

2008 NHMRC Project Grant Proposals using CHeReL: analysis of assessor and GRP reports

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Aim and Scope

■ Aim

What can we learn from the 2008 funding round for 2009 concerning:

- CheReL services
- The data sources

■ Scope of the review

NHMRC project grants submitted in 2008 proposing to use the CHeReL for linkage of routinely collected data

Method

- CIAs of 7 out of the 9 NHMRC project grants submitted in 2008 to use linked routinely collected data allowed me to review:
 - Project synopsis
 - Assessors comments
 - Final GRP reports

- Reviewed reports for
 - Issues raised about data linkage
 - Issues raised about data sources & variables that will be used in the analysis

NB: not specific methodological issues

Overview of Topics of the 6 Grants Included in the Review

- Obesity, hospitalisation and ageing
- Cervical cancer, fertility and pregnancy outcomes
- Cancer incidence among illicit drug users
- Intervention study to improve functioning and prevent falls after hip fracture
- Influence of migrant status and acculturation on ageing and health
- Factors that predict the rates of hospitalisation and outcomes of care in Aboriginal people
- Quality of primary care and hospitalisation for elderly patients with diabetes

Overview of the Proposed Datasets

- NSW Admitted Patient Data Collection (APDC)
- NSW Emergency Department Data Collection (EDDC)
- 45 and Up Study (+PBS and MBS)
- NSW Central Cancer Registry
- NSW Pap Test Register
- Birth and Death Registers
- ABS Mortality Data
- Specific datasets concerning: AIDS and Pharmaceutical Drugs of Addiction System (PHDAS)

Success Rate

- 2 out of the 9 grants submitted proposing to use CHeReL were successful = 22%
- This compares favourably with the overall success rate for NHMRC project grants commencing in 2009*
 - Public health success rate = 24%
 - Health services research success rate = 16.5%

*http://www.nhmrc.gov.au/grants/rounds/projects/_files/2009_Project_Grant_Statistics.pdf

Strengths Relating to CHeReL & Datasets

- Quality of the data sources and linkage methods
(Mentioned in 2 GRP summary reports)
- Routinely collected datasets increase feasibility and reduce costs
- Use of multiple, existing and well established datasets
“The elegance of this study is that the cohort has already been assembled and the data collected routinely by other parties” (Assessor)

Weaknesses/Queries Relating to CHeReL & Datasets

- General comments on completeness and quality of the routine data
 - Timely updating of data in routinely collected data sets
“What is the time delay between receipt of abnormal smear and update of registries?” (Assessor)
 - Validation studies to support variables of interest
“Has any validation been undertaken on the diagnosis in the admitted patient data collection” (Assessor)
- Specific issues about quality of datasets concerned
 - accuracy of past medical history
 - accuracy of Indigenous status in NSW
 - ability to identify interstate hospital admissions and deaths
 - reliability of socio-economic status measures
 - adjusting for co morbidity using routinely collected data
“co-morbidity score will only be available for people who have had at least one hospitalisation in the year in which the score is calculated”. (Assessor)

Weaknesses/Queries Relating to CHeReL & Datasets

- More detail required data analysis methods
“The linking methodology is well described and appears sound. The methods for analysis of the data are poorly developed and described” (Assessor)
- Evidence of data custodian approval questioned
- Quality of linkage for the smaller clinically specific data sets
“Given the limited information in the National Aids Registry, what is the quality of the linkage?” (Assessor)

Weaknesses/Queries Relating to 45 and Up and Medicare Data

- Issues relating to the 45 and Up Study

- Representativeness of the cohort was queried

“The major problem is the representativeness of the study sample given the low response rate and the exclusion of people from NESB and presumably those with low health literacy.” (Assessor)

“Demonstrate the representativeness of the 45 UP cohort”(GRP report)

- More justification required about costs of access to 45 and Up Study data
- Queries about consent rate for PBS and MBS linkage

- Issues relating to Medicare Australia Data (PBS/MBS)

- Capturing hospital outpatient care in settings without Medicare Australia coverage
- Families with more than one Medicare Australia card and dependents leaving home
- PBS lack of coverage for scripts where a Government subsidy is not paid

Comparing 2008 Results with 2007 Review Results

- In contrast to the results in the 2007* review, in 2008 there were no comments made on the quality of the CHeReL Data Linkage Methods. Therefore it seems that the linkage method is now being well described by researchers.
- In 2008 as in 2007 the main issues consistently being raised by reviews are:
 - Sufficient completeness and quality of the routine data
 - Specific issues about quality of datasets concerned

*<http://www.saxinstitute.org.au/contentUploadedByEWeb/Files/7%20Haines3%2Epdf>

Implications – Continue to include:

- Details of the robustness of linkage methods
- Strength of the NSW Sample size - population coverage & representativeness
- Benefits of using multiple datasets
- Details on methodological weakness and approaches to address them:
 - *“The researchers are clearly aware of the problems with the data they propose to use to answer the research question and have a very sound approach to addressing them.”* (GRP report of a funded application)

Implications – Start to include:

- Details on the quality and extent of data collections
- Evidence of custodian approvals and being able to meet timeframes
- Validation studies that relate to your variables of interest

Specifically regarding the 45 and Up Study provide:

- Clear descriptions about the value of large scale and long term cohort studies where there is high heterogeneity and opportunities to compare across different risk factors over time.
- Provide consent rates for linkage to Medicare Australia data
- Clear description of the 45 and Up Study business rules given it is an open access data resource