

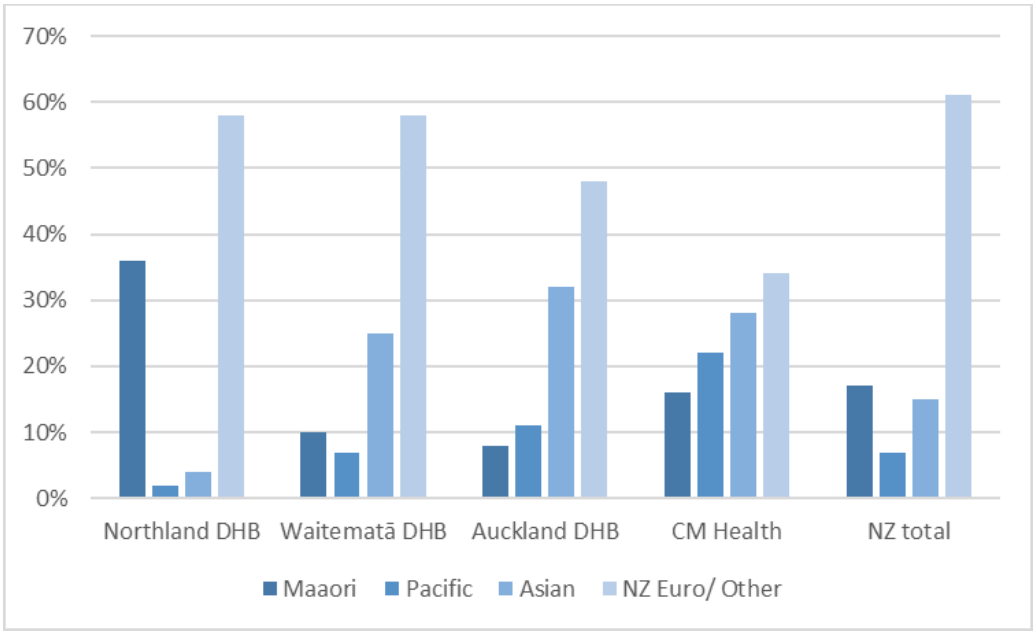
[22] Stats NZ (2007) *A Report on the 2006 Post-enumeration Survey*. Wellington: Stats NZ

Table 3 ER population by ethnicity for the Northern Region DHBs and NZ total population in 2018

	Northland DHB	Waitematā DHB	Auckland DHB	CM Health	NZ total
Maaori	36%	10%	8%	16%	17%
Pacific	2%	7%	11%	22%	7%
Asian	4%	25%	32%	28%	15%
NZ Euro/ Other	58%	58%	48%	34%	61%
Total	100%	100%	100%	100%	100%

Source: 2020 Stats NZ Pop Projections. Projections produced by Statistics New Zealand according to assumptions specified by the Ministry of Health.

Figure 4 ER population by ethnicity for the Northern Region DHBs and NZ total population in 2018



Source: 2020 Stats NZ Pop Projections. Projections produced by Statistics New Zealand according to assumptions specified by the Ministry of Health.

The ethnic mix of the CM population varies by age. Within CM Health, younger age groups have a higher proportion of Maaori, Pacific and Asian peoples compared with the population aged 65 years and over. Among the CM Health population under age 15 years, 24% identify as Maaori, 29% as Pacific, 24% as Asian and 23% as NZ European/Other (Table 4). In contrast, 55% of CM Health residents aged 65 to 74 years, and 69% of CM Health residents aged 75 years and over, identify as NZ European/Other groups (Table 4 and Figure 5).

Table 4 Ethnicity patterns *within* age groups of the ER population of CM in 2018

	0-14 yrs	15-24 yrs	25-44 yrs	45-64 yrs	65-74 yrs	75+ yrs	Total
Maaori	30,760	17,000	23,140	17,030	3,120	1,310	92,360
	24%	20%	14%	13%	8%	5%	16%
Pacific	36,690	24,530	33,120	23,640	5,020	2,440	125,440
	29%	29%	21%	18%	13%	10%	22%
Asian	30,910	21,510	58,590	34,430	8,710	3,890	158,040
	24%	26%	37%	26%	23%	16%	28%
NZ Euro/Other	29,580	21,180	45,080	57,910	20,570	16,850	191,170
	23%	25%	28%	44%	55%	69%	34%
Total Ethnicity	127,940	84,220	159,930	133,010	37,420	24,490	567,010
	100%	100%	100%	100%	100%	100%	100%

Source: 2020 Stats NZ Pop Projections. Projections produced by Statistics New Zealand according to assumptions specified by the Ministry of Health.

The age structure of ethnic groups varies significantly in the CM Health region. Maaori and Pacific peoples have a much younger age structure. In CM Health, 51% of all residents who identify as Maaori, and 49% of Pacific people, are younger than 25 years old. In comparison, 34% of CM Health Asian residents and 26% of NZ European/Other residents are less than 25 years old (Table 5). The age-sex structure for the total CM Health ER population is shown in Figure 5; the age-sex structures for the four aggregated ethnic groups presented in this report are visualised in Appendix One (page 67). Age-sex structures reflect a number of factors, including birth rates, death rates at different ages, and the age of people who migrate into an area (the latter may include local migration due to cost of housing and work opportunities, as well as international migration).

Overall, CM Health has a relatively young population. People aged 65 years and older make up 11% of the CM Health population, compared with that age group making up 15% of the NZ population.[23] In contrast, 23% of the 2018 CM Health ER population was aged 14 years or younger (Table 5). CM Health has a higher proportion of children compared to the overall NZ population, where 19% are under the age of 15 years.[24] In 2018, over 13% of New Zealand children under the age of 15 years were living in Counties Manukau.[25]

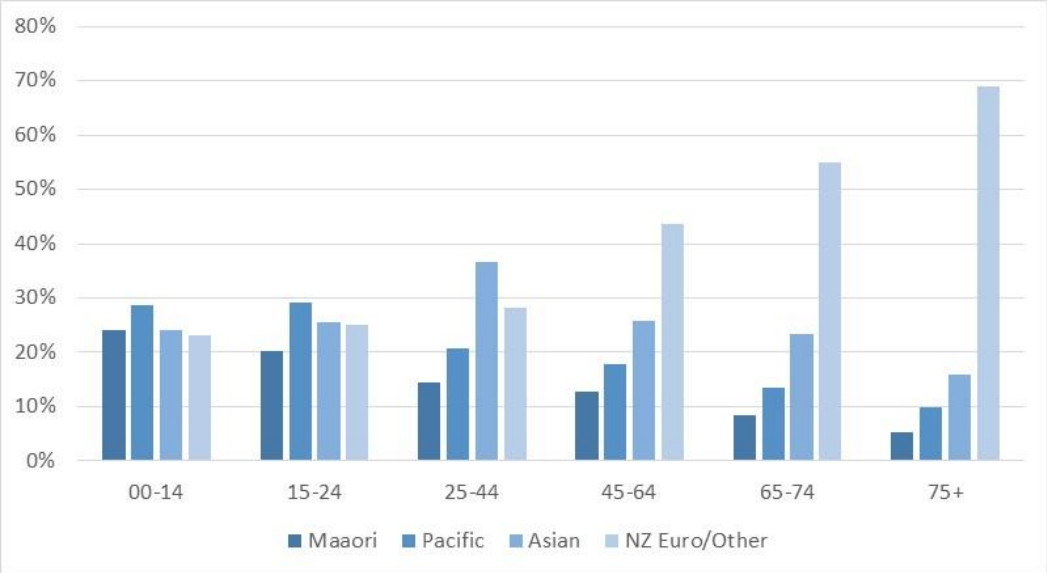
[23] Stats NZ projection for MOH, 2020. 2018 NZ figures for 65+: 734,840 of 4,900,200 = 15.0%.
[24] Stats NZ projection for MOH, 2020. 2018 NZ figures for 0-14 years: 946,340 of 4,900,200 = 19.3%
[25] 127,945 of 946,340 = 13.5%

Table 5 Ethnicity patterns *across* age groups of the ER population of CM in 2018

	0-14 yrs	15-24 yrs	25-44 yrs	45-64 yrs	65-74 yrs	75+ yrs	Total
Maaori	30,760	17,000	23,140	17,030	3,120	1,310	92,360
	33%	18%	25%	18%	3%	1%	100%
Pacific	36,690	24,530	33,120	23,640	5,020	2,440	125,440
	29%	20%	26%	19%	4%	2%	100%
Asian	30,910	21,510	58,590	34,430	8,710	3,890	158,040
	20%	14%	37%	22%	6%	2%	100%
NZ Euro/Other	29,580	21,180	45,080	57,910	20,570	16,850	191,170
	15%	11%	24%	30%	11%	9%	100%
Total Ethnicity	127,940	84,220	159,930	133,010	37,420	24,490	567,010
	23%	15%	28%	23%	7%	4%	100%

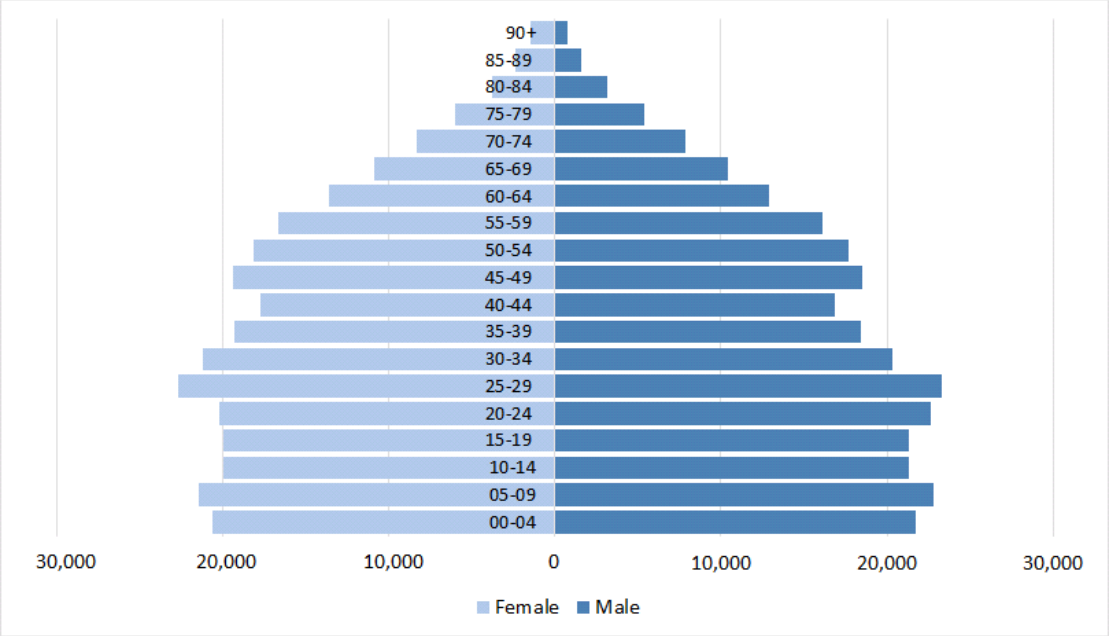
Source: 2020 Stats NZ Pop Projections. Projections produced by Statistics New Zealand according to assumptions specified by the Ministry of Health.

Figure 5 Ethnicity patterns within age groups of the ER population of CM in 2018



Source: 2020 Stats NZ Pop Projections. Projections produced by Statistics New Zealand according to assumptions specified by the Ministry of Health.

Figure 6 Age-sex pyramid for total CM ER population based on the 2018 Census



Source: 2020 Stats NZ Pop Projections. Projections produced by Statistics New Zealand according to assumptions specified by the Ministry of Health.

In 2018 the CM Health population represented 11% of the New Zealand population. Census data indicate that 11% of New Zealand Maaori were living in Counties Manukau. This makes CM Health's Maaori population of 92,360 the second largest DHB Maaori population, after Waikato DHB's 101,770. For Pacific people, 38% of New Zealand's Pacific population were living in the Counties Manukau district, which makes CM Health the largest DHB Pacific population, with its 125,440 more than twice the next largest, Auckland's 54,730.

Twenty one percent of Asian people living in New Zealand were living in Counties Manukau, making CM Health the second largest Asian DHB population (to Auckland DHB).[26] The DHB Asian populations in the metro Auckland area are very close in size. 2018 ERP data used for this report indicate that 21.5% of the NZ Asian population were living in the Auckland DHB region, and 21.2% of the NZ Asian population living in the CM Health region. The NZ European/Other population living in Counties Manukau constitute only 6% of the NZ European/Other population of New Zealand.

[26] Stats NZ projection for MOH, 2020. 2018 NZ figure for Asian ethnicity 744,345, with CM Health 158,040, and Auckland DHB 159, 890 – that is 1850 or 1% higher.

Pacific, Asian and MELAA subgroups

The Pacific, Asian and Middle Eastern, Latin American and African (MELAA) ethnic groups are aggregate groups. Within these groups are diverse ethnic identities. This section gives an indication of relative size of the populations within these groupings. Total response ethnicity is used.[27]

Half (50%) of the Pacific population in CM Health identified as Samoan at the time of the 2018 Census, a quarter as Tongan (25%) and 21% as Cook Island Maaori (Table 6).

Table 6 CM Health Pacific population by level 3 total response ethnic groups

	Cook Island	Fijian	Niuean	Other Pacific	Samoan	Tongan
% of CM Health Pacific population	21%	4%	8%	3%	50%	25%

Source: Census 2018 UR populations, total response ethnicity Level 3, Stats NZ

Nearly half of the Asian population in CM Health identified as Indian (48%), one third identified as Chinese (32%), and 6% as Filipino at the time of the 2018 Census (Table 7). Of note, this pattern differs from other parts of the Auckland region; for example, Chinese, Korean and Filipino people make up a larger proportion of the Asian population of Waitematā DHB, with a smaller proportion identifying as Indian (Figure 7).

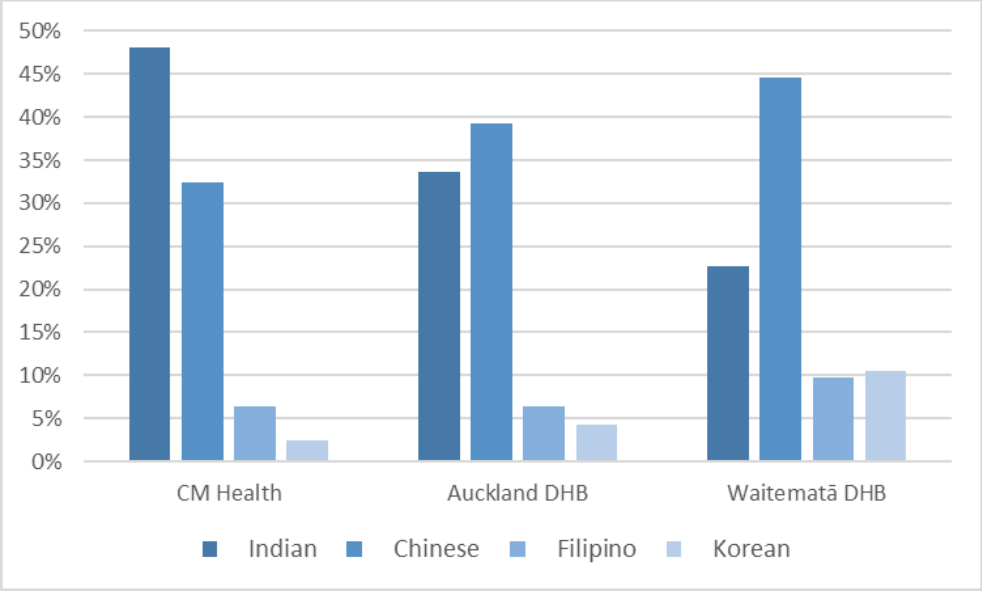
Table 7 CM Health Asian population by level 3 total response ethnic groups

	Cambodian	Chinese	Filipino	Indian	Korean	Vietnamese
% of CM Health Asian population	2%	32%	6%	48%	2%	2%

Source: Census 2018 UR populations, total response ethnicity Level 3, Stats NZ

[27] Ministry of Health. *HISO 10001:2017 Ethnicity Data Protocols. 2017*. Available at: www.health.govt.nz/system/files/documents/publications/hiso-10001-2017-ethnicity-data-protocols-v2.pdf

Figure 7 Ethnic mix of Asian populations across the metro Auckland DHBs



Source: Census 2018 UR populations, total response ethnicity Level 3, Stats NZ

The MELAA (Middle Eastern, Latin American and African) subgroup is a very heterogeneous ethnic group. In the 2018 Census, there were ~8,5000 people within the CM Health UR population who identified with an ethnicity captured by the MELAA group.[28] The MELAA ethnic group therefore account for approximately 1% of the total CM Health UR population. The Middle Eastern group were just under two thirds of the total MELAA group (62%), African 22% and Latin American 17%.

