

Child and Youth Mortality Review Committee

Draft Ethnicity Protocol



This is a subsection of the CYMRC Reporting Protocol prepared for the Child and Youth Mortality Review Committee
by Dr Elizabeth Craig, on behalf of the CYMRC Scientific Sub-Committee
September 2010



Contents

Contents	1
Ethnicity Protocol	2
References	8



Ethnicity Protocol

Introduction

One of the more prominent features of New Zealand's mortality statistics is the large ethnic disparities in mortality experienced by different groups of children and young people. Within the CYMRC Data Collection, information on ethnicity is recorded in a variety of different places (with multiple data sources containing similar / overlapping information). In addition, even within a single data source, a single individual may be identified as having affiliations to multiple ethnic groups. Thus clear protocols regarding the selection, coding and presentation of ethnic specific information are required, if the Committee is to best use its Data Collection to reduce disparities in mortality for New Zealand children and young people.

Collection and Reporting Options for Ethnicity Data

In order to understand the rationale for the CYMRC's current ethnicity reporting protocol, it is necessary to understand how ethnicity data is currently collected and stored in New Zealand's national data collections, as well as the various ethnicity classifications used by the sector in recent years.

Within the health sector at present, only 3 ethnic groups are stored electronically in most national data collections [1]. Each ethnic group is coded using Statistics New Zealand's 4 Level Hierarchical Classification System:

1. Level 4 (most detailed level) code 12111 is Celtic.
2. Level 3 code 121 is British and Irish.
3. Level 2 code 12 is Other European.
4. Level 1 (least detailed level) code 1 is European.

These (up to) three ethnic groups can then be combined and reported on in a variety of ways. The most commonly used classification systems are [2]:

1. **Prioritised Level 1 Ethnicity:** In the past, when it was necessary to assign individuals to a single ethnic group (e.g. for comparisons across multiple ethnic groups), Statistics New Zealand's Level 1 Prioritised Ethnicity was often used. This system recognised 5 ethnic groups: European, Māori, Pacific Island, Asian (including Indian) and Other. For those reporting multiple ethnic affiliations, ethnicity was prioritised in the following order: Māori > Pacific > Asian > Other > European [1]. More recently Statistics New Zealand has added a MELAA (Middle Eastern / Latin American / African) category, with prioritisation now occurring in the following order: Māori > Pacific > Asian > MELAA > European or Other Ethnicity (including New Zealander). While convenient for analytical purposes, prioritisation results in the loss of a significant proportion of e.g. Pacific children and young people to the Māori ethnic group (although this occurs in both the numerator and the denominator).
2. **Total Response Ethnicity:** Where analysis wishes to focus on a particular ethnic group, total response ethnicity is often used, which includes all individuals identifying with a particular ethnic group (e.g. Pacific) in any of their (usually 3) recorded ethnic affiliations. While for Māori, total response and prioritised ethnicity are identical, for e.g. Pacific children, the Pacific total response ethnic group also includes Pacific children simultaneously identifying as Māori (who are excluded if prioritisation is adopted). Such an approach reflects the ethnic heterogeneity of New Zealand's largest ethnic groups and in addition, provides a larger and more stable numerator and denominator (cf. sole ethnicity). Because total response ethnic groups often include a large number with multiple ethnic affiliations however, health disparities for some ethnic groups may be less marked than if a Sole ethnic group analysis is adopted. In addition, a single individual may appear in more than one ethnic

group, meaning that individual total response ethnic groups cannot be directly added to produce a New Zealand total [2].

3. **Sole Ethnic Groupings:** Where a focused ethnic specific analysis is required, which seeks to discount the ethnic heterogeneity of New Zealand's largest ethnic groups, a Sole ethnicity classification may be adopted, which includes only those identifying solely with one ethnic group. This system results in greater homogeneity, as there is no admixture with other ethnic groups, and health disparities may be greater (e.g. for Māori and Pacific children) than if a total response classification system is used. The Sole ethnicity classification results in a much smaller and statistically less stable numerator and denominator and in addition, potentially fails to take into account the ethnic diversity of New Zealand's child and youth population [2].

Note: While more complex ethnic classification systems are theoretically possible, in many cases more sophisticated reporting is prevented by the lack of comparable denominators for the calculation of rates.

Further, before considering which ethnic groupings may be of value in CYMRC reporting, it is also necessary to consider the extent to which multiple ethnic affiliations are an issue in New Zealand's largest national data collections, and also the extent to which prioritisation may impact on reporting for ethnic groups lower down the prioritisation hierarchy. The text box below briefly presents information relevant to this issue.

