

# 2007 NHMRC Project Grant Proposals using CHeReL: analysis of assessor and GRP reports

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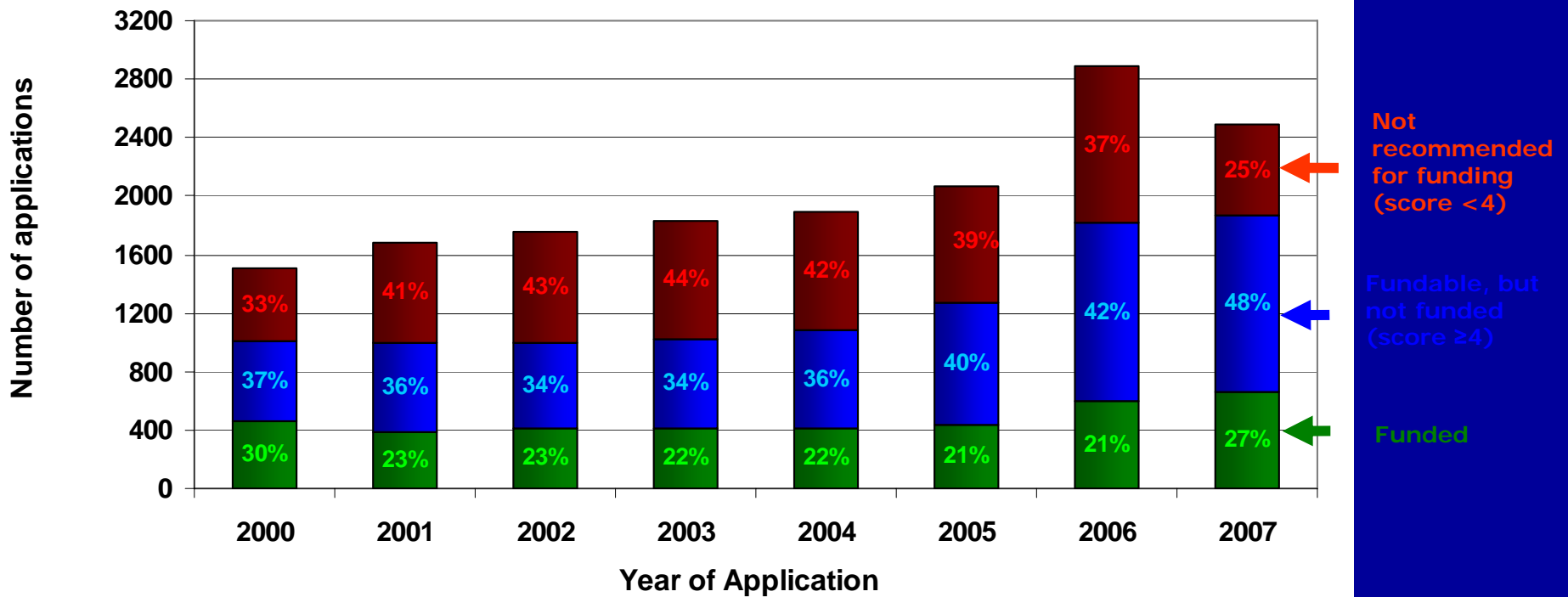
# Presentation Outline

- NHMRC project grants
- Western Australian Data Linkage System
- 2007 NHMRC grants using CHeReL
- Strengths and weaknesses identified by assessors
- Implications

# NHMRC funding

	2000		2007		Percent Increase (%) 00' - 07'	Absolute Increase (\$m) 00' - 07'
	No Grants	Approx Commitment (\$m)	No Grants	Approx Commitment (\$m)		
<b>Basic Science</b>	312	\$97	575	\$341	351%	\$244
<b>Clinical Medicine &amp; Science</b>	164	\$38	367	\$169	445%	\$131
<b>Health Services</b>	13	\$2	43	\$24	1200%	\$22
<b>Public Health</b>	85	\$24	142	\$87	362%	\$63
<b>Preventative Medicine and Science</b>	13	\$2	22	\$8	400%	\$6
<b>Other</b>	82	\$2	53	\$8	400%	\$6
<b>Total</b>	<b>669</b>	<b>\$165</b>	<b>1200</b>	<b>\$636</b>	-	-