[28] Using total response ethnicity data

Ethnic composition and age structure of the CM Health localities

The four localities of the CM Health region differ substantially in terms of population size and demography (Figure 2 and Table 8). The Franklin locality is the smallest by population size, with approximately 79,000 people and 14.6% of the CM Health population in 2018. In contrast, the Manukau locality accounted for 214,000 people, and was home to 37% of the CM Health population in 2018.

Table 8 2018 Estimated resident population by CM Health locality

Eastern	163,300	29%
Franklin	78,800	14%
Maangere/Ootara	110,900	20%
Manukau	214,000	38%
Total CM Health	567,000*	100%

*Rounded to the nearest 100, so totals may differ. Source: 2018 ER population, prioritised ethnicity by area unit for NR DHBs, Stats NZ

The ethnic composition of the CM Health population differs across the localities (Table 9, Table 10, Table 11 and Figure 8). The Eastern locality has a notably large Asian population (43% of this locality in 2018). The Franklin population is predominantly residents who are NZ European and Other ethnicities and Maaori (69% and 18% respectively in 2018). The Maangere/Ootara locality is notable for its large Pacific population; in 2018 58% of the residents identified with one or more Pacific ethnicities. The Manukau locality is more evenly distributed by ethnicity, with all four level 0 ethnic groups contributing approximately one quarter of the resident population in 2018 (Table 9).

Table 9 Ethnicity distribution within CM Health localities in 2018

Locality	Maaori	Pacific	Asian	NZ Euro/ Other	Total
Eastern	6%	4%	43%	46%	100%
Franklin	18%	4%	8%	69%	100%
Manukau	23%	24%	30%	24%	100%
Maangere/Ootara	18%	58%	16%	9%	100%
Total	16%	22%	28%	34%	100%

Source: 2018 ER population, prioritised ethnicity by area unit for NR DHBs, Stats NZ

Among the Maaori population within CM Health, over half were residents in the Manukau locality (Table 10). The CM Health Pacific population is concentrated primarily in the Maangere/Ootara locality (52%) and the Manukau locality (40%).

Pacific peoples contribute a very small proportion of the population in the Eastern and Franklin localities. Asian peoples in the CM health region predominantly live in the Eastern and Manukau localities (Table 10). The NZ European/Other ethnic grouping are relatively evenly spread across the Eastern, Franklin and Manukau localities, but only a small proportion of this ethnic grouping reside in the Maangere/Ootara locality.

Table 10 Ethnicity distribution across CM Health localities in 2018

Locality	Maaori	Pacific	Asian	NZ Euro/ Other	Total
Eastern	11%	6%	45%	40%	29%
Franklin	15%	3%	4%	29%	14%
Manukau	53%	40%	40%	27%	38%
Maangere/Ootara	21%	51%	11%	5%	20%
Total	100%	100%	100%	100%	100%

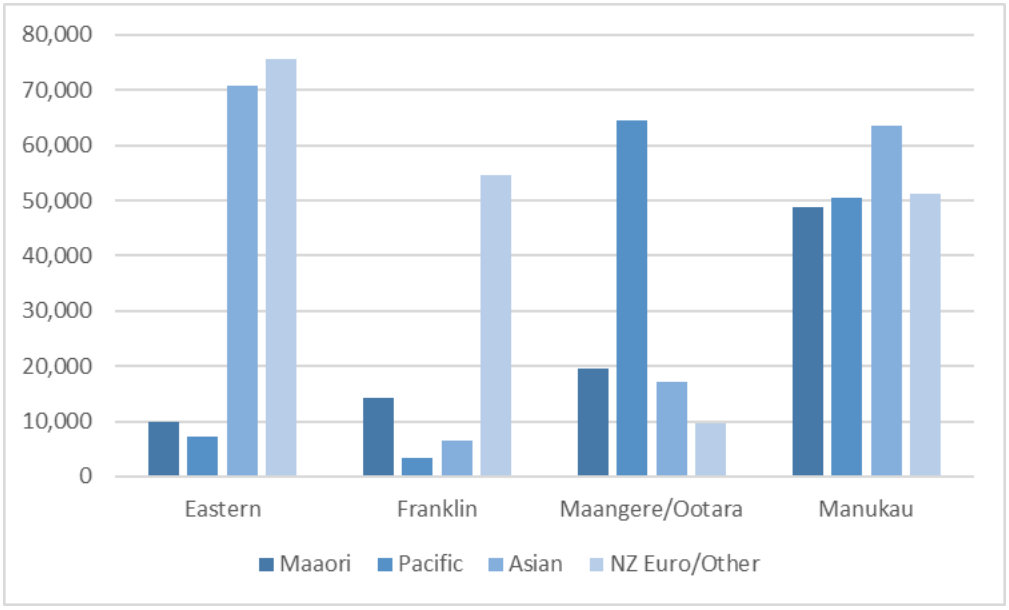
Source: 2018 ER population, prioritised ethnicity by area unit for NR DHBs, Stats NZ

Table 11 Indicative number of residents within CM Health localities by prioritised ethnic groups[29]

	Maaori	Pacific	Asian	NZ Euro/ Other	Total
Eastern	9,800	7,300	70,700	75,600	163,300
Franklin	14,200	3,400	6,500	54,700	78,800
Manukau	48,800	50,400	63,600	51,300	214,000
Maangere/Ootara	19,600	64,400	17,200	9,700	110,900

Source: 2018 ER population, prioritised ethnicity by area unit for NR DHBs, Stats NZ

Figure 8 Indicative number of residents within CM Health localities by prioritised ethnic groups



Source: 2018 ER population, prioritised ethnicity by area unit for NR DHBs, Stats NZ

[29] Figures are rounded to the nearest 100 residents so may not total the overall CM Health ER population

The age structure of the CM Health population also differs across the localities, corresponding to their differing ethnic compositions. The Maangere/Ootara locality has the youngest age structure, with 27% of the population aged under 15 years and only 8% aged 65 years and older in 2018. The Eastern locality, on the other hand, had 19% aged under 15 years and 13% aged 65 years and older. Manukau had the second youngest structure, with 23% aged under 15 years, while that figure was 21% for Franklin. Nine percent and 15% of the Manukau and Franklin populations were aged 65 years and older (Table 12).

Table 12 Age structure of the CM Health localities in 2018

	0-14 yrs	15-24 yrs	25-44 yrs	45-64 yrs	65-74 yrs	75+ yrs	Total
Eastern	31,300	21,700	45,200	43,000	13,000	8,800	163,400*
	19%	13%	28%	26%	8%	5%	100%
Franklin	16,600	9,600	18,900	22,000	6,900	4,600	78,800
	21%	12%	24%	28%	9%	6%	100%
Manukau	50,200	33,200	65,600	45,500	11,800	7,600	214,000
	23%	16%	31%	21%	5%	4%	100%
Maangere/ Ootara	29,700	19,800	30,200	22,200	5,700	3,100	110,900
	27%	18%	27%	20%	5%	3%	100%

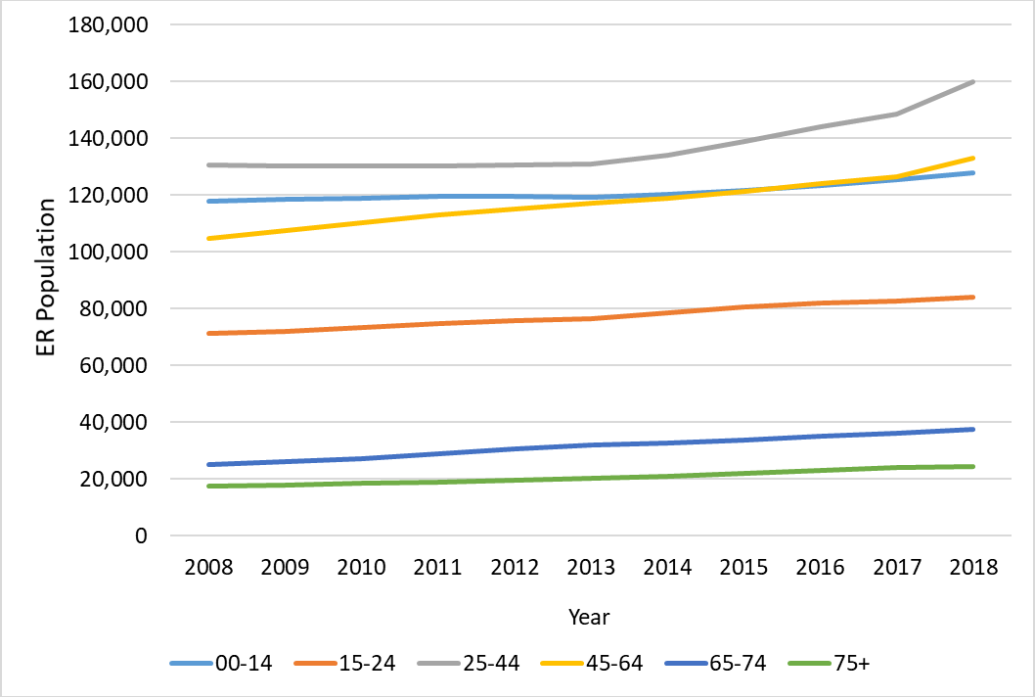
*Rounded to the nearest 100, so totals may differ. Source: 2018 ER population, prioritised ethnicity by area unit for NR DHBs, Stats NZ

Population change over time, to 2018 – age and ethnicity

CM Health covers one of the fastest growing regions in New Zealand, adding on average 10,000 people a year over the past 10 years, around 2% per annum. Growth is higher in older age groups, with the 65+ population growing at approximately 4% a year.

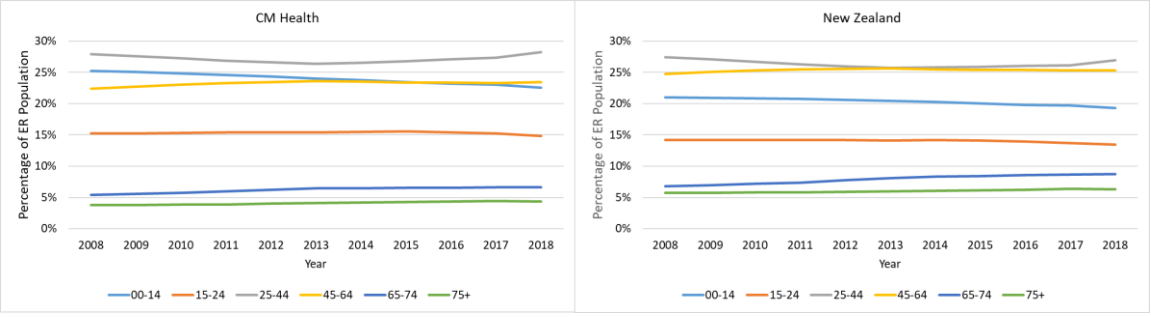
While the childhood population (0-14 years) has grown over the last decade, faster growth in other age groups means a smaller percentage of the total population were aged 0-14 years in 2018 (23%) than in 2008 (25%) (Figure 9 & Figure 10).

Figure 9 Estimated population of CM Health by age group 2008-2018



Source: 2020 Stats NZ ER population update. Estimates produced by Statistics New Zealand according to assumptions specified by the Ministry of Health.

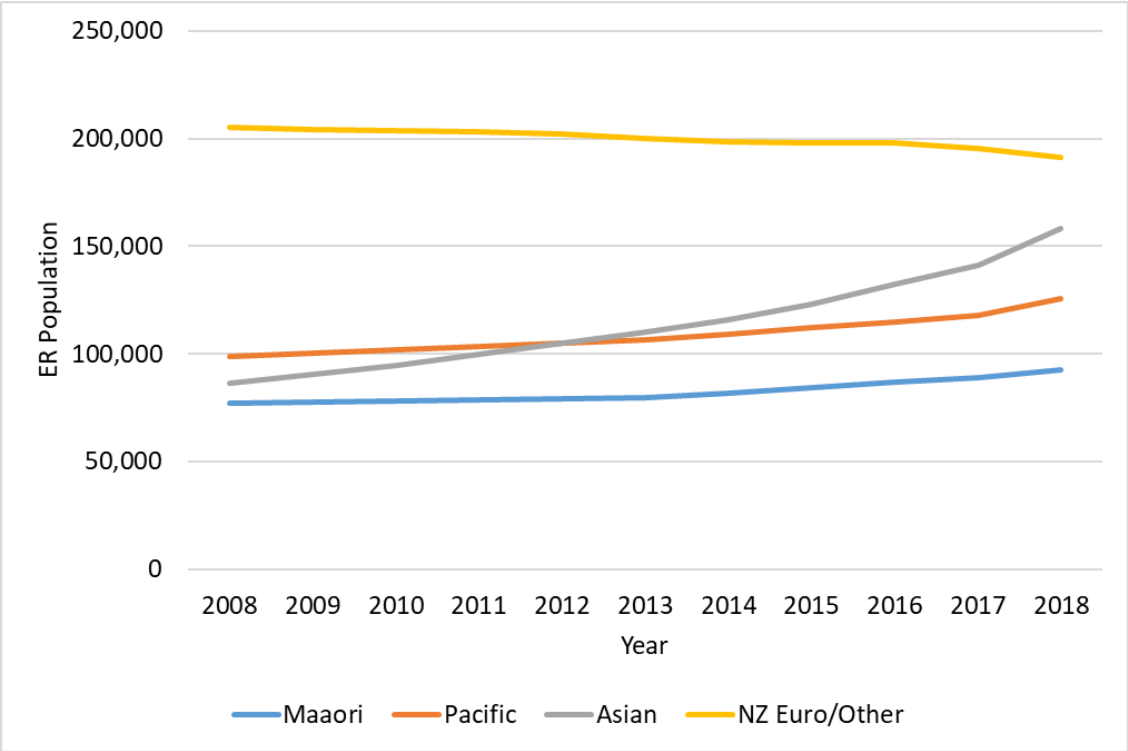
Figure 10 Estimated population of CM Health and NZ, percentage in age groups 2008-2018



Source: 2020 Stats NZ ER population update. Estimates produced by Statistics New Zealand according to assumptions specified by the Ministry of Health.

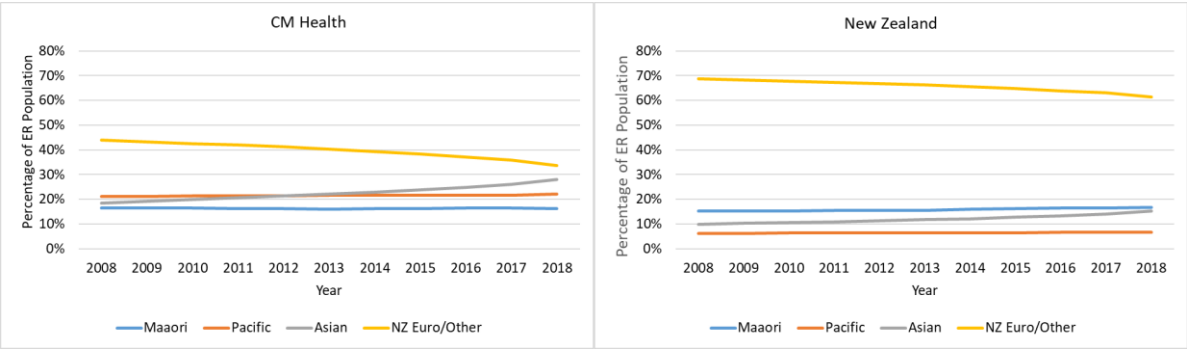
The decade 2008-2018 saw a substantial increase in the CM Health population who identify as an Asian ethnicity, and ongoing growth in the Pacific population. At the same time the NZ European/Other ethnic grouping actually reduced in size over that time (Figure 11). This means the CM Health population in 2018 was considerably more multi-ethnic than in 2008, and this change was much more marked in the population of CM Health than for the total New Zealand population (Figure 12).

Figure 11 Estimated population of CM Health by ethnicity 2008-2018



Source: 2020 Stats NZ ER population update. Estimates produced by Statistics New Zealand according to assumptions specified by the Ministry of Health.

Figure 12 Estimated population of CM Health and NZ, percentage by ethnicity 2008-2018



Source: 2020 Stats NZ ER population update. Estimates produced by Statistics New Zealand according to assumptions specified by the Ministry of Health.

Birthplace

Birthplace data were rated as high quality by the 2018 Census External Data Quality Panel.