Number of Ethnic Group Affiliations in Different National Data Collections

Birth Registration Dataset: In New Zealand during 2003-2008, 71.2% of babies in the Birth Registration Dataset had one ethnic affiliation recorded, 23.3% had two and 5.5% had three affiliations recorded (0.1% had no ethnic groups recorded).

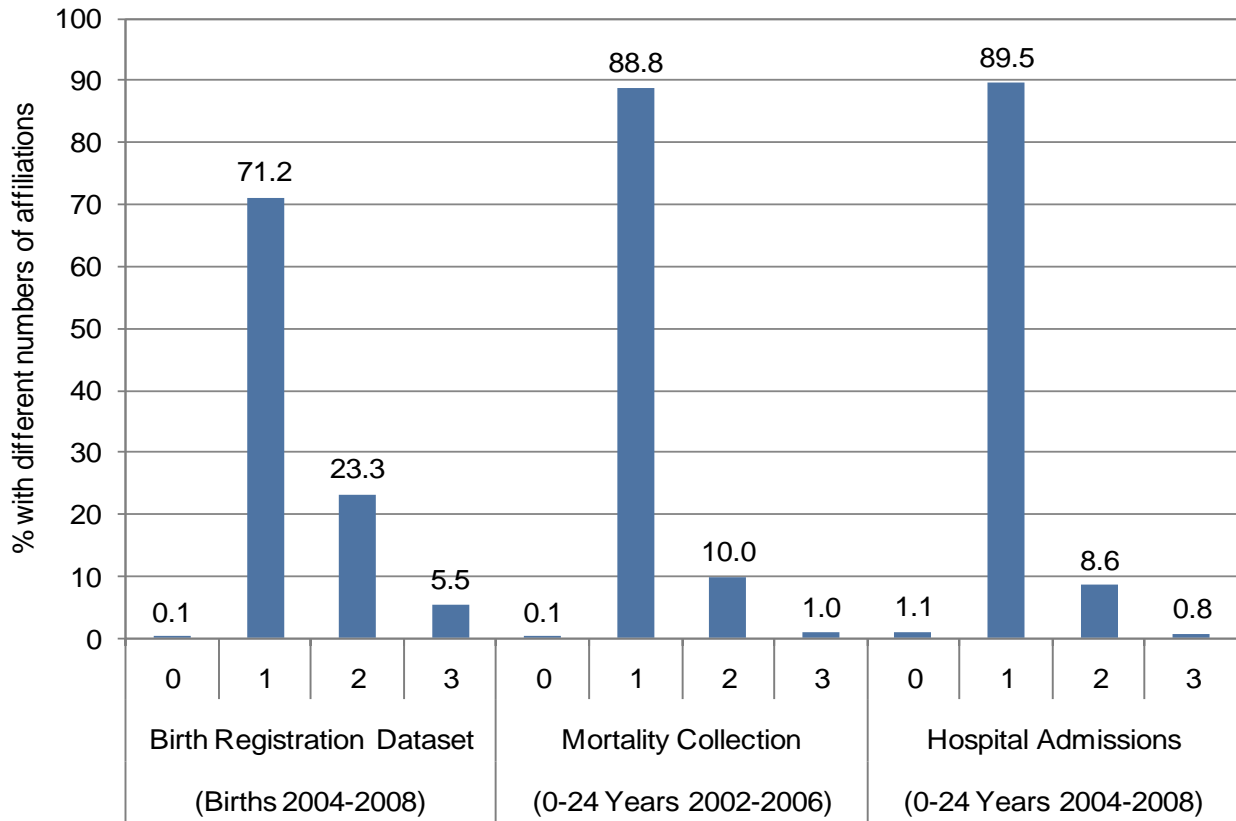
National Mortality Collection: In New Zealand during 2002-2006, 88.8% of children and young people aged 0-24 years whose information was recorded in the National Mortality Collection had one ethnic affiliation recorded, while 10.0% had two and 1.0% had three affiliations recorded (0.1% had no ethnic groups recorded).

