New Zealand

Adding Value to Publicly-Funded Data

The Work Programme of COMPASS Research Centre

COMPASS RESEARCH CENTRE

FACULTY OF ARTS
THE UNIVERSITY OF AUCKLAND

Whare Wānanga o Tāmaki Makaurau

5th Wellington Colloquium

Statistics NZ, Conference Room

22 July 2011

NZSSDS

hrc

NZSSN
SOCIAL STATISTICS NETWORK

ministry of science + innovation
TE PŪNAHA HIRINGA WHAKAEA

The University of Auckland

Presentation Outline

THE UNIVERSITY OF AUCKLAND
NEW ZEALAND
Te Whare Wānanga o Tāmaki Makaurau

- **Colloquium Purpose**
  - **Communicate! Collaborate! Disseminate and Translate!**
- Capacity Building Theme
  - Summer and Winter Schools
  - Teaching quantitative data analysis
  - *Graduate placements, summer scholars
- “Open Science” Theme
  - Data service
  - Enhanced publications
  - Health System “Collaboratory”
  - *Online teaching resources
- Colloquium

New Zealand

The University of Auckland

Presentation Outline

THE UNIVERSITY OF AUCKLAND
NEW ZEALAND
Te Whare Wānanga o Tāmaki Makaurau

- Colloquium Purpose

- **Capacity Building Theme**
  - **Summer and Winter Schools**
  - **Teaching quantitative data analysis**
  - *Graduate placements, summer scholars

- "Open Science" Theme

- Colloquium

2011 Summer Programme

Offered 11 five-day short courses in 'Social Science Research Methods' in February 2011

- Introduction to Statistics
- Intermediate Statistics
- Introduction to Structural Equation Modelling using Amos
- Advanced Structural Equation Models using Mplus
- Data Analysis in SPSS
- Qualitative Research Techniques
- Case Study Research
- Longitudinal Data Analysis
- Applied Computer-assisted Qualitative Data Analysis in Nvivo
- Introduction to Survey Design
- Introduction to Program Evaluation

Proposed courses for NZSSN courses Feb. 2012, Wellington

- **INTRODUCTION TO STATISTICS**
- **QUALITATIVE RESEARCH TECHNIQUES**
- **CASE STUDY RESEARCH**
- **INTRODUCTION TO STRUCTURAL EQUATION MODELLING USING *Amos***
- **APPLIED COMPUTER-ASSISTED QUALITATIVE DATA ANALYSIS USING *NVivo***
- **INTRODUCTION TO SURVEY DESIGN**
- **INTRODUCTION TO SAS**
- **INTRODUCTION TO STATA**
- **INTERMEDIATE STATISTICS**
- **INTRODUCTION TO PROGRAM EVALUATION**
- **FUNDAMENTALS OF MULTIPLE REGRESSION**
- **DATA ANALYSIS IN *SPSS***
- **ADVANCED STRUCTURAL EQUATION MODELLING USING *Mplus***
- **LONGITUDINAL DATA ANALYSIS**
- **SOCIAL NETWORK ANALYSIS**