New Zealand was the country of birth for 60% of the CM Health population (Table 13). In contrast, 73% of the total New Zealand population were born in NZ. Among the CM Health population, 98% of Maaori residents were born in NZ. This figure was lower for NZ European/Other (73%), Pacific peoples (58%), and Asian peoples (22%).

Table 13 Birthplace for the CM population in Census 2018 for prioritised ethnic groups

Ethnicity	Maaori	Pacific	Indian	Chinese	Other Asian	Total Asian	NZ Euro/Other	Total
NZ born	98%	58%	22%	24%	20%	22%	73%	60%

Source: Census 2018 UR population, Northern Region Health extract, Stats NZ

A Pacific Island country (13%) and an Asian country (16%) were the main overseas birthplaces for CM Health residents (data not shown). For people who identified with an Indian ethnicity, the most likely place of birth reported was an Asian country (41%) followed by a Pacific Island country (33%), and NZ (22%). A proportion of the Indian population living in CM identify as Fijian-Indian. For those of NZ Euro/Other ethnicities, 10% were born in the UK/Ireland, 10% in the Middle-East/Africa and 6% in Australia/Europe/US/Other places.

Years since arrival in New Zealand

Data on years since arrival in NZ were rated as moderate quality by the 2018 Census External Data Quality Panel.

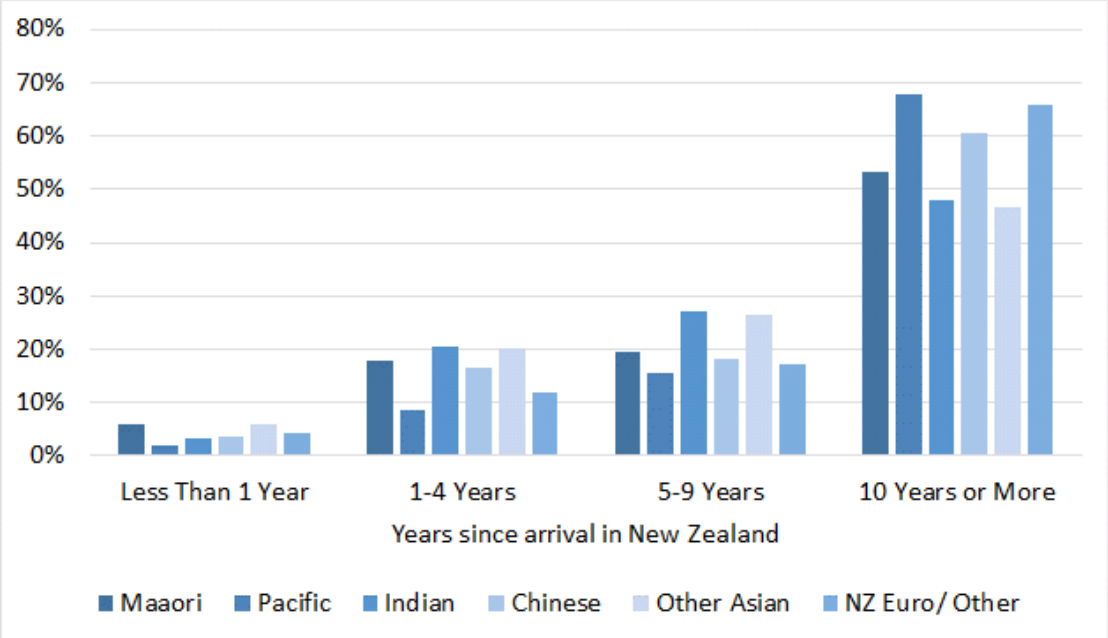
Among those who were born overseas, data were collected on the time since their arrival in NZ. Approximately 60% of those born overseas in CM Health had been living in NZ for 10 or more years at the time of the 2018 Census (Table 14 and Figure 13). Among overseas-born residents, 19% have been living in New Zealand for less than five years. Within the Asian population, a higher percentage of those identifying as Chinese (61%) had been living in NZ for 10 years or more, compared with people identifying as Indian (48%) and Other Asian groups (46%).

Table 14 Years since arrival in New Zealand (at the time of the 2018 Census) for the overseas born UR CM population by prioritised ethnicity

	Less than 1 Year	1-4 Years	5-9 Years	10 Years or More
Maaori	6%	18%	20%	53%
Pacific	2%	9%	15%	68%
Indian	3%	21%	27%	48%
Chinese	4%	17%	18%	61%
Other Asian	6%	20%	26%	46%
Total Asian	4%	19%	24%	51%
NZ Euro/ Other	4%	12%	17%	66%
Total	4%	15%	20%	59%

Source: Census 2018 UR population, Northern Region Health extract, Stats NZ

Figure 13 Years since arrival in New Zealand (at the time of the 2018 Census) for the CM Health overseas-born population by prioritised ethnicity



Source: Census 2018 UR population, Northern Region Health extract, Stats NZ

Languages spoken

The NZ Census asked respondents to answer which languages they are able to "have a conversation about a lot of everyday things".[30] Importantly, this question does not provide information on literacy, language confidence or the ability to have complex conversations, for example about health issues.

The quality and confidence in 2018 Census language data vary by language. English language data have been assessed as high quality, whereas Te Reo Maaori language data have been assessed as being of poor quality.[31] Data quality ranking for other languages is not available, but will be impacted by the English proficiency of the population and the census response rate for that population. Also, the analysis presented here is done using an 'ethnic' frame, but acknowledges that there is an imperfect connection between ethnicity and languages spoken – people may speak various languages but not identify with an 'associated' ethnicity and vice versa. People may also understand a language but not report speaking it with confidence.

For people without an individual response to the language question, responses from the 2013 Census were used (8.2% of NZ residents) when this was available. For the remainder of residents (8%), language was modelled based on languages spoken in the household and other demographic variables such as ethnicity, age and sex.[32] This has a greater impact on data quality for Maaori and Pacific peoples because of the lower response rates for these communities. Hence the analysis presented should be read as indicating the general patterns rather than placing too much reliance on the specific percentages.

Within CM Health, 22% of people who identified as Maaori aged 15 years and over were reported to be able to speak about everyday things in Te Reo Maaori. Among Maaori in CM Health and across New Zealand, there are higher proportions of people who speak Te Reo Maaori among older age groups (Table 15). Within CM Health, 42% of Maaori aged 65 years and older were reported to be able to speak about everyday things in Te Reo Maaori (Table 15).

Table 15 Te Reo Maaori speakers in CM Health and NZ, by age and Maaori ethnicity in the 2018 Census

Age group	CM Maaori	NZ Maaori
15-64	21%	22%
65 and over	42%	38%
Total 15 and over	22%	23%

Source: Customised extract, 2018 Census, Stats New Zealand

[30] Respondents can also choose "none or too young to talk"
[31] 2018 Census External Data Quality Panel (2020). *Final report of the 2018 Census External Data Quality Panel.* Retrieved from www.stats.govt.nz
[32] Stats NZ (2019). *Data sources, editing, and imputation in the 2018 Census*. Retrieved from www.stats.govt.nz .

The ability to have a conversation in English varies by ethnicity. Within CM Health, 96% of Maaori and 97% of NZ European/Other ethnicities were reported to have conversational English. However, conversational English was less common for Pacific (90%), Asian (84%) and MELAA (87%) ethnic groups (Table 16). Overall, 92% of the CM Health population were reported to have conversational English; this figure is slightly lower than the NZ national figure (95%).

Table 16 Percentage of English speakers by ethnic group

	Maaori	Pacific	Asian	MELAA	NZ Euro/ Other	Total*
CM Health	96%	90%	84%	87%	97%	92%
NZ population	96%	92%	85%	89%	98%	95%

Source: 2018 Census UR total response ethnicity, Stats New Zealand

* This is total population so includes a small percentage who are children too young to speak

Further language analysis by age for Asian and Pacific subgroups can be found in Appendix Two (page 69). Of note:

- A high proportion of those who identify with one or more of the Pacific and Asian populations in older age groups are reported to be able to speak their heritage language, an important part of the preservation of cultural values and identity (e.g. over 80% of Samoan, Chinese and Korean residents aged 45 years and older, and over 70% of those who are Tongan of that age group).
- However, those in older age groups were less likely to have conversational English: 73% of Samoan, 65% of Tongan and 69% of Indian residents aged 65 years and older were reported as having conversational English; only 40% of Chinese and 46% of Korean people of that age were reported as having conversational English.

Family size

Family type and household composition data were initially rated as very poor data quality data by the 2018 Census External Data Quality Panel. However, after a detailed assessment of households and families data, most family and household metrics were rated as of moderate quality[33]. The largest source of error in the household and family data is the people who are missing from households. People of Maaori and Pacific ethnicity are more likely to belong to fully missed households than people of other ethnicities, and are under-represented in household and family data as a result. This is important for analyses for the CM population.

In Stats NZ analysis and outputs

- a household consists of one person usually residing alone, or two or more people who usually reside together in a private dwelling. Households are classified according to the relationships between the people in the household. Household composition is based on how many and what type(s) of family nuclei are present in a household, and whether or not there are related or unrelated people present.
- a family (or family nucleus) is two or more people living in the same household who are either a couple, with or without children, or one parent and their children. A child in a family can be of any age.
- an extended family is a group of related people who usually reside together either:
    - as a family nucleus with one or more other related people, or
    - as two or more related family nuclei, with or without other related people.

Data presented here relate to family nuclei and are included because they are consistent with the patterns from the previous census data for the CM Health population on household size, but should be considered indicative. Household composition is described in the next section. Ethnicity is presented by prioritised ethnicity. Further information on household composition is given in the following section, and household crowding on page 50.

Within CM Health population, family size differs significantly by ethnicity (Table 17 and Figure 14). Forty percent of NZ European/Other families in CM Health consisted of two people, whereas for other prioritised ethnic groups less than 30% of families consisted of two people. Larger family size was more common among Maaori and Pacific peoples. At the time of the 2018 Census, 15% of Maaori and 27% of Pacific families in CM Health consisted of six or more people, compared with 3% for Asian and NZ European/Other groups.

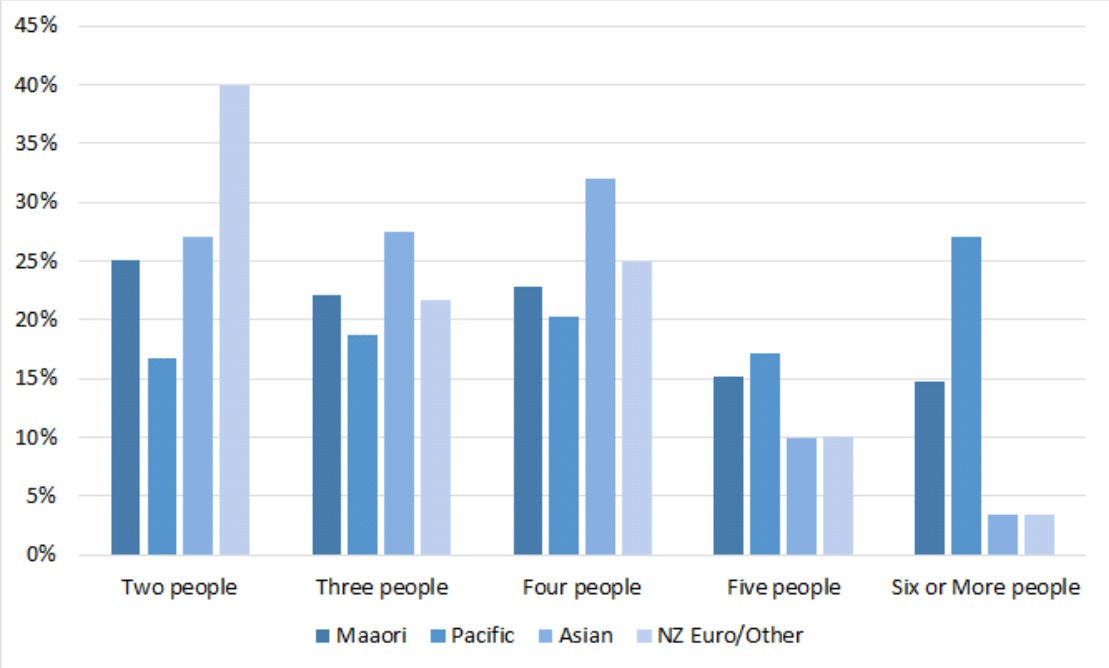
[33] Stats NZ (2020). *Families and households in the 2018 Census: Data sources, family coding, and data quality*. Retrieved from www.stats.govt.nz.

Table 17 Family size for the CM population in the 2018 Census by prioritised ethnicity

Ethnicity	Two people	Three people	Four people	Five people	Six or more people
Maaori	25%	22%	23%	15%	15%
Pacific	17%	19%	20%	17%	27%
Indian	26%	28%	34%	10%	3%
Chinese	32%	28%	29%	8%	2%
Other Asian	21%	25%	32%	14%	7%
(Total Asian)	27%	28%	32%	10%	3%
NZ Euro/Other	40%	22%	25%	10%	3%
Total	30%	23%	26%	12%	10%

Source: Census 2018 UR population, Northern Region Health extract, Stats NZ

Figure 14 Family size for the CM population in the 2018 Census by prioritised ethnicity, proportion of families



Source: Census 2018 UR population, Northern Region Health extract, Stats NZ

Household composition

A household is defined as "either one person who usually resides alone, or two or more people who usually reside together and share facilities (such as for eating and cooking, or a living area and bathroom and toilet) in a private dwelling".[34] Households are classified according to the relationships between the people in the household. Household composition is based on how

[34] Stats NZ (2019). *2018 Census data user guide.* Retrieved from www.stats.govt.nz .

many and what type(s) of family nuclei are present in a household, and whether or not there are related or unrelated people present[35].

As noted under the earlier section on Family Size, household data was initially ranked as very poor quality data by the 2018 Census External Data Quality Panel. However, after a detailed assessment of households and families' data, most family and household metrics were rated by Stats NZ as of moderate quality. The largest source of error in the household and family data is the people who are missing from households. People of Maaori and Pacific ethnicity are more likely to belong to fully missed households than people of other ethnicities, and are under-represented in household and family data as a result. Hence, even total population data for the CM Health population should be considered indicative. This data was not part of the customised extract for the Northern DHBs and so does not have prioritised ethnicity.

For the CM usually resident population in 2018, 76% of households contained one family. A further 14% of households contained two families, and 2% of households contained 3 or more families. Compared with national data, CM Health residents were more likely to live in households with two or more families (Table 18). This is consistent with the household crowding section below (page 46).

Table 18 Household composition for the CM population in the 2018 Census

	One-person household	One-family household*	Two-family household*	Three or more family household*	Other multi-person household
CM Health	4%	76%	14%	2%	3%
New Zealand population	8%	79%	7%	1%	5%

**With or without other people*[36]

Source: Census 2018 UR population, Stats NZ

Religion

Religious affiliation data were rated as high quality data by the 2018 Census External Data Quality Panel. Spirituality is an important aspect of health and wellbeing[37] and faith-based settings are a common place of engagement with communities for health promotion and for consultation regarding health service planning.

Forty-five percent of CM Health respondents identified with a Christian religion, while 37% of respondents identified with no religion (Table 19) (the latter compares with 48% of the total

[35] Stats NZ (2020). *Families and households in the 2018 Census: Data sources, family coding, and data quality*. Retrieved from www.stats.govt.nz.

[36] Household composition is based on how many and what type(s) of family nuclei are present in a household, and whether or not there are related or unrelated people present; this table describes the number of families but there may be other people living in the household not connected to any of the families in the household.

[37] Durie M (1998) Whaiora: Māori Health Development (2nd Edition ed). Auckland: Oxford University Press; WHOQOL-SRPB Group (2006) A cross-cultural study of spirituality, religion, and personal beliefs as components of quality of life. *Social Science & Medicine 62*(6):1486-1497.