National Minimum (Hospital Admission) Dataset: When hospitalisations for New Zealand children and young people aged 0-24 years were reviewed for the period 2003-2008, 89.5% of hospitalisations had one ethnic group affiliation recorded, while 8.6% had two and 0.8% had three ethnic affiliations recorded (1.1% had no ethnic groups recorded) (See **Figure 1**)

Implications of Prioritisation for Different Ethnic Groups)

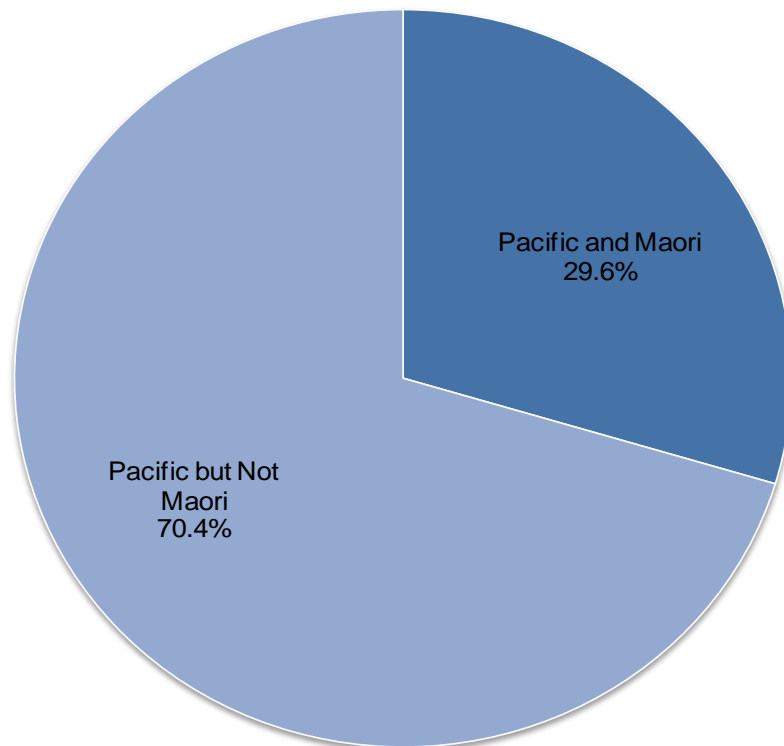
In New Zealand during 2004-2008, a total of 47,199 babies were born who were identified as being Pacific in one of their first 3 ethnic groups. Of these, 33,317 also identified with the Māori ethnic group, potentially suggesting that if the birth registration dataset is used for ethnicity coding, and a prioritised analysis is adopted, 29.6% of Pacific babies will be identified as Māori in CYMRC reporting (See **Figure 2**).

Figure 1. Number of Ethnic Group Affiliations for Children and Young People in Different New Zealand Data Collections



Source: Birth Registration Dataset National Mortality Collection National Minimum Dataset

Figure 2. Proportion of Pacific Babies Who Also Identified as Māori, New Zealand Birth Registrations 2004-2008



Source: Birth Registration Dataset

Ethnicity Protocol for CYMRC Reporting

The above analysis suggests that multiple ethnic affiliations are a significant issue that needs to be taken into account in CYMRC reporting, and also that if a prioritised approach to reporting is adopted in isolation, the health needs of ethnic groups further down the prioritisation hierarchy may be overlooked. In order to address these issues, and in consultation with the Māori Caucus (see text box below) the following CYMRC ethnicity reporting protocol has been adopted on an interim basis.

Source Information for Ethnicity Data

In the CYMRC Data Collection, information on ethnicity is available from a variety of sources, each of which is of different quality and completeness.

1. For **Infant Deaths** ethnicity data is sourced from multiple information sources in the following order: birth certificate > death certificate > health sources (NHI or other MOH dataset) > coroner > other source (i.e. if information from the first data source is unavailable, information is progressively sought from sources further down the hierarchy). The rationale for the pre-eminence of birth certificate data is the fact that ethnicity information in the birth registration dataset is collected directly from parents (rather than from other parties).
2. For **Child and Youth Deaths**, ethnicity data is sourced from multiple information sources in the following order: death certificate > birth certificate > health sources (NHI / other MOH dataset) > coroner > other source. The rationale for this is that the majority of child and youth deaths do not have a birth record in the CYMRC database. Further, MOH advice in 2006/7 was that funeral directors are generally asking next of kin [3]. Hence, the death certificate is a more appropriate primary source than the birth certificate, firstly because of its relative completeness in the CYMRC data collection, and secondly as it allows for the deceased's expression of their ethnic identity during their lifetime to be taken into account.