SPSS Teaching Workbooks

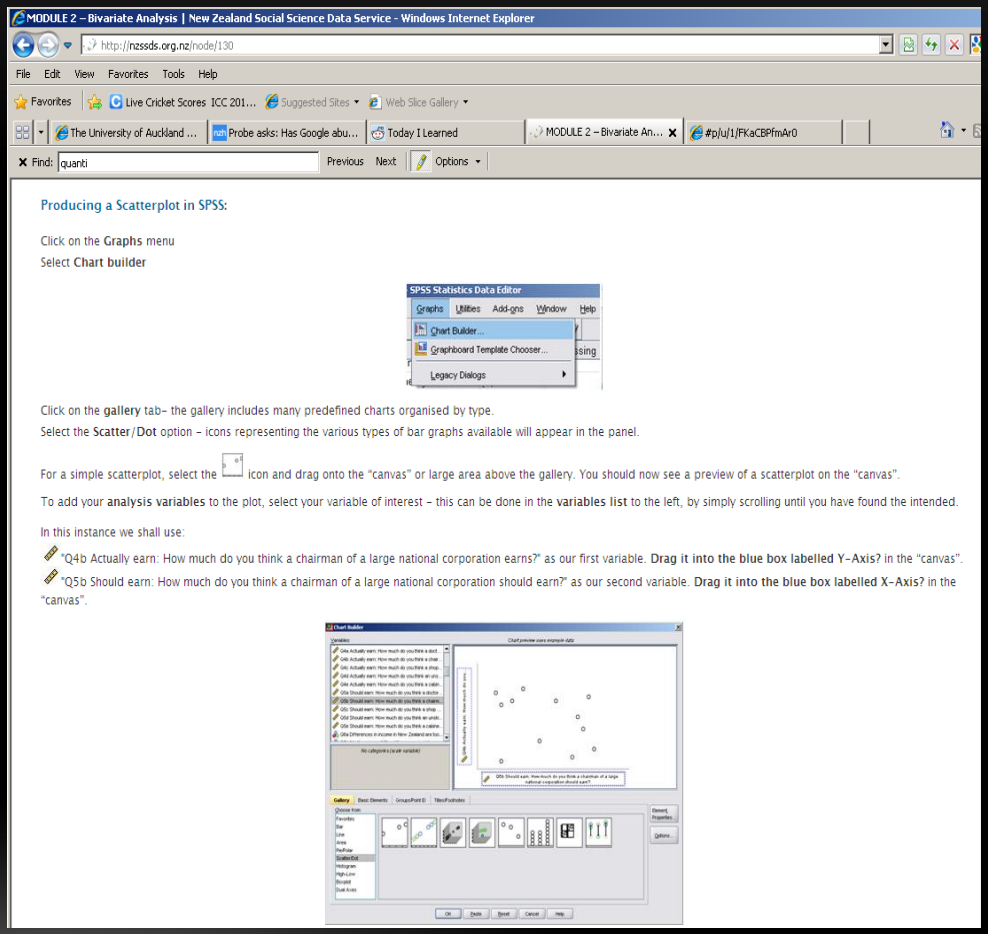
NZSSDS has been used in teaching at The University of Auckland, and these workbooks also aim to facilitate the learning of basic SPSS skills, providing self-teaching and/or support materials, and built around various social science survey data sets from NZSSDS.

The tutorial template

Each analysis tutorial consists of at least two key components.

- A set of explicit written instructions with **bold** keywords.
- Accompanying pictures provide a visual representation of the various key steps.

For more complex analysis, information related to the interpretation of the output is provided



Presentation Outline

THE UNIVERSITY OF AUCKLAND
NEW ZEALAND
Te Whare Wānanga o Tāmaki Makaurau

- Colloquium Purpose
- Capacity Building Theme
- **“Open Science” Theme**
  - **Data service**
  - **Enhanced publications**
  - **Health system “Collaboratory”**
  - *Online teaching resources
- Colloquium

“Open Science” Data Holdings

NZSSDS
Social Science Data Service

- 60 data sets archived including
  - New Zealand Election Study data (1987–2008) Professor Jack Vowles
  - New Zealand pre-election surveys & other regional voting surveys (1972–1981)
  - International Social Survey Programme data for New Zealand (1991–2009) – Professor Philip Gendall
  - World Internet Project for New Zealand (2007 & 2009) Professor Allan Bell
  - Health data sets (adverse events, oral health care, primary care, sexual health) – Professor Peter Davis