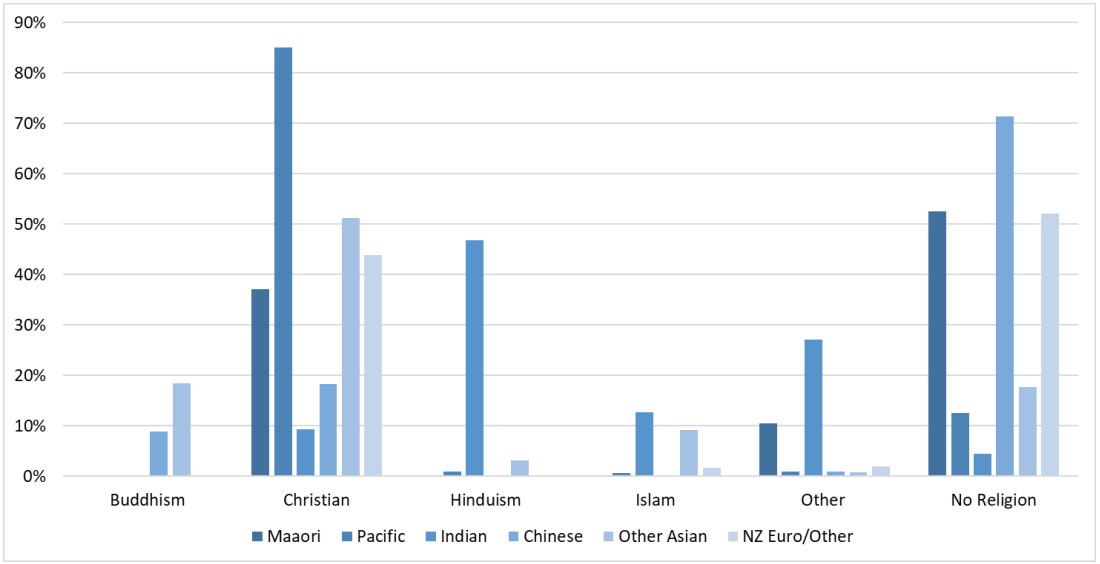
NZ population). These figures varied considerably across ethnicities (Table 19 and Figure 15). Among Pacific peoples, 85% identify with a Christian religion. For people who identify as Indian, almost half were reported to identify themselves as Hindu (46.8%), 27% with other religions and 12% as Muslim. Within CM Health, the Chinese community had the highest percentage of respondents identified as having no religion (71%).

Table 19 Religion/belief/philosophy identified for the CM population in the 2018 Census for prioritised ethnic groups

Ethnicity	Buddhism	Christian	Hinduism	Islam	Other	No Religion
Maaori	<1%	37%	<1%	<1%	10%	53%
Pacific	<1%	85%	1%	1%	1%	13%
Indian	<1%	9%	47%	13%	27%	4%
Chinese	9%	18%	<1%	<1%	1%	71%
Other Asian	18%	51%	3%	9%	1%	18%
Total Asian	7%	21%	23%	8%	14%	28%
NZ Euro/Other	<1%	44%	<1%	2%	2%	52%
Total	2%	45%	7%	3%	6%	37%

Source: Census 2018 UR population, Northern Region Health extract, Stats NZ

Figure 15 Religion identified for the CM population in the 2018 Census by prioritised ethnicity



Source: Census 2018 UR population, Northern Region Health extract, Stats NZ

Socioeconomic Determinants of Health

The factors that have the greatest influence on health and wellbeing are not healthcare services, but the wider environments in which we live. This includes the social, cultural and political environment. These factors shape our income, employment and occupation, education, housing, and our ability to participate and be included in society. Known as the socioeconomic determinants of health, they are key drivers for health inequities – the unfair and avoidable differences in health we see in Aotearoa New Zealand.

The following sections describe the distribution of key socioeconomic determinants of health for CM Health captured in the 2018 Census.

New Zealand Deprivation Index 2018

As noted earlier, NZDep2018 is based on nine variables from the 2018 Census. These variables relate to home internet access, receipt of welfare benefits, household income, employment, qualifications, home ownership, family structure, household crowding and housing quality. It is an important tool to highlight where socioeconomic deprivation is geographically concentrated and to analyse and monitor the ethnic inequities in relative socioeconomic deprivation.

All NZDep2018 analyses in this report are based on Statistical Area 1 (SA1) level data as this provides a more accurate picture compared with data aggregated to Statistical Area 2 (SA2) level (see page 19 for more information on SA1 and SA2). The information CM Health has on NZDep2018 comes from nationally released information[38], rather than the customised Northern Region health extract of 2018 Census data, and is based on total response ethnicity. Therefore, indicative population counts will differ to other analyses where prioritised ethnicity is used.

CM Health has a high proportion of residents living in areas of high socioeconomic deprivation; for example, compared with Auckland and Waitematā DHBs as in Table 20. Ten percent of the Waitematā DHB and 18% of the Auckland DHB population live in NZDep2018 deciles 9 and 10 / quintile 5. In contrast, 37% (rounded) of the CM Health population live in NZDep2018 deciles 9 and 10 / quintile 5 (Table 20, Table 21 and Figure 16). At the New Zealand average this figure would be 20%.

[38] University of Otago, Wellington (2018) *New Zealand Indexes of Deprivation, 2018; NZDep2018 Area Concordance File.* Accessed from: https://www.otago.ac.nz/wellington/departments/publichealth/research/hirp/otago020194.html

Table 20 Distribution of residents across NZDep2018 deciles for the three Auckland DHBs

	NZDep2018 Decile									
DHB	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Auckland	8%	10%	10%	11%	12%	12%	10%	9%	8%	10%
Counties Manukau	6%	8%	8%	8%	7%	8%	7%	10%	13%	23%
Waitematā	11%	14%	13%	13%	12%	10%	10%	8%	7%	3%

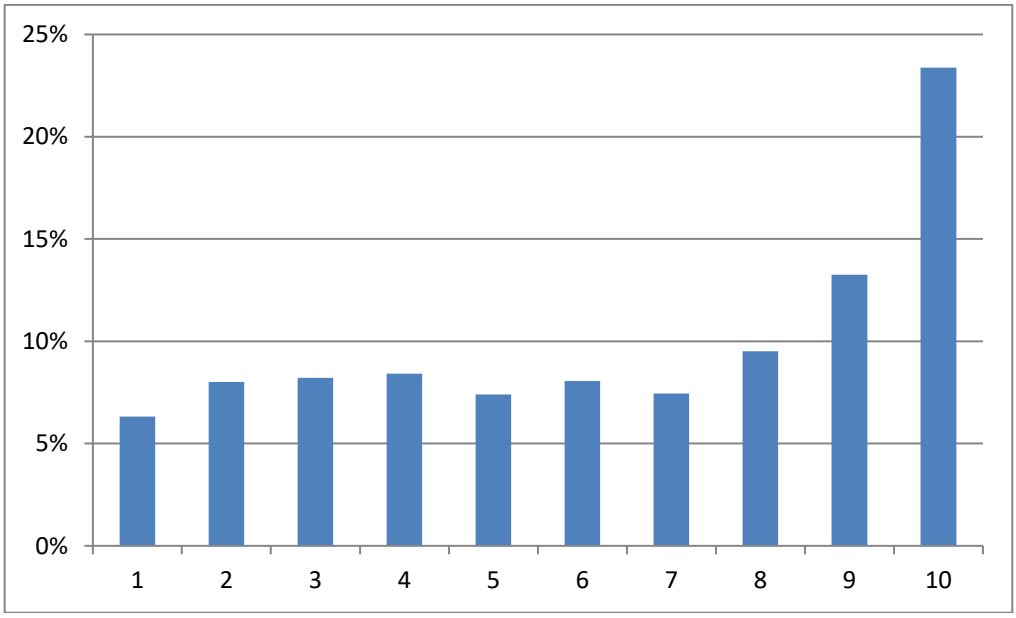
Source: University of Otago, Wellington (2018) *New Zealand Indexes of Deprivation, 2018; NZDep2018 Area Concordance File*; analysed by CM Health

Table 21 Distribution of residents across NZDep2018 quintiles for the three Auckland DHBs

	NZDep2018 Quintile				
DHB	**1**	**2**	**3**	**4**	**5**
Auckland	18%	21%	24%	19%	18%
Counties Manukau	14%	17%	15%	17%	37%
Waitematā	24%	26%	22%	18%	10%

Source: University of Otago, Wellington (2018) *New Zealand Indexes of Deprivation, 2018; NZDep2018 Area Concordance File*; analysed by CM Health

Figure 16 Percentage of CM Health residents living in NZDep2018 deciles, 2018



Source: University of Otago, Wellington (2018) *New Zealand Indexes of Deprivation, 2018; NZDep2018 Area Concordance File*; analysed by CM Health

Table 22 illustrates the indicative number of residents living in each NZDep2018 decile in 2018. Compared with the other DHBs, CM Health has a substantially higher number of residents living in deciles 9 and 10. Over 200,000 CM Health residents lived in deciles 9 and 10 in 2018. In comparison, approximately 59,000 Waitematā residents and 88,000 Auckland residents were living in deciles 9 and 10.

Table 22 Indicative number of residents[39] in 2018 across NZDep2018 deciles for Auckland, Counties Manukau and Waitematā DHBs

		Auckland	CM Health	Waitematā
NZDep 2018 Decile	**1**	40,400	35,900	65,600
	2	50,300	45,400	84,200
	3	49,300	46,600	81,100
	4	56,000	47,700	79,800
	5	59,900	41,900	71,500
	6	57,400	45,700	64,000
	7	48,000	42,200	60,300
	8	43,800	53,900	49,600
	9	40,500	75,200	41,800
	10	47,500	132,600	17,200

Source: University of Otago, Wellington (2018) *New Zealand Indexes of Deprivation, 2018; NZDep2018 Area Concordance File*, analysis applied to the 2018 ER population, from MoH 2020 projections, by CM Health

Within CM Health, there are stark ethnic inequities by NZDep2018 (Table 23 and Figure 17). Fifty-eight percent of Maaori and 74% of Pacific peoples in CM Health live in NZDep2018 deciles 9 and 10 / quintile 5. In contrast, 24% of Asian and 19% of NZ European/Other CM Health residents live in deciles 9 and 10 / quintile 5. (Percentages differ from adding the percentages for deciles 9 & 10 from the table because of rounding). An indication of the number of residents in each decile by total response ethnic groups is provided in Table 24.

[39] Figures are rounded to the nearest 100 residents

Table 23 Distribution of CM Health residents across NZDep2018 deciles by total response ethnicity

		Maaori	Pacific	Asian	MELAA	NZ Euro/ Other	Total CM Health
NZDep 2018 Decile	**1**	3%	1%	6%	6%	10%	6%
	2	4%	1%	9%	7%	12%	8%
	3	4%	2%	9%	10%	12%	8%
	4	4%	2%	11%	12%	11%	8%
	5	4%	2%	10%	9%	10%	7%
	6	6%	4%	10%	9%	10%	8%
	7	6%	5%	10%	8%	8%	7%
	8	10%	10%	12%	11%	8%	10%
	9	18%	20%	14%	14%	8%	13%
	10	41%	54%	11%	14%	10%	23%

Source: University of Otago, Wellington (2018) *New Zealand Indexes of Deprivation, 2018; NZDep2018 Area Concordance File*; analysed by CM Health

Table 24 Indicative number of CM Health residents[40] across NZDep2018 deciles by total response ethnicity, 2018

		Maaori	Pacific	Asian	NZ Euro/ Other	Total CM Health
NZDep 2018 Decile	**1**	2,500	1,000	9,600	15,900	35,800
	2	3,300	1,600	13,900	23,000	45,400
	3	3,900	1,900	14,300	23,300	46,500
	4	4,100	2,600	17,000	21,600	47,700
	5	3,900	2,600	15,100	18,400	41,900
	6	5,600	4,700	15,500	19,100	45,700
	7	5,900	6,300	15,500	14,600	42,200
	8	9,200	12,300	18,900	15,300	53,900
	9	16,500	24,700	21,500	16,400	75,100
	10	37,500	67,700	16,700	19,900	132,600

Source: As Table 23; applied to the 2018 ER population from MoH 2020 projections, by CM Health

Table 25 and Figure 17 illustrate the distribution of socioeconomic deprivation by age within CM Health district. Of note, the proportion of the population living in deciles 9 and 10 / quintile 5 is higher for younger age groups. For CM Health residents aged less than 15 years, 44% were living in deciles 9 and 10 / quintile 5 at the time of the 2018 Census. In comparison, 25% of the CM Health population 65 and older were living in deciles 9 and 10 / quintile 5. Poverty at any age can impact health outcomes. However, exposure to poverty at an early age is of particular concern because it can impact both child health outcomes and adult health and social outcomes.[41]

[40] Total response ethnicity means some people will be counted in more than one column. The MELAA grouping have been combined with the NZ European/Other grouping. Figures are rounded to the nearest 100 residents

[41] Roos LL, Wall-Wieler E, & Lee JB. (2019). Poverty and early childhood outcomes. *Pediatrics*, *143*(6).

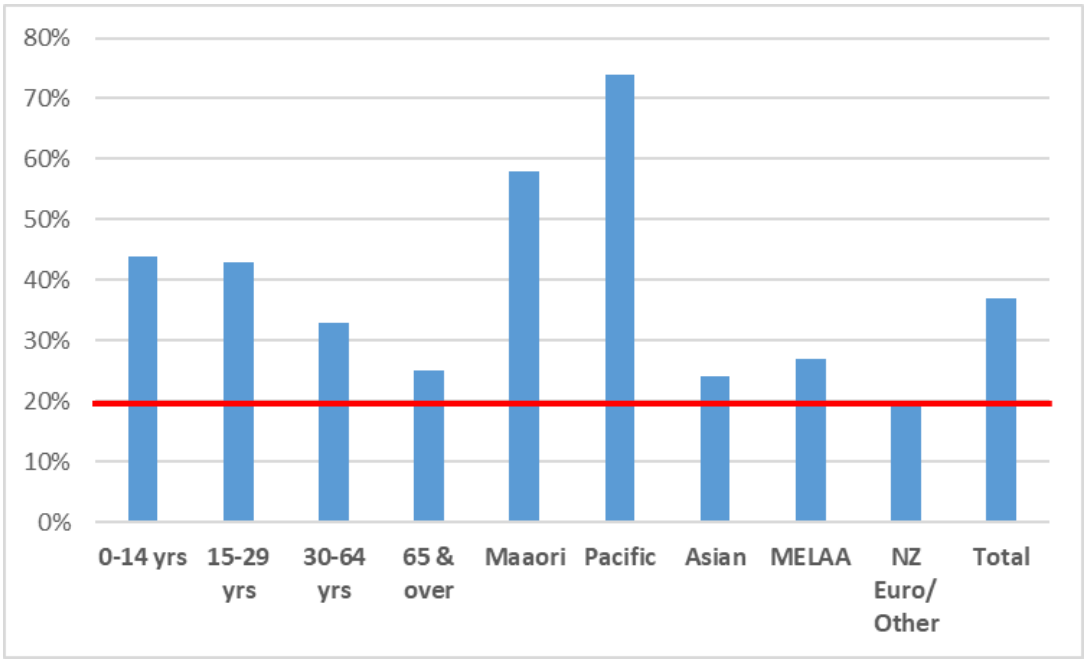
Table 25 Percentage of CM Health residents living in NZDep2018 deciles by age group

		0-14 yr	15 -29 yr	30-64 yr	65+ yr	Total
NZDep 2018 Decile	**1 least depr**	6%	5%	7%	7%	6%
	2	7%	6%	9%	10%	8%
	3	7%	7%	9%	11%	8%
	4	7%	7%	9%	10%	8%
	5	6%	7%	8%	9%	7%
	6	7%	8%	8%	10%	8%
	7	7%	8%	8%	8%	7%
	8	9%	10%	9%	9%	10%
	9	14%	15%	13%	11%	13%
	10 most depr	30%	28%	20%	14%	23%

Source: University of Otago, Wellington (2018) *New Zealand Indexes of Deprivation, 2018; NZDep2018 Area Concordance File*; analysed by CM Health

The figure below summarises the inequities in socioeconomic deprivation by ethnicity and age, as captured by the percentage of people living NZDep2018 deciles 9 and 10 / quintile 5, for the CM Health population (Figure 17). The red line indicates the 'line of equity' – 20% in NZDep2018 Deciles 9 and 10.

Figure 17 Percentage of CM Health residents living in NZDep2018 deciles 9 & 10 by age and ethnicity



Source: University of Otago, Wellington (2018) *New Zealand Indexes of Deprivation, 2018; NZDep2018 Area Concordance File*; analysed by CM Health

Housing

Housing plays in important role in health and wellbeing, and is linked to health inequities in Aotearoa New Zealand.[42] Housing impacts health in a range of ways and is linked to both physical and mental health outcomes. Poor housing quality, such as damp and cold homes, increases the risk of respiratory illness but also significantly impacts mental wellbeing and quality of life. High housing costs leave less money for other expenses such as heating, food, education, and access to health services.[43] Insecure tenure can impact on education and employment, and also have negative impacts on mental wellbeing.

