

Title	Calculate, display, and interpret descriptive statistical information in a public sector or other policy context		
Level	5	Credits	8

Purpose	<p>This unit standard is designed for people employed in positions where they are required to interpret statistical data to make and/or report on recommendations.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> – calculate, display, and interpret results from data collections for a given public sector or other policy project; – interpret results from time-series variables for a project in a public sector or other policy context; – interpret results from demographic information for a given public sector or other policy project; and – identify, describe, and justify the use of a descriptive statistical procedure to answer a specific policy question.
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Classification	Public Sector Services > Public Sector Core Skills
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Available grade	Achieved
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Guidance Information

- 1 References
 - Human Rights Act 1993;
 - Income Tax Act 2007;
 - Local Government Official Information and Meetings Act 1987;
 - New Zealand Bill of Rights Act 1990;
 - Official Information Act 1982;
 - Protected Disclosures Act 2000;
 - Privacy Act 1993;
 - Public Finance Act 1989;
 - State Sector Act 1988;
 - Statistics Act 1975;
 - Information sharing agreements between government agencies and any other organisations;
 - Treaty of Waitangi/Te Tiriti o Waitangi;
 - United Nations Fundamental Principles of Official Statistics; and
 - any relevant legislation applicable to specific government agencies and any other organisations whose employees are supplying evidence for assessment against this unit standard.

Statistical obligations may also exist under a range of treaties and conventions, e.g. World Health Organisation (WHO), or environmental treaties such as the Paris Climate Agreement.

Any reference superseding any of the above will apply, pending review of this unit standard.

- 2 Where assessment will occur for an international audience, the applicable or equivalent legislation of the country where assessment is taking place may be used. Statistical related obligations may also exist under a treaty of conventions, e.g. WHO conventions or environmental treaties such as the Paris Climate Agreement.
- 3 **Recommended entry knowledge and skills**
It is recommended that candidates have basic data transformation skills, including the ability to use simple formulae in a spreadsheet application, and be able to compute the value of a simple mathematical expression.
- 4 Demonstration of knowledge and skills must be consistent with any applicable code or codes of conduct such as the New Zealand State Services Code of Conduct, Standards of Integrity and Conduct (available from <http://www.ssc.govt.nz>) and/or any other organisation or sector specific code or codes of conduct and/or ethics.
- 5 Although this unit standard is classified in the *Public Sector Core Skills* domain it is written so it can also be applied to non-public sector organisations as well as within the public sector. Examples of such non-public sector organisations are non-governmental organisations (NGOs), charities, and iwi authorities.
- 6 Assessment for this unit standard will be based on data collection case studies, and additional reports and datasets as required.
- 7 **Definitions**
A descriptive statistical procedure describes a set of data numerical summaries and/or graphs.
Organisational requirements refer to instructions to staff on policy and procedures that are documented in memo or manual format and are available in the workplace.

Outcomes and performance criteria

Outcome 1

Calculate, display, and interpret results from data collections for a given public sector or other policy project.

Performance criteria

- 1.1 Calculate and interpret tables of counts, percentages, and proportions with their row and column marginal totals.
- 1.2 Construct and interpret graphical displays, calculate numerical summaries, and interpret descriptions of distributions of numerical and/or categorical variables.

- 1.3 Calculate and interpret measures of association between pairs of categorical and/or numerical variables.
- Range must include but not is limited to – correlation coefficients, simple linear regression models, rates, rate ratios, odds, odds ratios.
- 1.4 Draw conclusions from the analysis of the categorical and numerical variables.

Outcome 2

Interpret results from time-series variables for a project in a public sector or other policy context.

Performance criteria

- 2.1 Interpret analysis of time-series variables to give responses to public sector or other policy project questions.
- Range time-series variables may include but are not limited to – actual, seasonally adjusted, deflated, percentage change; components may include but are not limited to – trend, seasonal, irregular.
- 2.2 Draw conclusions about the original variables and their components and record these in accordance with organisational requirements.
- Range components may include but are not limited to – trend, seasonal, irregular.
- 2.3 Calculate and interpret index numbers to give responses to project questions.
- Range may include but is not limited to – the Consumers Price Index (CPI), Food Price Index (FPI), Producers Price Index (PPI).

Outcome 3

Interpret results from demographic information for a given public sector or other policy project.

Performance criteria

- 3.1 Calculate age standardised rates and rate ratios from demographic data, and interpret these.
- 3.2 Draw conclusions from the interpreted data.

Outcome 4

Identify, describe, and justify the use of a descriptive statistical procedure to answer a specific policy question.

Range limited to procedures covered in Outcomes 1, 2, and 3 applied to a simple data set.

Performance criteria

4.1 Identify, describe, and justify the use of the descriptive statistical procedure.

Range may include but is not limited to – key variable types, type of collection, frequency of collection.

This unit standard is expiring. Assessment against this standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	25 September 2006	31 December 2020
Review	2	21 May 2010	31 December 2020
Review	3	14 December 2017	31 December 2023
Review	4	15 December 2022	31 December 2023

Consent and Moderation Requirements (CMR) reference

0121

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.