

Guidelines for use of the non-Māori group in ethnic statistics

Comparisons of Māori are often made with the total population and sometimes with the non-Māori population. These comparisons raise several questions:

- Is one comparison better than the other?
- Is non-Māori a statistically valid population group?
- When is it appropriate to use non-Māori statistics, and when is it inappropriate?
- Is it statistically valid to present Māori statistics solely in relation to statistics of the total population?

This paper provides good practice guidelines for users of ethnicity data in terms of using the non-Māori group. The guidelines apply equally to use of other residual ethnic population groups, such as non-Pacific, non-Asian and non-European.

Defining the non-Māori group

Ethnic information is usually collected at a detailed level. The [Statistical Standard for Ethnicity](#) (2005) recommends that "ethnic information is to be collected in order to allow categorisation at the most detailed level of the ethnicity classification, level 4."

For analytical and output purposes, ethnic information is often aggregated to more general categories. This reflects some practical and statistical issues in analysing groups of sufficient size. At the most aggregated level, people can be assigned to one of three mutually exclusive (non-overlapping) categories:

- identify with the X ethnic group (eg Māori)
- identify with an ethnic group, but not with the X ethnic group (eg non-Māori)
- no identification with any ethnic group (eg unspecified, invalid, or indecipherable responses).

In some statistics (eg [ethnic population estimates](#)), these categories are further collapsed to the first two categories, because ethnic groups are effectively imputed for people in the non-response category.

It is inappropriate to group the third 'non-response' category with either the first or second categories. Non-response needs to be identified separately or dealt with in a statistically valid manner.

Users should be aware of the heterogeneity of groups such as European, Pacific and Asian which are comprised of people from a diverse range of ethnicities. This heterogeneity applies even more to the non-X groups.

Appropriate use of the non-Māori group

It is common analytical practice to compare different population groups. Careful consideration is needed to make the most appropriate comparisons. The two most important statistical considerations are:

1. comparisons are made between meaningful (internally homogenous) groups
2. comparisons are made between non-overlapping (mutually exclusive) groups.

These two considerations are sometimes idealistic and contradictory, so the following discussion includes some examples that illustrate good practice. Practical considerations are also important, such as the actual availability of statistics for different ethnic groups.

Importantly, it is appropriate to present comparisons between ethnic groups identified in the [Statistical Standard for Ethnicity](#) (2005), even though ethnic groups do overlap on a total response basis. Despite the heterogeneity of groups such as European, Pacific and Asian, comparisons between these groups and Māori are statistically appropriate.

However, even when statistics for these ethnic groups are available, it may still be prudent to make comparisons between non-overlapping groups, such as Māori with non-Māori, European with non-European, Pacific with non-Pacific, or Asian with non-Asian. In some cases this comparison of non-overlapping populations is preferable to comparisons with the total population. This is because an ethnic group exerts an influence on the aggregate characteristics of the total population, and this influence increases as the ethnic share of the total population increases.

Māori, for example, may account for 15 percent of the population overall, but in some sub-groups and datasets their proportion is much larger (eg 25 percent of the population aged under 10 years; 47 percent of Gisborne's population; 40 percent of deaths at ages 1–4 years). It is often important to compare non-overlapping populations to avoid masking the true differentials between people who identify with Māori ethnicity and those who do not. This advice applies to point-in-time comparisons in general (eg males-females, age groups, geographic areas), and becomes more important as the overlap increases.

For females aged 1–4 years, the ratio of Māori death rates to total death rates in 2005–07 was 1.5, while the ratio of Māori death rates to non-Māori death rates was 2.1. Does one ratio give a better measure of Māori mortality differentials than the other, or indeed, do both ratios provide valid and complementary comparisons? The comparison of the non-overlapping populations gives the best comparison. These ratios indicate that Māori death rates were about twice as high at ages 1–4 years than non-Māori in 2005–07.

The appropriateness of the non-Māori group (or other non-X groups) stems from its value in providing a reference for analysis and comparisons with the Māori group (or other X groups). However, it does not extend that a non-X group is appropriate as the focus of analysis, because a non-X group is not an ethnic group as defined by the [Statistical Standard for Ethnicity](#) (2005). In some cases, the European ethnic group is effectively equivalent to the non-Māori group, and can therefore be used for comparisons.

The non-X group is most useful in point-in-time comparisons. Extra care is needed with non-X time series. This is because the non-X population does not change in accordance with conventional demographic processes. This is sometimes referred to as diminution of successive generations. For example, offspring to a Māori parent with a non-Māori parent will generally result in the child being identified as Māori, and therefore not non-Māori. Thus, each generation of the non-Māori population is smaller than non-Māori fertility would imply, while each generation of Māori is larger than Māori fertility would imply.

Furthermore, the non-X group is most useful in comparisons of rates, ratios, percentages and proportions, rather than absolute numbers. For example, there is little value in presenting birth numbers for the Māori and non-Māori groups. However, there is value in presenting fertility rates for the Māori and non-Māori groups (which are derived from Māori and non-Māori births and population measures). The total fertility rates in 2005–07 of New Zealand's Māori and non-Māori populations were 2.79 and 1.88 births per woman, respectively. In this case, adding the corresponding total fertility rate of New Zealand's total population, 2.05 births per woman, may be useful to indicate the relative influence of Māori and non-Māori fertility rates on New Zealand's overall fertility rate.

In all comparisons, age-specificity or age standardisation is needed to enable meaningful comparisons of populations with different age structures. Age standardisation may even be needed where age groups are being compared, if those age groups are broad.

Summary

The prevalence of people identifying with multiple ethnicities, and therefore the overlapping nature of ethnic groups, presents challenges when collecting, analysing and presenting ethnic statistics. It is appropriate to compare and contrast these overlapping ethnic populations using ethnic groups from the [Statistical Standard for Ethnicity](#) (2005).

In some cases the comparison of non-overlapping populations is preferable to comparisons with the total population. This is because an ethnic group exerts an influence on the aggregate characteristics of the total population, and this influence increases as the ethnic share of the total population increases. The most appropriate comparisons are point-in-time where the ethnic group (eg Māori) is the focus of analysis.

Non-response categories should never be grouped with an ethnic group (nor with a non-X group).