Healthy housing is safe, warm and dry, connected, affordable, accessible and able to meet the needs of the whole household.[44]

Residential Mobility

In 2013 and previous censuses, there was a question asking a person's usual residence five years ago. This question was not included in the 2018 Census form, but instead, data was derived by linking 2018 Census respondents (usual residence in 2018) to their 2013 Census record (usual residence in 2013). Coding rules were applied to:

- respondents aged less than five year old, who were coded to 'not born five years ago'
- respondents who arrived in New Zealand fewer than five years ago, who were coded to 'overseas five years ago'.

Usual residence five years ago was ranked as poor quality data quality data by the 2018 Census External Data Quality Panel, because the 2013 census was the only source of data for this variable, with no admin data or imputation used to replace missing responses. With 14.6% of people having no information available for 2013, it was automatically categorised as poor quality. However, the quality of the matched responses is deemed to be sound and comparable with 2013 and 2006 censuses[45]. The caveats for using this variable are that at small geographies, there will be variability in the percentage of missing data for a given area, so some small geography areas will have poorer quality data than the overall quality rating, and the percentage of the population with no information (unable to match to 2013 Census data) may differ between population subgroups from that for the overall subject population. Hence the data presented here is considered indicative only.

However, for the Counties Manukau population previous Census data has demonstrated high levels of residential mobility and the 2018 Census data described here are consistent with previous patterns[46].

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[42] New Zealand College of Public Health Medicine (2013) *Housing. Position statement.* Wellington: New Zealand College of Public Health Medicine

[43] National Health Committee (1998) *The Social, Cultural and Economic Determinants of Health in New Zealand: Action to Improve Health.* Wellington: National Health Committee

[44] New Zealand College of Public Health Medicine (2013) *Housing. Position statement*. Wellington: New Zealand College of Public Health Medicine

[45] Stats NZ, DataInfo+: Usual residence five years ago (information about this variable and its quality). Accessed from http://datainfoplus.stats.govt.nz/Item/nz.govt.stats/58180123-b856-4fed-9b91-b006d16e43b8

[46] In 2013, 49% of those aged 5 years and over were not living at the same address they were at five years previously.

For CM Health residents, only 39% of CM Health residents were living in the same house on census night as they were five years before the census (Table 26). These figures are comparable to NZ data (79% and 40% respectively).

Importantly, these data do not indicate the frequency of relocating for those people who did move residences, or the reasons for moving. Data from the Growing Up in New Zealand longitudinal study, 'Now we are Eight' 2020 report, indicate that 40% of children had moved house at least once in the prior two years. Most of these children had moved house only one time, but one third of this group had moved two or more times in this two-year timeframe.[47]

Table 26 Residential mobility for CM Health residents at five years before the 2018 Census

	Same as usual residence	Another residence (in New Zealand)	Not born five years ago	Overseas
Residence five years before census	39%	43%	9%	9%

Source: Census 2018 UR population, Stats NZ

Housing Tenure

Data on housing tenure was ranked as moderate quality by the 2018 Census External Data Quality Panel.

Of all residents aged 25 years and over, 47% of CM Health residents did not own their own home or hold it in a family trust in 2018. In comparison 39% of NZ residents aged 25 years and older did not own their own home or hold it in a family trust. The percent of people living in homes they did not own was higher for Maaori (68%) and Pacific peoples (73%) in the CM Health district. In comparison, 34% of people who identified as NZ European/Other and were aged 25 years and older did not own their home (Table 27 and Figure 18).

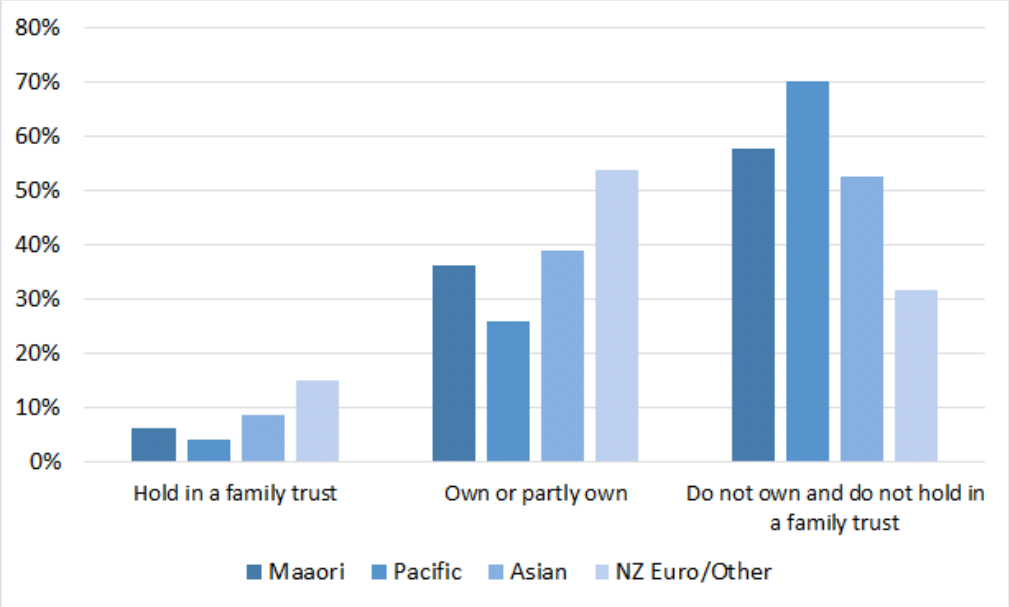
[47] Morton SMB, Walker CG, Gerritsen S, Smith A, Cha J et al. (2020) *Growing Up in New Zealand: A longitudinal study of New Zealand children and their families. Now We Are Eight.* Auckland: Growing Up in New Zealand.

Table 27 Housing tenure for CM Health residents aged 25 years and over in 2018 by prioritised ethnicity

Ethnicity	Hold in a family trust	Own or partly own	Do not own and do not hold in a family trust
Maaori	4%	28%	68%
Pacific	3%	24%	73%
Indian	8%	43%	49%
Chinese	12%	49%	39%
Other Asian	7%	38%	55%
(Total Asian)	9%	45%	46%
NZ Euro/Other	15%	51%	34%
Total	**10%**	**43%**	**47%**

Source: Census 2018 UR population, Northern Region Health extract, Stats NZ

Figure 18 Housing tenure for CM Health residents aged 25 years and over in 2018 by prioritised ethnicity



Source: Census 2018 UR population, Northern Region Health extract, Stats NZ

At a national level, while there has been little change since 2013, there has been a decline from the 1990s in the proportion of households living in owner-occupied homes throughout NZ. This did not occur uniformly across the population, with declines at a faster rate for Maaori, and Pacific peoples.

Household crowding

Household crowding is calculated by using, and linking data of variable quality, including family size and household composition which has been rated as very poor data quality data by the 2018 Census External Data Quality Panel. However, indicative data has been produced by Stats NZ as below, and the pattern is similar to the previous Census for the CM Health population.

Crowding analysis of census data by Stats NZ is done using the Canadian National Occupancy Standard (CNOS). The household is defined as crowded if one or more extra bedrooms are needed relative to the size of the household, based on the criteria of the CNOS. [48]

The following analysis of crowding is presented by people rather than households, as this allows reporting by ethnicity. Crowding data are presented as 'not crowded' (no spare rooms, one or more spare rooms), 'crowded' (one room required), and severely crowded (two or more rooms required).

Using the CNOS, 22% of Counties Manukau residents were living in a crowded or severely crowded household in 2018. This figure was much higher for Maaori (32%) and Pacific peoples (48%) than for those in Asian groups (19%), and NZ European/Other groups (5%) (Table 28 and Figure 19). The overcrowding rate for CM Health residents is twice that of the NZ average (10.8%) – a rate largely static since the turn of the century.[49]

Table 28 Household crowding for CM Health residents in 2018 by prioritised ethnicity

Ethnicity	Not crowded	Crowded	Severely crowded
Maaori	68%	18%	14%
Pacific	52%	23%	25%
Indian	77%	14%	9%
Chinese	89%	8%	4%
Other Asian	76%	15%	9%
Total Asian	81%	12%	7%
NZ Euro/ Other	95%	4%	1%
Total	78%	12%	10%

Source: Census 2018 UR population, Northern Region Health extract, Stats NZ

Translated to the ER population, at the time of the 2018 Census, approximately 86,000 CM Health residents lived in crowded homes and a further 51,000 residents lived in severely crowded homes (Table 29).

[48] The criteria for crowding under the Canadian National Occupancy Standard: no more than two people sharing a bedroom, children aged less than 5 years of either gender may share a bedroom but children between 5 and 18 should have separate bedrooms if they are not the same gender. Couples and people 18 and over should have their own bedroom.

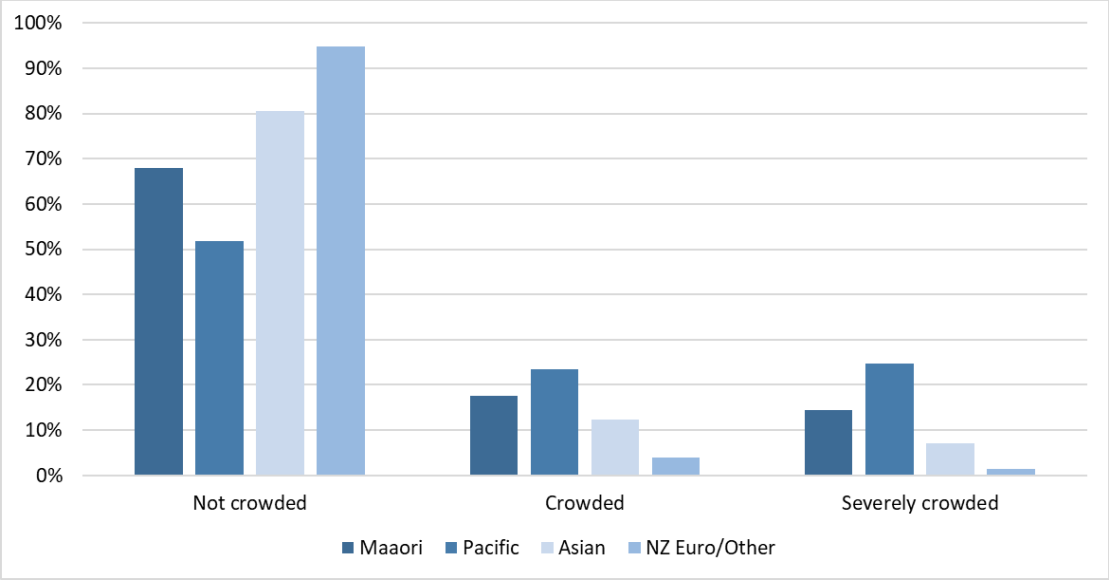
[49] Stats NZ (2020). *Housing in Aotearoa: 2020*. Retrieved from www.stats.govt.nz

Table 29 Indicative number of CM Health residents[50] living in crowded homes in 2018 by prioritised ethnicity

Ethnicity	Not crowded	Crowded	Severely crowded	Total
Maaori	62,800	16,200	13,400	92,400
Pacific	65,100	29,300	31,100	125,500
Asian	121,900	22,500	13,700	158,000
NZ Euro/Other	169,200	14,800	7,100	191,200
Total	429,800	85,900	51,100	566,800

Source: Census 2018 UR population, Northern Region Health extract, Stats NZ; applied to the 2018 ER population, from MoH 2020 projections, by CM Health

Figure 19 Household crowding for CM Health residents in 2018 by prioritised ethnicity



Source: Census 2018 ER population, Northern Region Health extract, Stats NZ

Children were more likely to be living in a crowded household compared with adults in CM Health (Table 30). At the time of the 2018 Census, 29% of children less than 15 years old lived in a crowded or severely crowded home. In contrast, 9% of CM Health residents over 65 years lived in a crowded or severely crowded home. Given the associations between infectious and infection-related conditions, such as respiratory and skin infections and rheumatic fever, and household crowding, these data highlight the critical and urgent need to address household crowding for the wellbeing of children in Counties Manukau. Further analysis of household crowding for children, by ethnicity, is presented in Appendix Three, page 73).

[50] Figures are rounded to the nearest 100 residents

Table 30 Household crowding for CM Health residents in 2018 by age groups

Age group	Not crowded	Crowded	Severely crowded
0 - 14	71%	17%	13%
15 to 24	66%	16%	16%
25-64	82%	11%	8%
65+	91%	5%	4%
Total	78%	12%	10%

Source: Census 2018 UR population, Northern Region Health extract, Stats NZ

Housing quality

Data on housing quality were deemed as moderate quality by the 2018 Census External Data Quality Panel.

Within CM Health region, 5% of the population lived in homes described as always damp. A further 21% lived in homes described as sometimes damp (Table 31). The proportion of people in CM Health living in homes described as always or sometimes damp was slightly higher compared with the proportion of people who reported this nationally.

Table 31 Housing dampness for the CM Health and NZ population[51] in 2018

	Always damp	Sometimes damp	Not damp
Counties Manukau Health	5%	21%	74%
NZ population	3%	19%	78%

Source: Census 2018 UR population, Stats NZ

National analysis carried out by Stats NZ shows dampness and mould to be a much larger problem for those renting. Self-reported housing problems in the General Social Survey 2018 found that housing that was not owner-occupied was more likely to be often or always cold, always damp, to have mould, and to be in need of major repairs[52]. 2018 Census data found that living in homes affected by dampness and mould particularly affects Maaori and Pacific people – overall they are twice as likely to live in homes affected by dampness or mould than other ethnic groups.

> "Over 2 in 5 Māori and Pacific peoples lived in damp housing (40.3 percent and 45.9 percent, respectively), compared with 21.3 percent of people of European ethnicity, and 22.5 percent of people of Asian ethnicity"[53]

[51] Analysed by total dwellings stated. This is likely an undercount of the proportion of homes that are damp, due to differential response rates for the 2018 Census.

[52] Stats NZ (2020). *Housing in Aotearoa: 2020*. Retrieved from www.stats.govt.nz

[53] Stats NZ (2020). *Housing in Aotearoa: 2020*. Retrieved from www.stats.govt.nz

Home heating

Data on home heating were rated as moderate quality by the 2018 Census External Data Quality Panel.

Table 32 indicates whether CM Health residents heat their homes. Overall, 11% of all residents were reported as using no fuels to heat their homes. This varied considerably by ethnicity, and was highest among Pacific peoples. Over one quarter (28%) of Pacific peoples in CM Health were reported as using no fuels to heat their homes. This may be because their home does not require heating, they do not have a method of heating their homes or they cannot afford to heat their homes. Other available data suggest that it is unlikely that this percentage of Pacific families lived in homes that did not require active heating – around 40% of Pacific in the 2018 General Social Survey (GSS) said their home was always or often cold, compared with 21% overall[54].

Table 32 Home heating among CM Health residents in 2018 by prioritised ethnicity

Ethnicity	No fuels used in this dwelling for heating
Maaori	13%
Pacific	28%
Indian	8%
Chinese	12%
Other Asian	9%
Total Asian	10%
NZ Euro/Other	4%
Total	11%

Source: Census 2018 ER population, Northern Region Health extract, Stats NZ

[54] Stats NZ (2020). *Housing in Aotearoa: 2020*. Retrieved from www.stats.govt.nz

Income

Income is an important modifiable determinant of health and is strongly related to health and well-being. A low income is associated with a range of poorer health outcomes via a range of mechanisms. These mechanisms include the impact of income stress and mental wellbeing, housing access, quality and location, food and nutrition availability and quality, and the affordability of healthcare.

Personal Income

Data on personal income were rated high quality by the 2018 Census External Data Quality Panel. Personal income recorded in the census is the income from all sources. It does not take into account employment status, the source of income (see next section) or existing wealth or debt. These data are not from the customised Northern Region Health extract, and ethnicity is total response.

Low incomes are more common in CM Health region compared to the NZ population. In New Zealand 35% of people 15 years and older have an income equal to or less than $30,000 per annum. In comparison, just under half (49%) of the CM Health population aged 15 years and over (note this does include young people still at school) had a personal income of $30,000 or less per year (Table 33). This equates to an estimated 202,000 residents aged 15 years and older in the CM Health population in 2018 (data not shown) with an income of < $30,000 per year.

There are ethnic inequities in personal income within CM Health. Half or more of Maaori, Pacific, Asian and MELAA people had an income of $30,000 or less per year. In contrast, 43% of European groups reported an income of $30,000 or less per year (Table 33 & Figure 20).