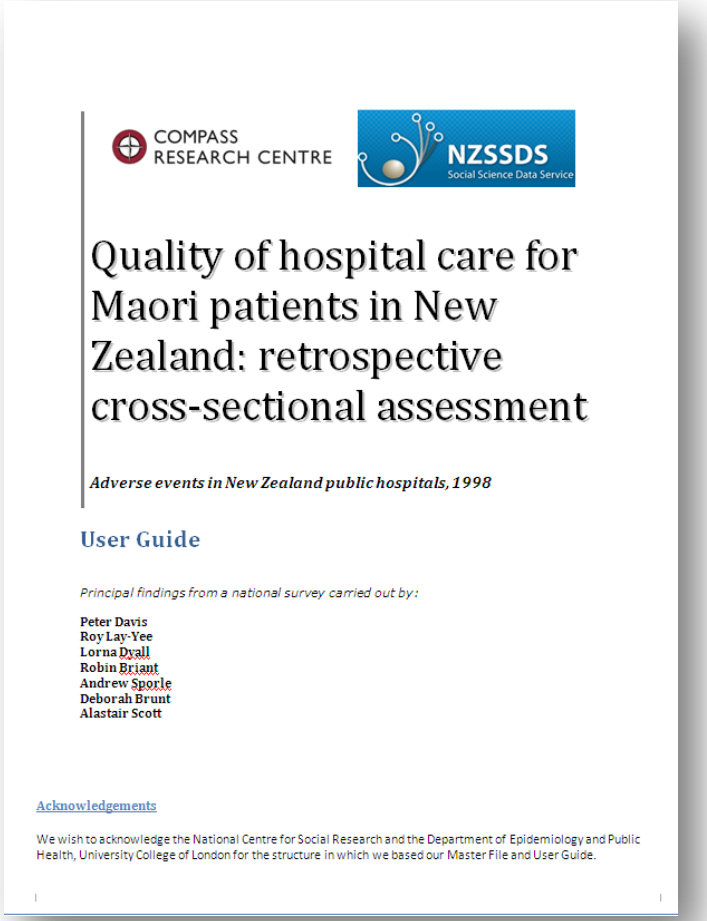
“Open Science” enhanced publications

- **Purpose:**

  Introduce the background & analysis of the study to the users who intend to plan on extending the analysis of the study

- **Divided into five sections:**

  1. Article Details
     - Background, Objective, Methods, Conclusion
  2. Purpose of Metadata
  3. Using the Data
     - Variables on the files
  4. Analyses
  5. Data Dictionary
     - Original Variables
     - Derived Variables


COMPASS RESEARCH CENTRE

NZSSDS Social Science Data Service

Quality of hospital care for Maori patients in New Zealand: retrospective cross-sectional assessment

Adverse events in New Zealand public hospitals, 1998

User Guide

Principal findings from a national survey carried out by:

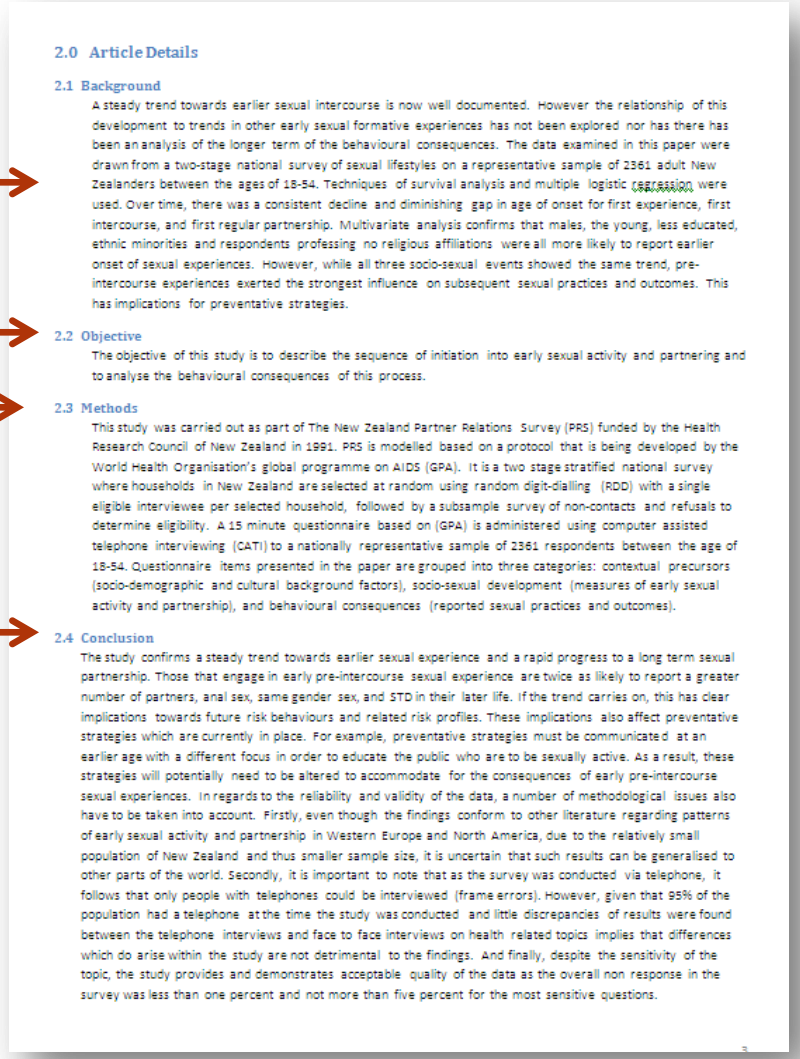
Peter Davis
Roy Lay-Yee
Lorna Dyall
Robin Briant
Andrew Sporle
Deborah Brunt
Alastair Scott

Acknowledgements

We wish to acknowledge the National Centre for Social Research and the Department of Epidemiology and Public Health, University College of London for the structure in which we based our Master File and User Guide.