# NHMRC Project Grants - Success rates



# Western Australian Data Linkage System – trackrecord

- Total grant funding to WA for data linkage studies since 1995 well exceeds \$A50 million
- 450 project applications
- 5 applications in 1995 to 46 in 2003
- 708 research outputs, 172 of which are peer-reviewed journal articles (1995-2003)

# Review 2007 NHMRC project grants using CHeReL

- Aim and scope of the review:

What can we learn from the 2007 funding round for 2008 concerning:

- CHeReL services
  - The data sources
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- CIAs of 7 NHMRC project grant proposals allowed me to review:
    - 1<sup>st</sup> and 2<sup>nd</sup> spokesperson reports
    - Independent assessor reports
    - Final GRP reports

# Overview of 7 Grants Submitted in 2007– topics

- Birth weight and risk of childhood morbidity and mortality
- Recurrent morbidity in consecutive pregnancies
- Patterns of care, outcomes and costs for Stroke care
- Fracture risk in women taking contraceptives
- Influence of migrant status and acculturation on age and health
- Cost of hospital and aged care services in the last year of life
- Quality of primary care, hospitalisation for patients with diabetes

# Overview of 7 Grants Submitted in 2007

## – Datasets

- NSW Midwives Data Collection (MDC)
- NSW Admitted Patient Data Collection (APDC)
- NSW Emergency Department Data Collection (EDDC)
- 45 and up (+PBS and MBS)
- NSW Central Cancer Register
- Birth and Death Registers
- ABS Mortality Data
- Home and Community Care (HACC)
- Community aged care packages (CACPS)
- Residential Aged Care Services (RACS)
  
- Specific datasets concerning: birth defects and diabetes

# Strengths relating to CHeReL & datasets

- Complete population coverage and large sample size made possible through comprehensive record linkage
  - *“The amount of data from Australia’s most populous state is very large and will be generally more representative of national patterns of care” (SPR)*
- Advanced data linkage methods
  - *“A particular strength is the clear separation between the linkage process (blind of medical history) and analysis process (blind to any identifying information)” (GRP).*
  - *“The committee regarded the proposed data linkage, if successful, as being of considerable importance to the setting of policy and financial planning for the future” (GRP)*
- Use of multiple and well established datasets
  - Using 2 or more datasets to minimise impact of missing data for outcomes (e.g. MDC, APDC)
  - Building on well established 45 and up study will be value for money
  - The power of being able to link up the 45 & up study, MBS and APDC

# Weaknesses/queries relating to CHeReL & datasets

- **Sufficient completeness and quality of the routine data**
  - *“The committee regrettably noted that the principal concern about this application is with the source data sets” (GRP)*
  - *“The central issue is the validity of the various health data parameters that are routinely collected” (SPR)*
  - *“Have they performed any pilot work to assess the accuracy of the data being collected for their analyses from these different sources?”*
  - *“...it would be important to provide evidence about the validity of the information held in the various databases that are to be linked” (GRP)*
- **Specifics issues about quality of datasets concerned**
  - scope of population captured (esp. more specialised datasets)
  - attrition due to moving interstate and overseas
  - accuracy of Indigenous status in NSW
  - how to deal with deceased subjects? (e.g. canvassing using the Australian Death Index to obtain data on mortality)
  - how to deal with missing data?

# Weaknesses/queries relating to CHeReL & datasets

- Reliability and Feasibility of CHeReL Data Linkage methods
  - How reliable is CHeReL? Will it be able to perform the linkage of data within the timeframe suggested?
  - Also how many multiple matches might arise with probabilistic matching?
  - *“Evidence that these databases have been successfully linked would add to the feasibility of this application” (SPR)*
- Guaranteed availability of datasets with specified timeframe
  - *“Is there any guarantee that Medicare Australia will be able to provide 2002-2006 data for use on 2008?” (SPR)*
  - Time taken to obtain data is a concern
  - MBS, PBS and aged care data – unknown

# Implications

- Continue to include
  - robustness of linkage methods
  - NSW Sample size - population coverage & representativeness
  - Evidence of custodian approvals and being able to meet timeframes
  - Use of multiple datasets (*“use of multiple datasets adds robustness to the study”* SPR)
- Start including
  - Details on the quality and extent of data collections
  - Feasibility assessment of the data linkage
  - Validation studies?
    - “The inclusion of a validation study will significantly increase the confidence in the study”* (spokes person report of funded study)
    - “validation studies to justify feasibility in terms of data availability would be highly desirable”* (GRP suggestion for improvement)