Table 33 Personal income, CM residents aged 15 years and over in 2018 by total response ethnicity

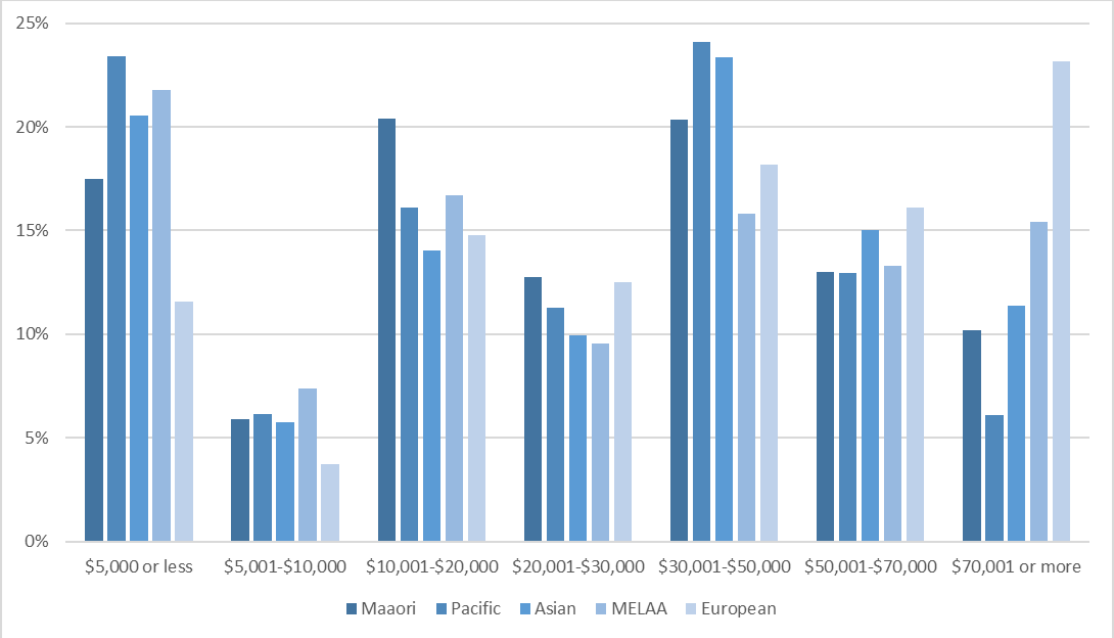
Total response ethnicity	$5,000 or less	$5,001-$10,000	$10,001-$20,000	$20,001-$30,000	$30,001-$50,000	$50,001-$70,000	$70,001 or more
Maaori	17%	6%	20%	13%	20%	13%	10%
Pacific	23%	6%	16%	11%	24%	13%	6%
Asian	21%	6%	14%	10%	23%	15%	11%
MELAA	22%	7%	17%	10%	16%	13%	15%
European	12%	4%	15%	13%	18%	16%	23%
Total stated*	17%	5%	16%	12%	21%	15%	15%

Source: Census 2018 UR population, Stats NZ
*Total response ethnicity so ethnic groups can't be combined; small numbers in the 'Other ethnicities' group are not shown

Overall, 15% of CM Health residents aged 15 years and over had an income over $70,000 per annum. National data, indicate that 17% of the NZ population aged 15 years and over have an income of greater than or equal to $70,000.[55] Compared with other ethnic groups, people in the European category were considerably more likely to earn over $70,000 per annum.

[55] Stats NZ. NZ Stat table viewer. http://nzdotstat.stats.govt.nz

Figure 20 Personal income, CM residents aged 15 years and over in 2018 by total response ethnicity



Source: Census 2018 UR population, Stats NZ

Income Source

Personal income source data were rated high quality by the 2018 Census External Data Quality Panel. These data are not from the customised Northern Region Health extract; therefore, analysis by prioritised ethnicity is not available.

Respondents can state more than one income source; therefore, the totals do not add to 100%. Respondents are also asked to report all sources of income in the 12 months prior to the census. As with total personal income, these data refer to all residents aged 15 years and older, and therefore includes people at school or in further education.

At the time of the 2018 Census, 9% of CM Health residents aged 15 years and older reported no income source in the 12 months before the census (Table 34). Wages, salary or income from one's own business was the most common source of income (73%) for CM Health residents. Fifteen percent of CM Health residents received a government benefit (excluding pensions or student allowances), slightly higher than the national figure of 13%.

Table 34 Sources of income in the 12 months prior to the 2018 Census for the CM population aged 15 years and over

	No income	Wages, salary or self employed	Invest-ments	ACC or other accident insurer	Pension[56]	Student allowance	Other benefit type	Other[57]
CM Health	9%	73%	11%	1%	14%	2%	15%	1%
Total NZ	6%	75%	17%	2%	20%	2%	13%	2%

Source: Census 2018 UR population, Stats NZ

The jobseeker support allowance (7%) is the most common source of income for people in the 'Other benefit type' category (Table 34 and Table 35). The proportion of people who report receiving jobseeker, sole parent, supported living and other types of government benefits was similar or the same between CM Health residents and national figures.

Table 35 Government benefit sources[58] of income in the 12 months prior to the 2018 Census for the CM population aged 15 years and over

	Jobseeker Support	Sole Parent Support	Supported Living Payment	Other e.g. income support, war pensions or paid parental leave
CM Health	7%	2%	2%	4%
Total NZ	6%	2%	2%	4%

Source: Census 2018, Stats NZ

[56] This includes NZ Superannuation, veterans pension or other overseas pensions
[57] This includes financial support from non household members
[58] Excluding NZ Superannuation, veteran pensions and student allowances.

Workforce status

Work and labour force status was rated as moderate quality data by the 2018 Census External Data Quality Panel. These data are not from the customised Northern Region Health extract, and the ethnicity is total response.

Employment is linked to health outcomes through a range of mechanisms. Employment plays a key role in facilitating social connection, participation and is important for many of us for our identity. Paid employment is a contributor to adequate income, and is associated with a range of protective or risk factors, depending on the role and industry.

In the New Zealand census work status for a person aged 15 years and over refers to whether someone is in paid employment, unemployed or not in the labour force. 'Employment' refers to paid work. 'Unemployed' refers to working age people, who are available to work and actively seeking work. 'Not in the labour force' refers to anyone who is not employed and is not unemployed as per the previous definitions. There are a range of reasons why a person may not be in the labour force. This includes people who are:

- in education (e.g. school, university, apprenticeships or trade courses)
- retired
- occupied with personal or family responsibilities (e.g. unpaid housework and childcare)
- unable to work due to disabilities
- temporarily unavailable for work in the survey reference week
- not seeking work.

A third (31%) of CM residents aged 15 years and over were not in the labour force at the time of the 2018 Census (this includes those aged 15 years and over and still at school or in training). The proportion of people not in the labour force was similar across ethnic groups, except the MELAA group at 37% (Table 36). A further 50% were employed full time, and between 11 and 14% of people were in part time employment.

Table 36 Workforce status for the CM population aged 15 years and over in 2018 by total response ethnicity

Ethnic group	Not in the labour force	Unemployed	Employed part-time	Employed full-time
Maaori	31%	9%	12%	48%
Pacific	33%	7%	11%	49%
Asian	31%	4%	13%	52%
MELAA	37%	6%	13%	45%
NZ Euro/Other	30%	3%	14%	53%
Total people stated*	31%	5%	12%	51%

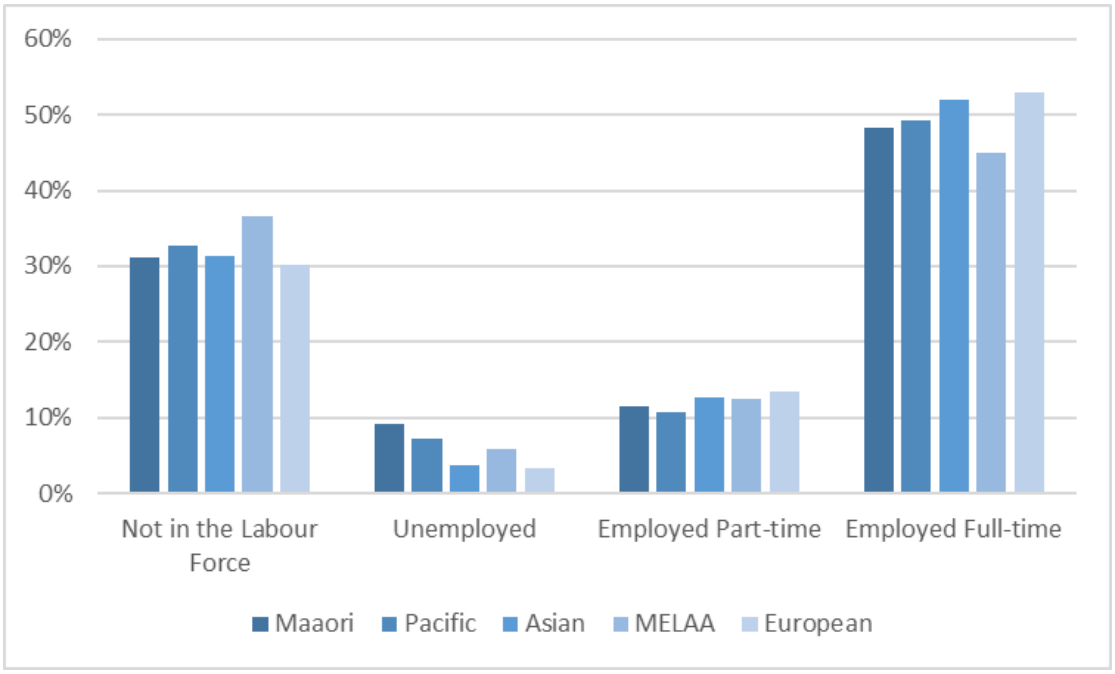
Source: Census 2018 UR population, Stats NZ

*Total response ethnicity so ethnic groups can't be combined; small numbers in the 'Other ethnicities' group are not shown

Five percent of CM Health residents were unemployed at the time of the 2018 Census. Maaori, Pacific peoples and those in MELAA groups were disproportionately impacted by unemployment in the CM Health region. At the time of the 2018 Census 9% of Maaori, 7% of Pacific people and 6% in MELAA groups in CM Health were unemployed, compared with 3% and 4% for European and Asian populations (Table 36 & Figure 21).

Unemployment figures for the rest of NZ were very similar. The overall unemployment figure for NZ was 4% in 2018, compared with 5% in the CM Health region. Across NZ, the percent of people unemployed by ethnicity was: Maaori 9%, Pacific 7%, MELAA 6%, Asian 4%, and European 3%.

Figure 21 Workforce status for the CM population aged 15 years and over in 2018 by total response ethnicity



Source: Census 2018 UR population, Stats NZ

Education

Education has significant impacts on health outcomes. Education is an important factor in determining people's social and economic position, occupation, literacy and one's ability to navigate the health system.[59]

Census data on academic achievement usually describes the proportion of the population aged 15 years and over who report attaining a particular level of education. That means these figures include young people who are still at school or in training. This is particularly important when interpreting ethnicity data, given that Maaori and Pacific populations have a younger population and therefore a greater proportion of people who will still be at school or in education gaining formal qualifications.

Additionally, these data must be viewed with caution given the 2018 Census External Data Quality Panel graded education data from the 2018 Census as moderate/poor quality[60]; the patterns for the CM Health population are consistent with previous census data although with higher percentages with post-school qualifications.

Twenty percent of all CM Health respondents aged 15 years and over, were reported as having no formal qualification (Table 37). This is slightly higher than the national figure of 17%.[61] A school level qualification was the highest level of achievement for 32% of the CM Health population. A further 27% of the CM Health population aged 15 years and older held a post-school qualification (excluding university) and 21% of CM Health residents 15 years and older held a qualification at level 7 or Bachelor degree level or above.

Table 37 Highest level of academic qualification for the CM population aged 15 years and over in 2018 by prioritised ethnicity

Ethnicity	No qualification	School	Post school (excluding university)	L7/Bachelor degree or above
Maaori	29%	27%	35%	9%
Pacific	27%	35%	29%	9%
Indian	10%	31%	25%	34%
Chinese	15%	35%	13%	37%
Other Asian	15%	34%	15%	36%
(Total Asian)	13%	33%	19%	35%
NZ Euro/ Other	18%	33%	28%	21%
Total	20%	32%	27%	21%

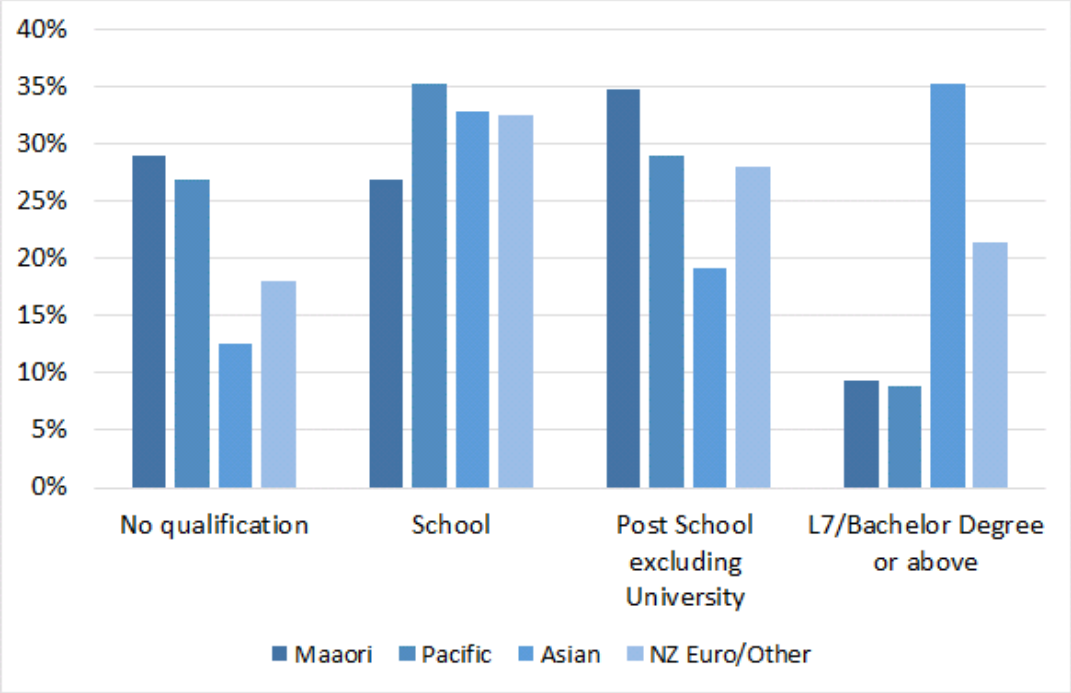
Source: Census 2018 UR population, Northern Region Health extract, Stats NZ

[59] Cutler DM, & Lleras-Muney A. (2006). *Education and health: evaluating theories and evidence* (No. w12352). National Bureau of Economic Research.
[60] 2018 Census External Data Quality Panel (2020). *Final report of the 2018 Census External Data Quality Panel.* Retrieved from www.stats.govt.nz
[61] Stats NZ. NZ Stat table viewer. http://nzdotstat.stats.govt.nz

Maaori and Pacific people were less likely to have formal qualifications compared with other ethnic groups. Twenty nine percent of Maaori and 27% of Pacific peoples aged 15 years and older were reported as having no formal academic qualifications (Table 37 and Figure 22). In comparison, 13% of Asian and 18% of NZ European/Other residents aged 15 years and older held no formal academic qualifications.

In the CM Health region, 21% of the population aged 15 years and above have a L7 or Bachelor degree, or above. Among CM Health residents, the highest levels of Bachelors/Level 7 qualifications or above, was reported amongst Asian residents (35%). Maaori and Pacific peoples were less likely to hold a Bachelors/Level 7 qualification or above (9% and 9% respectively) compared with Asian and NZ European/Other ethnic groups.

Figure 22 Highest level of academic qualification for the CM population aged 15 years and over in the 2018 Census by prioritised ethnicity



Source: Census 2018 UR population, Northern Region Health extract, Stats NZ

Transport

Household vehicle data were rated as moderate quality data by the 2018 Census External Data Quality Panel.

The choices that are made by society about transport have significant impacts on the transport decisions of people in communities, and health and wellbeing outcomes.[62] Transport systems and infrastructure impact health through multiple mechanisms including, trauma and injury rates, air pollution and greenhouse gas emissions, community connectedness, and rates of physical activity. Public and active transport options are beneficial for halting climate change and have co-benefits for health, such as increasing physical activity.[63]

Household vehicles

Across the CM Health region, 3% of residents were reported as having no access to a motor vehicle. In comparison, 6% of NZ households did not have access to a vehicle.[64] When applied to the estimated resident population for 2018, there are estimated 17,000 residents in Counties Manukau without access to a vehicle in their household. This is likely to be less that that reported in 2013 (~24,000 people), though noting the differences in methodology across the censuses.

Access to a vehicle varies by ethnicity in CM Health region. Maaori and Pacific residents were less likely to have access to a vehicle (7% and 5% respectively - Table 38).