Article Details

- **Background**
  - Contains a brief abstract of the study
- **Objective of the study**
- **Methods**
  - Survey that the study based on
  - Survey design
- **Conclusion**
  - Implications
  - Reliability & Validity of the data



2.0 Article Details

2.1 Background

A steady trend towards earlier sexual intercourse is now well documented. However the relationship of this development to trends in other early sexual formative experiences has not been explored nor has there has been an analysis of the longer term of the behavioural consequences. The data examined in this paper were drawn from a two-stage national survey of sexual lifestyles on a representative sample of 2361 adult New Zealanders between the ages of 18-54. Techniques of survival analysis and multiple logistic regression were used. Over time, there was a consistent decline and diminishing gap in age of onset for first experience, first intercourse, and first regular partnership. Multivariate analysis confirms that males, the young, less educated, ethnic minorities and respondents professing no religious affiliations were all more likely to report earlier onset of sexual experiences. However, while all three socio-sexual events showed the same trend, pre-intercourse experiences exerted the strongest influence on subsequent sexual practices and outcomes. This has implications for preventative strategies.

2.2 Objective

The objective of this study is to describe the sequence of initiation into early sexual activity and partnering and to analyse the behavioural consequences of this process.

2.3 Methods

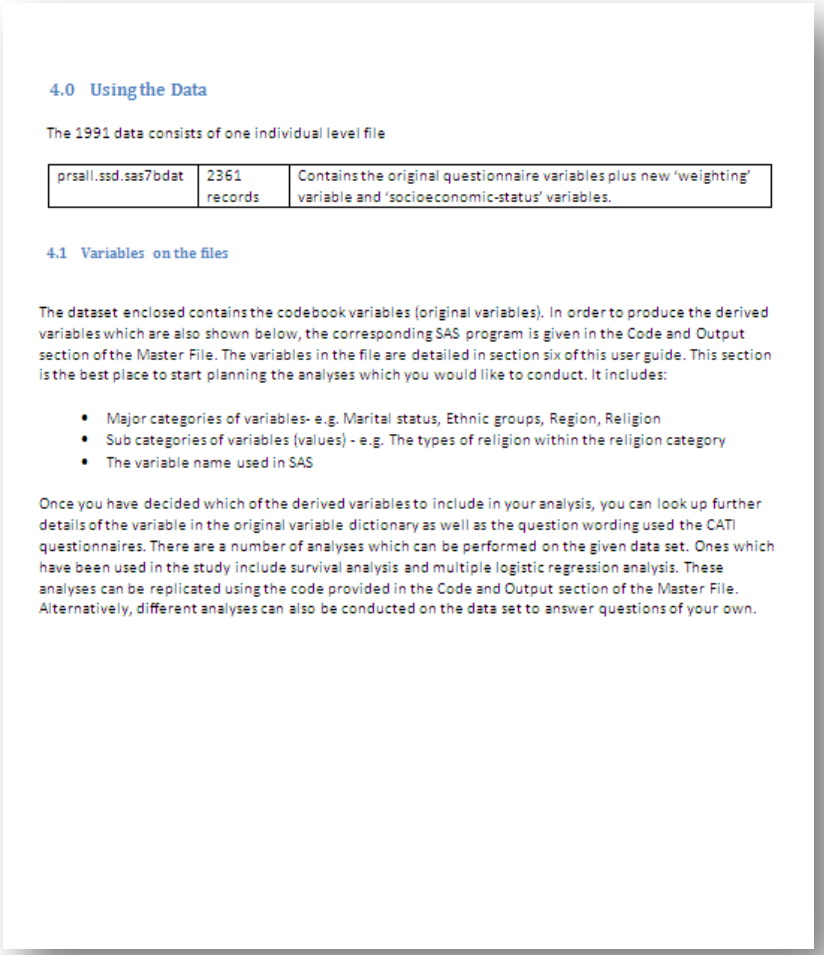
This study was carried out as part of The New Zealand Partner Relations Survey (PRS) funded by the Health Research Council of New Zealand in 1991. PRS is modelled based on a protocol that is being developed by the World Health Organisation's global programme on AIDS (GPA). It is a two stage stratified national survey where households in New Zealand are selected at random using random digit-dialling (RDD) with a single eligible interviewee per selected household, followed by a subsample survey of non-contacts and refusals to determine eligibility. A 15 minute questionnaire based on (GPA) is administered using computer assisted telephone interviewing (CATI) to a nationally representative sample of 2361 respondents between the age of 18-54. Questionnaire items presented in the paper are grouped into three categories: contextual precursors (socio-demographic and cultural background factors), socio-sexual development (measures of early sexual activity and partnership), and behavioural consequences (reported sexual practices and outcomes).