Protocols for Those with Multiple Ethnic Affiliations

Prioritised Ethnicity

For children and young people with multiple ethnic affiliations, the CYMRC prioritise ethnicity using the hierarchy in

Table 1. In this algorithm, Māori ethnicity is awarded the highest priority, with the Māori ethnic group including those whose sole ethnicity is Māori, as well as those with multiple ethnic affiliations (one of which is Māori). Similarly, the Pacific ethnic group includes those who identify as Pacific in one of their ethnic groups, unless this ethnic group is Māori. When making comparisons between ethnic groups, the European ethnic group is used as the reference category for rate ratio calculations, due to its large numerical size and relative absence of disparity.

Due to the loss of a large proportion of Pacific children to the Māori ethnic group, the large numerical size of the Pacific population, and the likelihood of significant health disparity, it is recommended that a total response analysis for Māori and Pacific children is also routinely included in the analysis for each in-depth topic. In this context, the use of the non-Māori non-Pacific group as the reference category for rate ratio calculations is preferable, as it provides a numerically stable, mutually exclusive reference category which is comprised of ethnic groups with relatively low rates of disparity (i.e. for conditions where rates are particularly high for Pacific children, the inclusion of Pacific children in the non-Māori reference group for the calculation of Māori vs. non-Māori rate ratios may mask the magnitude of disparities for Māori).

Table 1. Hierarchy Used by CYMRC for Prioritising Ethnicity for Children and Young People with Multiple Ethnic Affiliations

Ethnicity	Priority
NZ Māori	1
Pacific Islander	2
Asian	3
Middle Eastern, Latin American, African	4
European, New Zealander, Other	5
Not Stated	6

Report Format for CYMRC Report In-Depth Topics

For reporting of CYMRC in-depth topics, the following format is to be adopted.

Table 2. Mortality from (Condition) in Children and Young People Aged 28 Days to 24 Years by Ethnicity, New Zealand 2002-2008

Ethnicity	No. of Deaths: Total 2002-2008	No. Of Deaths: Annual Average	Rate per 100,000	Rate Ratio	95% Confidence Interval
Prioritised Ethnicity					
Māori					
Pacific					
Asian					
MELAA					
European				1.00	
Total Response Ethnicity					
Māori					
Pacific					
Non-Māori Non-Pacific				1.00	

Source: Numerator: CYMRC Cases by ICD-10-AM Main Underlying Cause of Death as assigned in National Mortality Collection
Denominator Statistics NZ Estimated Resident Population. For details of Ethnicity Classifications used see Appendix 2.

Current Status of CYMRC Ethnicity Protocol

This protocol was reviewed by the Māori Caucus in June 2010 and endorsed for use in the 2010 CYMRC Report. In addition to the protocols above, it was felt necessary to develop additional guidelines regarding how ethnic differences were interpreted in the text (accompanying each table or graph) and thus further detail will be added to this protocol once the Māori Caucus has reviewed the 2010 CYMRC Report draft.

In addition, at the Māori Caucus Meeting in June 2010 there was significant interest in the Sole Ethnicity classification, although concerns were expressed regarding how Sole vs. Total Ethnic Group differences might be interpreted. Further, while one of the recommendations from the first CYMRC Māori report was that the CYMRC should consider using the ever-Māori classification (i.e. where a Māori ethnic affiliation is identified in any of the data sources in the CYMRC collection, rather than using the data source deemed to be of the highest quality), this practice was not fully endorsed due to concerns that this may over-count Māori (when compared to denominator data). It was agreed however, that both Sole Ethnicity and the Ever Māori classification should be reviewed in more detail in the context of an in-depth Māori report, and that the protocol outlined above might be further modified, should a more in-depth analysis suggest that either of these approaches would have utility in routine CYMRC reporting.

The protocol outlined above thus remains interim until the Māori Caucus can provide additional guidance on the interpretation of ethnic differences in the text accompanying each table or graph (it anticipated that this part of the protocol will be further refined once the tables and graphs are available for the 2010 CYMRC Report); and also until after the release of a more in-depth Māori report, when the relative merit of the Sole and Ever Māori classifications can be explored in more detail by a writer with experience in Māori child and youth health.



References

1. Ministry of Health, *Ethnicity Data Protocols for the Health and Disability Sector*. 2004, Ministry of Health: Wellington. p. 1-23.
2. Craig, E., et al., *The Health of Pacific Children and Young People in New Zealand*. 2008, NZ Child and Youth Epidemiology Service Auckland. p. 1-448.
3. Needs, G., *Development of a New Zealand Mortality Review Information System.*, in *Unpublished Masters Thesis*. 2010, University of Otago: Dunedin. p. 78-79.