Table 38 No motor vehicle in the home for CM Health residents in 2018 by prioritised ethnicity

Ethnicity	Maaori	Pacific	Indian	Chinese	Other Asian	*(Total Asian)*	NZ Euro/ Other	Total
No motor vehicle	7%	5%	1%	3%	2%	2%	2%	3%
Estimated ER population	6,390	4,220				2,860	4,550	18,240

Source: Census 2018 UR population, Northern Region Health extract, Stats NZ

Travel to Work

Travel to work data were rated as poor quality by the 2018 Census External Data Quality Panel. However, they are provided here as a comparison for travel to education (next section).

At the time of the 2018 Census, the majority (83%) of employed CM usual residents aged 15 years and over travelled to work in a vehicle on Census day (either as a driver or passenger and either private or company owned) (Table 39).

[62] New Zealand College of Public Health Medicine. *Policy statement on Transport*. Wellington: New Zealand College of Public Health Medicine, 2018. Available at https://www.nzcphm.org.nz/policy-publications
[63]New Zealand College of Public Health Medicine. *Policy statement on Climate Change*. Wellington: New Zealand College of Public Health Medicine, 2013. Available at http://www.nzcphm.org.nz/policy-publications
[64] Stats NZ. NZ Stat table viewer. http://nzdotstat.stats.govt.nz

Eight percent of CM residents worked from home, or did not travel to work on the day of the census. A further 6% of residents travelled to work by public transport (bus, ferry or train). One percent of residents used other means of transport to get to work (e.g. scooter). Active transport contributed only a small proportion of trips to work. Two percent of the CM UR population reported walking or jogging to work and less than 1% of residents (930 people) biked to work on the day of the 2018 Census. This general pattern has changed little over the past two censuses.

Table 39 Means of travel to work for employed CM Health residents aged 15 years and over in 2018

Work at home/did not travel to work on Census day	Walk or jog	Bicycle	Passenger or driver in vehicle	Public transport	Other
8%	2%	0.4%	83%	6%	1%

Source: Census 2018 UR population, Stats NZ

Travel to education

Travel to education data were rated as moderate quality by the 2018 Census External Data Quality Panel. In this section education refers to all education types, including early childhood education, primary and secondary school, tertiary education and trade training. Considerably higher percentages travelled by public transport, walking or jogging to education than travelled by those means to work (Table 39 and Table 40).

On the day of the 2018 Census, the majority (56%) of CM Health residents in education or training travelled to their education facility in a vehicle as either the driver or a passenger (Table 40), slightly higher than the NZ average of 50%. Eighteen percent of people in education travelled to their education facility by public transport (school bus, public bus, ferry or train). Twenty percent of people walked or jogged to education, and 1% of people cycled. A further 1% of people used other means of transport, such as a scooter. The number of children using active transport to get to school has been gradually dropping over the past ten years.[65]

Table 40 Means of travel to education for CM Health residents in 2018

Studied at home	Walk or jog	Bicycle	Passenger or driver in vehicle	Public transport	Other
3%	20%	1%	56%	18%	1%

Source: Census 2018 UR population, Stats NZ

[65] Environmental Health Indicators, Massey University. Webpage viewed 10 May 2021. Main data from NZ Health Survey. www.ehinz.ac.nz/indicators/transport/active-transport-to-and-from-school/

Telecommunications access

Telecommunication access data was rated as moderate quality by the 2018 Census External Data Quality Panel.

Access to telecommunications is increasingly relevant to health outcomes. Telecommunications including phone and internet access are now considered a normal and expected part of connection and participation in society. They are also necessary for accessing information and education and increasingly for accessing telehealth services.

The 2018 Census asked respondents about access to telecommunications, including mobile phones, telephones and the internet. Importantly, the interpretation of these questions is likely to be different for different residents. For example, does the "telephone" option include mobile phones? Does "internet access" include access via a mobile phone? Additionally, a mobile phone does not necessarily indicate a smart phone. Also, the census question about telecommunication access is asked at the level of the dwelling and applied to individuals in the household. This means not every person in the household will necessarily use, for example, the internet but that internet access is present in the dwelling.

The 2018 Census data indicate that approximately 1% of people in CM Health region had no access to telecommunications at home (Table 41 and Figure 23). The proportion of people in CM Health region without any access to telecommunications was slightly higher for Maaori, Pacific and Indian people (2%).

Table 41 Access to telecommunications at home, CM Health residents, 2018 by prioritised ethnicity

Ethnicity	Access to a mobile phone	Access to a telephone	Access to the internet	No access to telecommunications
Maaori	94%	48%	83%	2%
Pacific	93%	58%	81%	2%
Indian	92%	71%	94%	2%
Chinese	93%	70%	94%	1%
Other Asian	94%	66%	95%	1%
(Total Asian)	93%	70%	94%	1%
NZ Euro/Other	96%	68%	93%	0%
Total	94%	64%	90%	1%

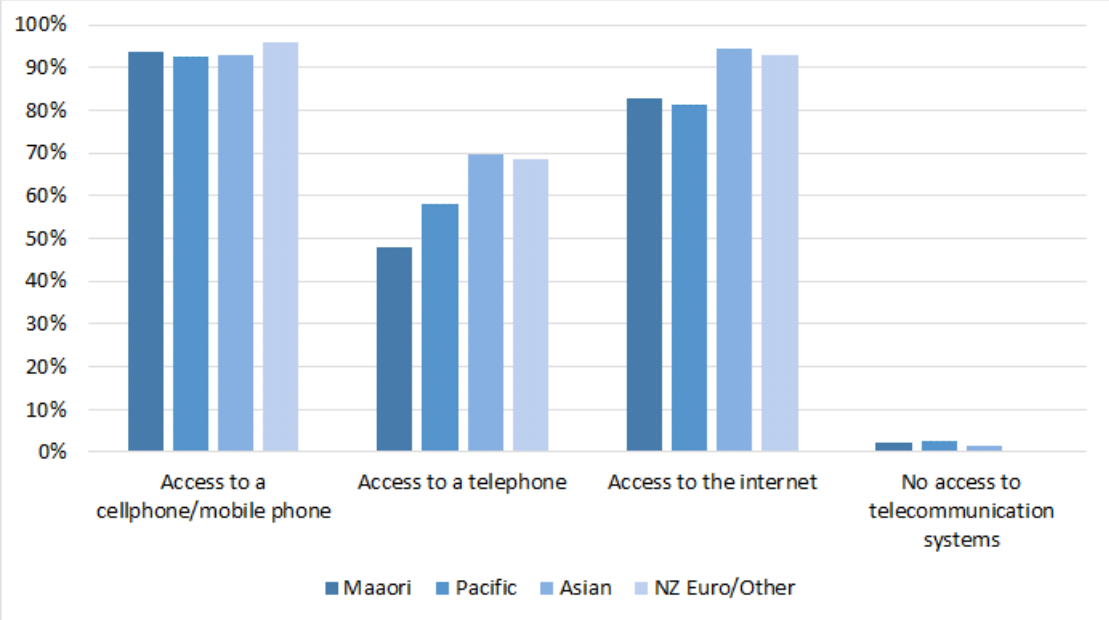
Source: Census 2018 UR population, Northern Region Health extract, Stats NZ

Overall, 94% of Counties Manukau residents were reported as having access to a mobile phone. This was fairly consistent across ethnicities. Sixty four percent of respondents had access to a telephone. Assuming this is being interpreted as a landline telephone, it is apparent the rate of use is decreasing[66], with the mobile phone now predominant. Internet access is becoming increasingly decoupled from telephone access – although telephone access has dropped internet access at home was present for 90% of CM Health residents. This

[66] NZ rate in 2006 Census 92%, 2013 86% (MSD (2017) The Social Report 2016.

was notably lower for Maaori and Pacific peoples (83% and 81%) compared with Asian and NZ European/Other groups (94% and 93%).

Figure 23 Access to telecommunications at home for CM Health residents in 2018 by prioritised ethnicity



Source: Census 2018 UR population, Northern Region Health extract, Stats NZ

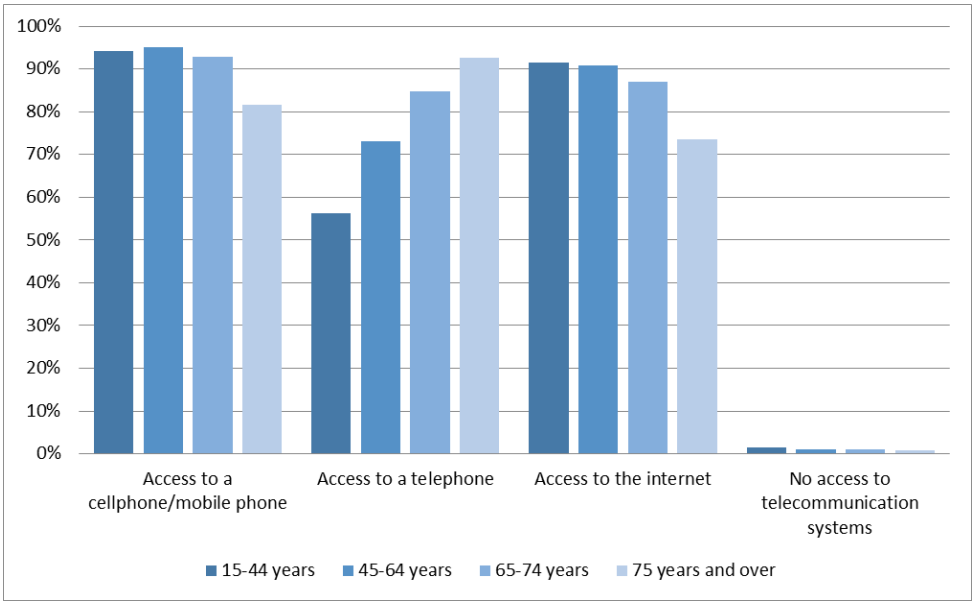
Access to the telecommunications also differed by age, with lower internet access and higher telephone access for older people (Table 42 and Figure 24), although noting that if older people are living with others, for example in multigenerational households, internet access in the dwelling may relate to use by others in the household, rather than them personally.

Table 42 Access to telecommunications at home, CM Health residents, 2018 by age group

Age group	Access to a mobile phone	Access to a telephone	Access to the internet	No access to telecommunications
15-44 years	94%	56%	92%	1%
45-64 years	95%	73%	91%	1%
65-74 years	93%	85%	87%	1%
75 years & over	82%	93%	74%	1%
Total	94%	64%	90%	1%

Source: Census 2018 UR population, Northern Region Health extract, Stats NZ

Figure 24 Access to telecommunications at home, CM Health residents, 2018 by age group



Source: Census 2018 UR population, Northern Region Health extract, Stats NZ

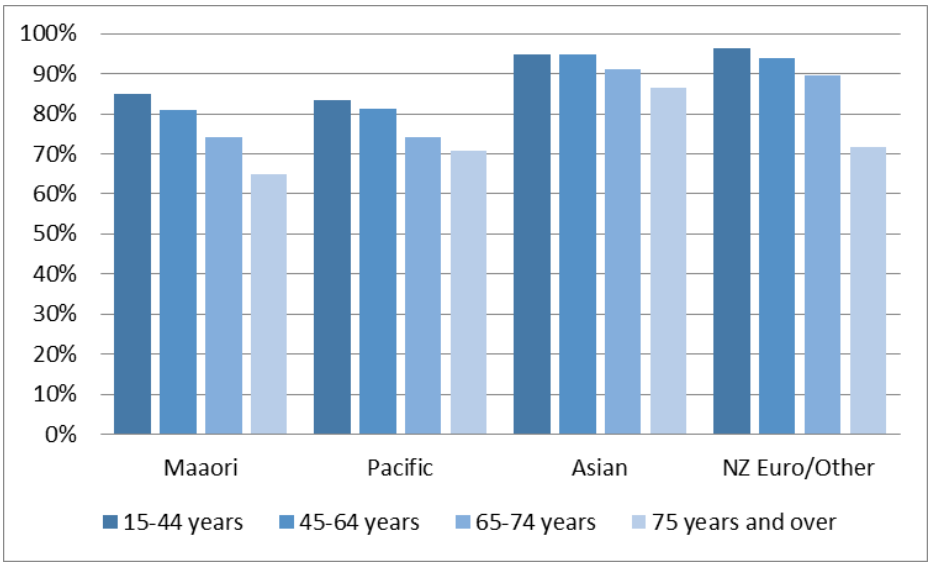
The pattern of internet access by age group was less marked for those identified as Asian ethnicities; older Maaori were the least likely to be resident in a dwelling with internet access (Table 43 and Figure 25).

Table 43 Access to the internet at home, CM Health residents, 2018 by age group and ethnicity

Age group	Maaori	Pacific	Asian	NZ Euro/Other
15-44 years	85%	83%	95%	96%
45-64 years	81%	81%	95%	94%
65-74 years	74%	74%	91%	90%
75 years & over	65%	71%	86%	72%
Total	94%	64%	90%	1%

Source: Census 2018 UR population, Northern Region Health extract, Stats NZ

Figure 25 Access to the internet at home, CM Health residents, 2018 by age group and ethnicity



Source: Census 2018 UR population, Northern Region Health extract, Stats NZ

Appendices

Appendix One: Population pyramids for CM Health ER populations[67] by ethnicity

Population pyramids provide a visual representation of the age structure of a population. Of note, they make obvious the different age structures of the different ethnic populations of Counties Manukau, with much younger structures (broad based pyramids) for Maaori and Pacific peoples. The Asian pyramid shows discrete immigrant patterning in the 20-39 age groups as students and qualified people of working age arrive in NZ.

Figure 26 Population pyramid for CM Health Maaori 2018 ER population

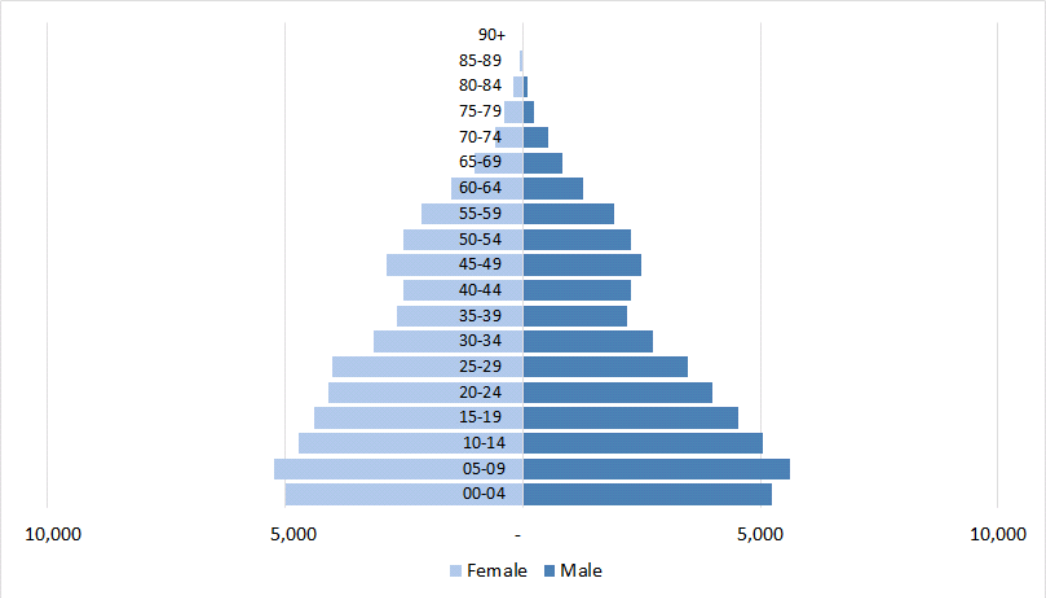
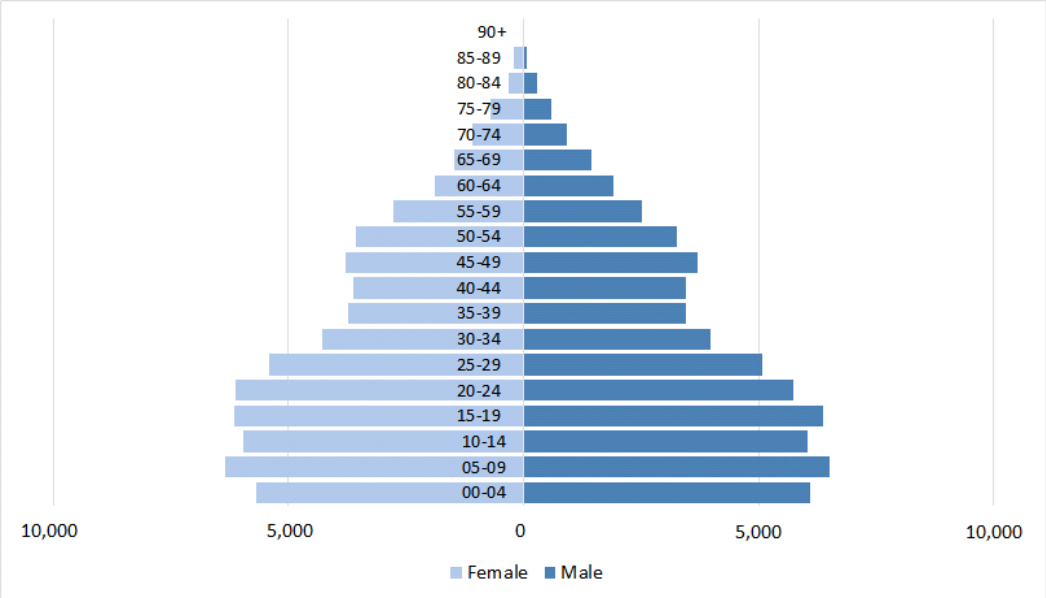


Figure 27 Population pyramid for CM Health Pacific 2018 ER population



[67] Source: 2020 Stats NZ Pop Projections. Projections produced by Statistics New Zealand according to assumptions specified by the Ministry of Health.