2.4 Conclusion

The study confirms a steady trend towards earlier sexual experience and a rapid progress to a long term sexual partnership. Those that engage in early pre-intercourse sexual experience are twice as likely to report a greater number of partners, anal sex, same gender sex, and STD in their later life. If the trend carries on, this has clear implications towards future risk behaviours and related risk profiles. These implications also affect preventative strategies which are currently in place. For example, preventative strategies must be communicated at an earlier age with a different focus in order to educate the public who are to be sexually active. As a result, these strategies will potentially need to be altered to accommodate for the consequences of early pre-intercourse sexual experiences. In regards to the reliability and validity of the data, a number of methodological issues also have to be taken into account. Firstly, even though the findings conform to other literature regarding patterns of early sexual activity and partnership in Western Europe and North America, due to the relatively small population of New Zealand and thus smaller sample size, it is uncertain that such results can be generalised to other parts of the world. Secondly, it is important to note that as the survey was conducted via telephone, it follows that only people with telephones could be interviewed (frame errors). However, given that 95% of the population had a telephone at the time the study was conducted and little discrepancies of results were found between the telephone interviews and face to face interviews on health related topics implies that differences which do arise within the study are not detrimental to the findings. And finally, despite the sensitivity of the topic, the study provides and demonstrates acceptable quality of the data as the overall non response in the survey was less than one percent and not more than five percent for the most sensitive questions.

Using the Data

- Description of the datasets
- Variables on the files
  - Information on how to re-run or extend the current analysis
- Comments on the original and the derived variables



4.0 Using the Data

The 1991 data consists of one individual level file

prsall.ssd.sas7bdat	2361 records	Contains the original questionnaire variables plus new 'weighting' variable and 'socioeconomic-status' variables.

4.1 Variables on the files

The dataset enclosed contains the codebook variables (original variables). In order to produce the derived variables which are also shown below, the corresponding SAS program is given in the Code and Output section of the Master File. The variables in the file are detailed in section six of this user guide. This section is the best place to start planning the analyses which you would like to conduct. It includes:

- Major categories of variables- e.g. Marital status, Ethnic groups, Region, Religion
- Sub categories of variables (values) - e.g. The types of religion within the religion category
- The variable name used in SAS

Once you have decided which of the derived variables to include in your analysis, you can look up further details of the variable in the original variable dictionary as well as the question wording used the CATI questionnaires. There are a number of analyses which can be performed on the given data set. Ones which have been used in the study include survival analysis and multiple logistic regression analysis. These analyses can be replicated using the code provided in the Code and Output section of the Master File. Alternatively, different analyses can also be conducted on the data set to answer questions of your own.

“Open Science”
A health system “collaboratory”

