



# Health Needs Assessment

## for the Central Region's District Health Boards

Data Quality

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Central Region's Technical Advisory Services Limited (TAS)

***Health Needs Assessment - Data Quality chapter only***

***for the Central Region's District Health Boards***

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This chapter is one of several contributing to the Central Region's Health Needs Assessment (HNA). The chapters included in this HNA are:

- Introduction
- Key Findings for Regional Action
- Demographic Profile of the Central Region
- Health Status of the Central Region
- Access to Services and the Utilisation of Services
- Risk and Protective Factors
- Chronic Conditions including Circulatory System Diseases, Diabetes, Renal Failure and Kidney Disease, and Respiratory Conditions
- Cancer
- Mental Health
- Child, Youth and Maternal Health
- Health of Older People
- Disability
- Injuries and Accidents
- Violence
- **Data Quality**

This chapter may be read in isolation but in order to gain a context of the Central Region, readers should in particular refer to the chapters 'Demographic Profile of the Central Region' and 'Health Status of the Central Region'.

For a summary of the findings for the region, their implications and some key areas for strategies readers should refer to the 'Key Findings for Regional Action' chapter.

## Data quality

The key datasets used to complete the analysis in this Health Needs Assessment document were the National Minimum Data Set (NMDS), and Mortality Collection, from New Zealand Health Information Services. These were complemented by population and demographic information from Statistics New Zealand and the Ministry of Health, including census data and the Deprivation Index (both from 2006).

The data from the above datasets was organized into OLAP cubes, with some additional processing to create groupings, relationships and measures (including per capita figures, averages and proportions). Due to the complexities of the national datasets, filters and transformations have been applied by TAS to create a logical and integrated dataset that supported comparative analysis. Because of the additional processing undertaken, exact numbers may vary between TAS data cubes and the specific source national collection.

Volumes of deaths and discharges were grouped by patient DHB of domicile (and Territorial Local Authority of patient domicile), DHB of treatment, Age Group (5 year bands) and Life Age Group (larger age categories such as Child, Adult etc) and ethnicity (Maori, Pacific People, and Other) according to information contained in the source national collections.

Age specific rates were calculated by distributing the frequency of hospitalization or death amongst the relevant population, and age standardized

rates were also calculated, using the WHO standard population to weight the age specific rates and give a standardized population view. Ethnicity coding is prioritized, with Maori being assigned first, then Pacific, then Other (where multiple ethnicities are nominated). For this analysis, the Asian ethnic group has been included in the Other category for most sections. Whilst it was recognized that the Asian group was distinct, it has not been widely used at a local or national level as a separate category for this type of analysis.

Principally, analysis was done based on disease, using the appropriate codes from the International Classification of Diseases for particular condition types (based either on coding of primary diagnosis, or coding of the external cause) to establish volumes and rates of mortality and hospitalizations. Common Language groupings were applied to the ICD code information at a high level for ease of use and understanding – e.g. ICD-10 Chapter II, Neoplasms, has been renamed as ‘Cancer’. Major Diagnostic Code, Diagnosis Related Group, Purchase Unit, and Health Specialty were also used as categories for aggregation of this information in some places. Dimension information as to whether a death or hospitalization was Avoidable was also included in the cubes according to Ministry of Health guidelines.

Other data sources included national collections [Cancer Registry, National Immunisations Register, CCPS (Health of Older People data), National Booking Reporting System, and the Maternity and Newborn Collection] and

public health research (e.g. The New Zealand Health Survey and Mental Health Survey by Public Health Intelligence).

Relevant agencies were contacted to provide additional data pertinent to particular chapters of the document. For example, data sets were provided from ACC, Plunket, and Women's Refuge.

In addition, some other calculations were performed for particular sections of this analysis, such as life expectancy calculations. Where this occurs, specific methodological information is given in the appropriate chapter.