Figure 28 Population pyramid for CM Health Asian 2018 ER population

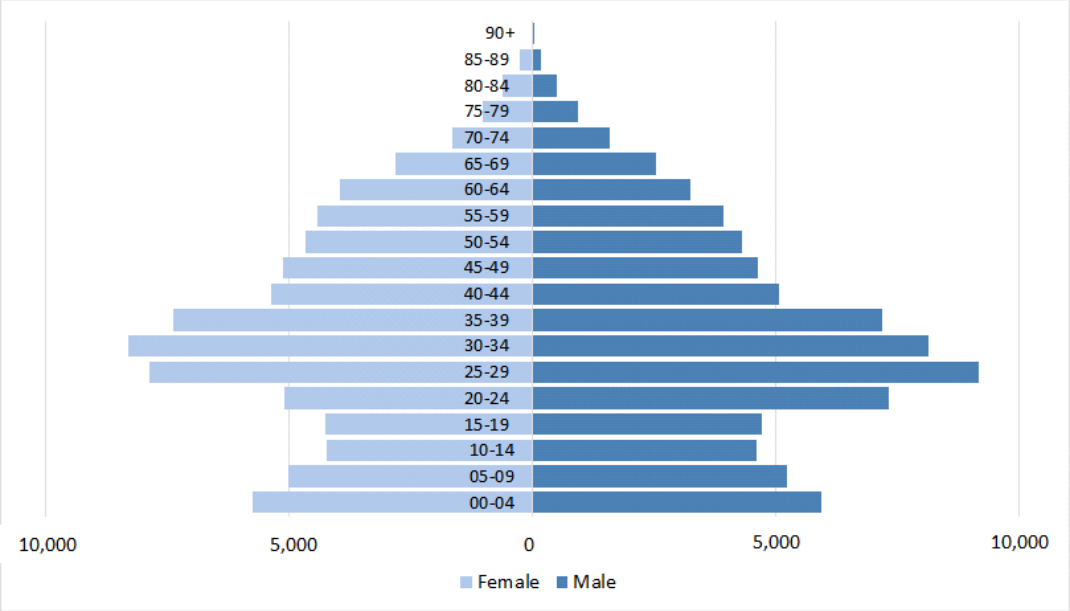
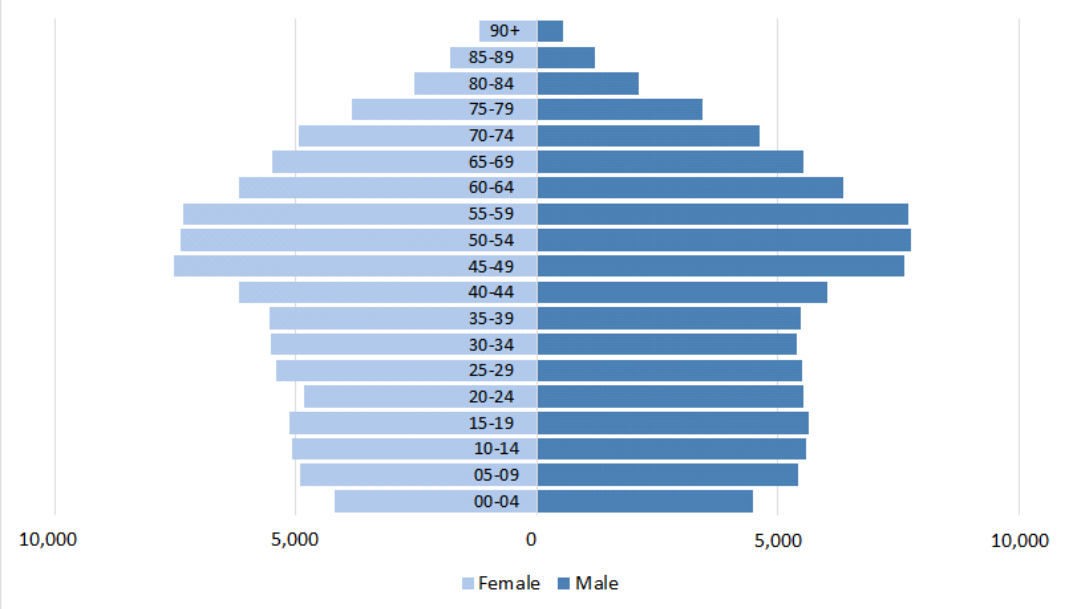


Figure 29 Population pyramid for CM Health NZ European/Other 2018 ER population



Appendix Two: Pacific and Asian language analysis

The following language data has been sourced directly from Stats NZ in a customised extract; the data was provided by total response ethnicity.

As noted in the body of the report, the quality and confidence in 2018 Census language data vary by language. The quality issues had a greater impact on data quality for Maaori and Pacific peoples because of the lower response rates for these communities. Hence the analysis presented should be read as indicating the general patterns rather than placing too much reliance on the specific percentages.

The 2018 Census data indicate that the ability to have an everyday conversation in English varies considerably across Pacific and Asian population subgroups and by age group.

A high proportion of those who identify with one or more of the Pacific and Asian populations aged 65 years and over are reported to be able to speak their heritage language, an important part of the preservation of cultural values and identity. However, a substantial proportion of those groups do not have conversational English. Even for those aged 45-64 years living in Counties Manukau, conversational English was relatively low among some Asian subgroups. These findings have important implications for health services provision and community engagement. Given the connections between language, culture and identity, and identity and health and wellbeing, there are also implications for health of the lower percentages able to speak their heritage language in younger age groups, along with concerns about their languages becoming endangered.

Pacific languages

Subgroup analysis of conversational language shows that a high proportion of Pacific people are reported as able to speak their heritage language, at least for every day matters (over 70% for those who are Samoan or Tongan aged 45 years and over) (Table 44 and Table 45). However, the proportion able to speak their heritage language can be considerably lower for younger age groups who are predominantly New Zealand born. Among Samoans aged 15 to 29 years 58% could speak in conversational Samoan. The figure was much lower for people in the same age group who identify as Cook Island Māori or Niuean (6% and 7% respectively) (Table 46 and Table 47). The latter two groups have generally been in New Zealand longer.

The ability to speak conversational English is more common in younger age groups. Over 90% of people aged between 15 and 44 years old were reported to have conversational English among Samoan, Tongan, Cook Island Māori and Niuean subgroups. Among people aged 65 years and over, conversational English was less common. This pattern was particularly evident among people who identify as Samoan or Tongan. Seventy three percent of Samoans and 65% of Tongans aged 65 years and older were reported as having conversational English (Table 44 and Table 45). ~90% of Cook Island Māori and Niuean people aged 65 and over were reported to have conversational English. Overall, 76% of older Pacific people were reported to have conversational English (Table 48).

Table 44 Language indicators for the CM Health Samoan population from the 2018 Census, by age group

Samoan (TR)	15-29 yrs	30-44 yrs	45-64 yrs	65 yrs & over	Total 15 yrs & over
Able to speak Samoan	58%	72%	81%	92%	70%
Able to speak English	95%	93%	85%	73%	90%

Source: Customised extract, 2018 Census, Stats NZ

Table 45 Language indicators for the CM Health Tongan population from the 2018 Census, by age group

Tongan (TR)	15-29 yrs	30-44 yrs	45-64 yrs	65 yrs & over	Total 15 yrs & over
Able to speak Tongan	43%	57%	72%	79%	56%
Able to speak English	97%	94%	85%	65%	91%

Source: Customised extract, 2018 Census, Stats NZ

Table 46 Language indicators for the CM Health Cook Island Māori population from the 2018 Census, by age group

Cook Island Maaori (TR)	15-29 yrs	30-44 yrs	45-64 yrs	65 yrs & over	Total 15 yrs & over
Able to speak Cook Island Māori	6%	13%	30%	58%	17%
Able to speak English	99%	98%	96%	91%	98%

Source: Customised extract, 2018 Census, Stats NZ

Table 47 Language indicators for the CM Health Niuean population from the 2018 Census, by age group

Niuean (TR)	15-29 yrs	30-44 yrs	45-64 yrs	65 yrs & over	Total 15 yrs & over
Able to speak Niuean	7%	17%	38%	63%	21%
Able to speak English	99%	99%	96%	88%	97%

Source: Customised extract, 2018 Census, Stats NZ

Table 48 English language speaking for total Pacific population from the 2018 Census, by age group

Total Pacific (TR)	15-29 yrs	30-44 yrs	45-64 yrs	65 yrs & over	Total 15 yrs & over
Able to speak English	97%	95%	88%	76%	93%

Source: Customised extract, 2018 Census, Stats NZ

Asian languages

Subgroup analysis of the largest four Asian ethnic groups in CM Health, shows that the ability to speak ones' heritage language/s differs significantly by ethnicity and age group.

Among adults 15 years and older living in CM Health area, 86% of Korean residents and 77% of Chinese residents[68] were reported to be able to speak one or more of their heritage languages (Table 52 and Table 50). In comparison, 63% of Filipino residents could speak their main heritage language, Tagalog (Table 51). There are many languages spoken in India; the table below shows the percentage of people reported as speaking Hindi and Punjabi (Table 49). The percent of Asian people who are reported to be able to speak their heritage language is lower for younger age groups.

The ability to speak English is less common among Asian people in older age groups. Conversational English was least common among Chinese and Korean residents aged 65 and over; only 40% of Chinese and 46% of Korean people of that age were reported as having conversational English. In contrast the percent of Filipino residents reported to speak conversational English is very high, and over 90% of residents aged 65 years and over were reported to speak conversational English (Table 51). Indian older people were intermediate, with 69% reported as having conversational English. Overall, 76% of older Asian people were reported to have conversational English (Table 53).

Table 49 Language indicators for the CM Health Indian population from the 2018 Census, by age group

Indian (TR)	15-29 yrs	30-44 yrs	45-64 yrs	65 yrs & over	Total 15 yrs & over
Able to speak Hindi	39%	49%	52%	53%	47%
Able to speak Punjabi	27%	21%	16%	20%	22%
Able to speak English	96%	95%	89%	69%	92%

Source: Customised extract, 2018 Census, Stats NZ

Table 50 Language indicators for the CM Health Chinese population from the 2018 Census, by age group

Chinese (TR)	15-29 yrs	30-44 yrs	45-64 yrs	65 yrs & over	Total 15 yrs & over
Able to speak Yue (includes Cantonese)	25%	25%	34%	40%	30%
Able to speak Northern Chinese (includes Mandarin)	35%	44%	45%	38%	41%
Able to speak other Sinitic languages	19%	24%	25%	23%	23%
Total able to speak a Sinitic language	66%	76%	83%	86%	77%
Able to speak English	93%	84%	63%	40%	73%

Source: Customised extract, 2018 Census, Stats NZ

[68] This figure refers to Chinese people who report speaking any Sinitic language.

Table 51 Language indicators for the CM Health Filipino population from the 2018 Census, by age group

Filipino (TR)	15-29 yrs	30-44 yrs	45-64 yrs	65 yrs & over	Total 15 Yrs & over
Able to speak Tagalog	55%	64%	69%	76%	63%
Able to speak English	98%	98%	97%	92%	97%

Source: Customised extract, 2018 Census, Stats NZ

Table 52 Language indicators for the CM Health Korean population from the 2018 Census, by age group

Korean (TR)	15-29 yrs	30-44 yrs	45-64 yrs	65 yrs & over	Total 15 yrs & over
Able to speak Korean	83%	85%	89%	89%	86%
Able to speak English	93%	84%	62%	46%	75%

Source: Customised extract, 2018 Census, Stats NZ

Table 53 English language speaking for total Asian population from the 2018 Census, by age group

Total Asian (TR)	15-29 yrs	30-44 yrs	45-64 yrs	65 yrs & over	Total 15 yrs & over
Able to speak English	95%	91%	78%	54%	85%

Source: Customised extract, 2018 Census, Stats NZ

Appendix Three: Additional Household Crowding Analysis for children

As described on page 50, the data used to calculate household crowding is of variable quality for Census 2018 and so this analysis is indicative but the pattern is similar to the previous census for children in the CM Health population. Crowding analysis of Census data by Stats NZ is done using the Canadian National Occupancy Standard (CNOS). The household is defined as crowded if one or more extra bedrooms are needed relative to the size of the household, based on the criteria of the CNOS. [69] Crowding data are presented as 'not crowded' (no spare rooms, one or more spare rooms), 'crowded' (one room required), and severely crowded (two or more rooms required).

Using the CNOS, 29% of Counties Manukau children were living in a crowded or severely crowded household in 2018. This figure was much higher for Maaori (36%) and Pacific children (53%) than for those in Asian groups (21%), and NZ European/Other groups (7%) (Table 54 and Figure 30). Within the Asian groups, Indian (24%) and Other Asian groups (27%) were considerably more likely than Chinese children (14%) to be living in crowded households, but Chinese children were still twice as likely to be as children in the NZ European/Other group. The respective percentages for NZ children were Maaori (26%), Pacific children (45%), Asian groups (20%), NZ European/Other groups (6%) and total (16%). I.e. children living in Counties Manukau were twice as likely as children in NZ overall to be living in crowded households, but this is largely driven by the conditions for Maaori and Pacific children where crowding was higher in children living in CM.

Table 54 Household crowding for CM Health children aged 0-14 years in 2018 by prioritised ethnicity

Ethnicity	Not crowded	Crowded	Severely crowded	Total crowded
Maaori	64%	20%	16%	36%
Pacific	47%	27%	26%	53%
Indian	76%	17%	8%	24%
Chinese	87%	9%	4%	14%
Other Asian	73%	18%	10%	27%
Total Asian	79%	14%	7%	21%
NZ Euro/ Other	93%	5%	2%	7%
Total	71%	17%	13%	29%

Source: Census 2018 UR population, customised household crowding extract by age and ethnicity, Stats NZ

[69] The criteria for crowding under the Canadian National Occupancy Standard: no more than two people sharing a bedroom, children aged less than 5 years of either gender may share a bedroom but children between 5 and 18 should have separate bedrooms if they are not the same gender. Couples and people 18 and over should have their own bedroom.

Figure 30 Household crowding for CM Health children in 2018 by prioritised ethnicity

Source: Census 2018 UR population, customised household crowding extract by age and ethnicity, Stats NZ

Translated to the ER population, at the time of the 2018 Census, approximately 37,000 CM Health children lived in crowded or severely crowded homes and the majority of these were Maaori or Pacific children (Table 55).

Table 55 Indicative number of CM Health children[70] living in crowded homes in 2018 by prioritised ethnicity

Ethnicity	Not crowded	Crowded	Severely crowded	Total crowded
Maaori	19,700	6,200	4,900	11,100
Pacific	17,200	9,900	9,500	19,400
Asian	24,400	4,300	2,200	6,500
NZ Euro/Other	27,500	1,500	600	2,100
Total	90,800	21,700	16,600	37,100

Source: Census 2018 UR population, customised household crowding extract by age and ethnicity, Stats NZ; applied to the 2018 ER population, from MoH 2020 projections, by CM Health

As highlighted in the body of this report, given the associations between infectious and infection-related conditions, such as respiratory and skin infections and rheumatic fever, and household crowding, these data highlight the critical and urgent need to address household crowding for the wellbeing of children in Counties Manukau.

[70] Figures are rounded to the nearest 100 residents