Definition – Wikipedia

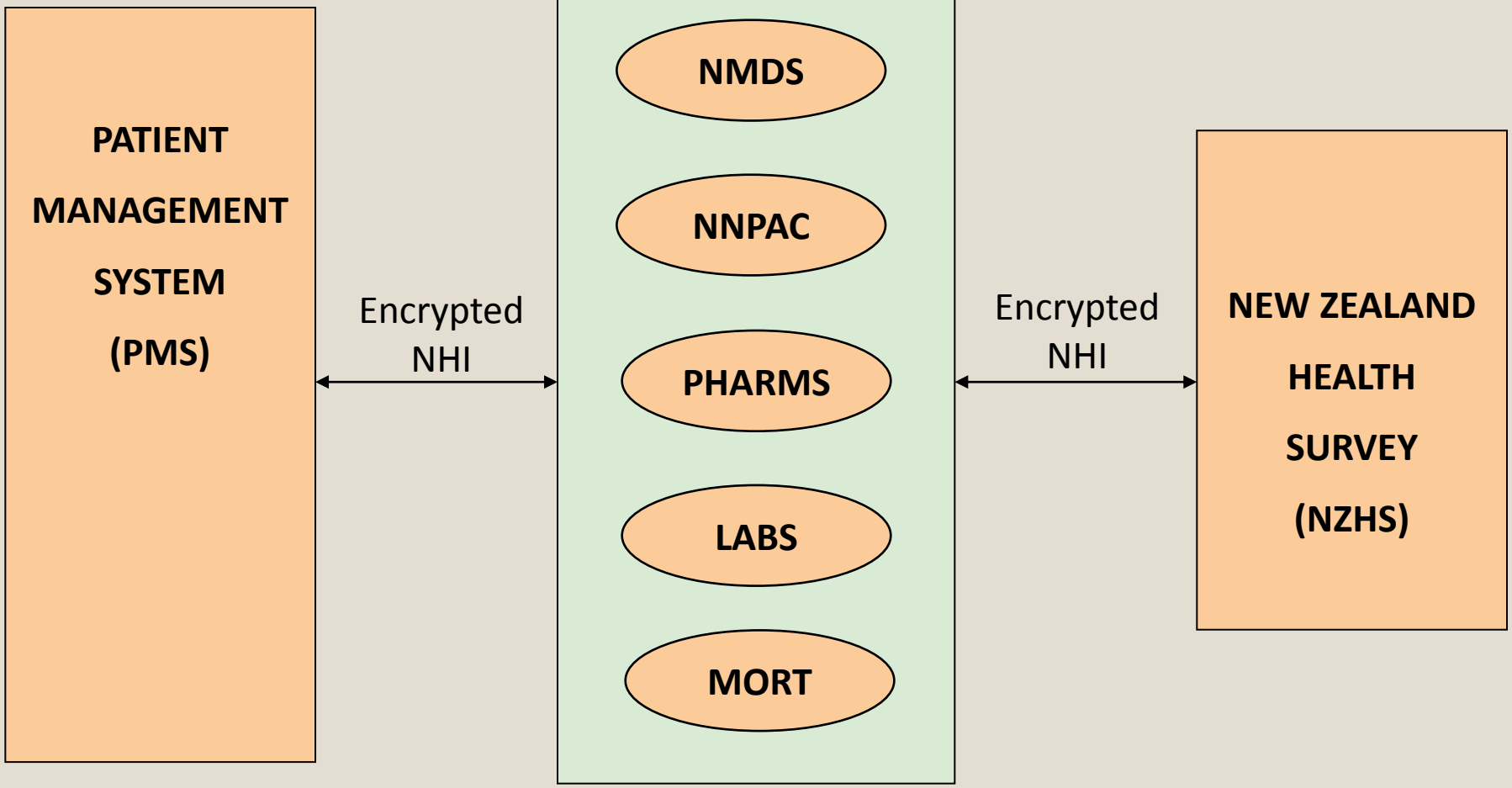
"An environment where participants make use of computing and communication technologies to access shared instruments and data, as well as to communicate with others."

Elements of a “Collaboratory”

- **Health System “Collaboratory”**

1. **Accessing Publicly-funded Data**
2. *Sharing a Policy-relevant Framework
3. *Management and governance arrangements
4. **Engaging Diverse Communities**

Accessing Publicly-funded Data



Engaging Diverse Communities

- **Scientists and researchers**
  - Training and collaboration
- **Māori and Pacific**
  - Engagement, responsiveness and training
  - Healthcare advisory groups
- **Health professionals**
  - Engagement and application
- **Policy makers**
  - Changes to policy settings
- **Managers**
  - Performance improvement agenda

Presentation Outline

THE UNIVERSITY OF AUCKLAND
NEW ZEALAND
Te Whare Wānanga o Tāmaki Makaurau

- Colloquium Purpose
- Capacity Building Theme
- “Open Science” Theme
- **Colloquium**

Colloquium Outline

THE UNIVERSITY OF AUCKLAND
NEW ZEALAND
Te Whare Wānanga o Tāmaki Makaurau

09.45 INTRODUCTION [Peter Davis]

10.00 Policy Monitoring and Evaluation

- Monitoring Socio-demographic Risk (FoRST)
- Assessing Policy Options for Demographic Ageing (HRC)
- *Professor Peter Davis (Director, COMPASS)*

11.00 Simulation Modelling and Public Policy

- Developing a Simulation Tool for Policy-Makers (FoRST)
- *Roy Lay-Yee (Senior Research Fellow, COMPASS)*
- *Dr. Barry Milne (Research Fellow, COMPASS)*

12.00 LUNCH BREAK

13.00 Health Services Research and Policy

- Evaluating Performance in the Public Hospital Sector (HRC)
- *Dr. Phil Hider (University of Otago, Christchurch)*
- *Dr. Jaikishan Desai (Victoria University Wellington, HSRC)*
- *Dr. Barry Milne (University of Auckland, COMPASS)*

14.30 CONCLUSION

New Zealand
The University of Auckland