





**Australian Longitudinal Study  
on Women's Health**

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**Mars and Venus: Does Gender Matter in Ageing?**  
Newcastle, 9 & 10 July 2007



➤ **Overview of the Study**

- Aims
- Themes
- Design
- Progress so far

➤ **Examples**

- Demographic and social changes
- Linking ALSWH survey data and Medicare data
- Hysterectomy – patterns

➤ **Strengths and limitations of the study**



➤ **Longitudinal cohort study of the health and well-being of Australian women in 3 age groups**

➤ **Designed to run for at least 20 years (1996-2015+)**

➤ **More than 40,000 participants from all parts of Australia**


➤ **Funded by Australian Department of Health & Ageing**

➤ **Conducted by the Universities of Queensland and Newcastle**




**Themes**

- **Physical and mental health, symptoms, diagnoses**
- **Health service use, access and satisfaction**
- **Health related behaviours**
- **Social factors related to health and well-being**



**Aims**

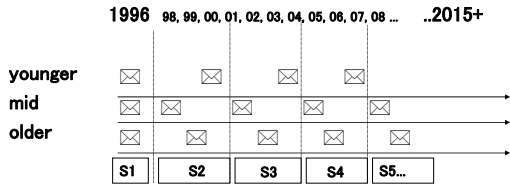
- **To examine the social, psychological, physical and environmental factors which determine good health, and those which cause ill-health, in women throughout adult life**
- **To contribute to the development of policy and practice in key areas for women's health**
  - **National Health Priority Areas**
  - **Health Targets e.g. Continence, Quality Use of Medicines, National Tobacco Strategy, Obesity Taskforce, Framework for Physical Activity, ...**



**Three age groups: 18–23, 45–50 and 70–75 years in 1996**

- **Sampled randomly from Medicare database**
- **Systematic over-sampling in rural/remote areas**
- **Postal surveys every 3 years**
- **Linkage to Medicare for health service use data**
- **Additional sub-studies on particular issues**

## Study Design



Currently concluding S5 for mid-aged women and about to pilot S5 for the older women

## Cohorts – age in 1996, sample size and responses

- Younger 18-23
  - N=14,247 at S1
  - 69% response at S2
  - 65% response at S3
  - 71% response at S4 (ages 28-33)
  - N=13,716 at S1
  - 91% response at S2
  - 84% response at S3
  - 84% response at S4
  - ~ 77% so far for S5 (ages 56-61)
- Mid-aged 45-50
  - N=12,432 at S1
  - 90% response at S2
  - 85% response at S3
  - 82% response at S4 (ages 79-84)

## Methods

- Quantitative self reported data from postal surveys
- Qualitative data – comments written on surveys
- Sub-studies – special topics
  - Postal surveys
  - Phone interviews
- Methodological research
  - Validation of measures
  - Analysis of longitudinal data (incl. missing data)

## Representativeness of sample

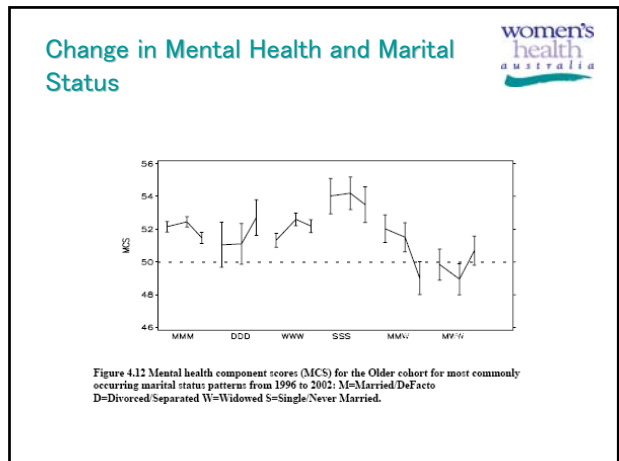
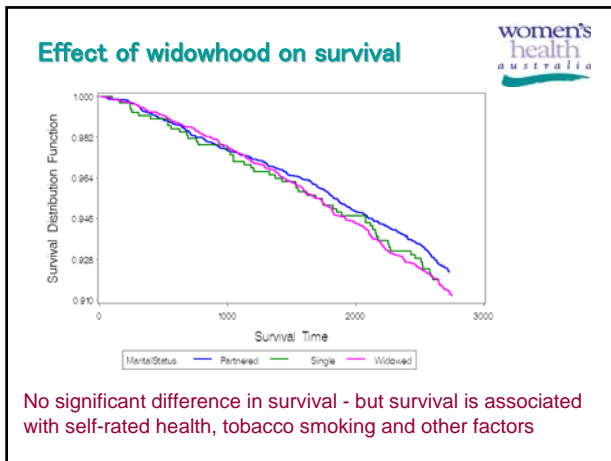
- Compared initial sample with 1996 census for same demographic variables
- Compare continuing participants with those who have dropped out and with subsequent censuses
- Participants tend to be somewhat
  - Better educated
  - Australian born
  - Among mid-aged and older women, more likely to be married
  - Healthier than those who drop out

## Examples

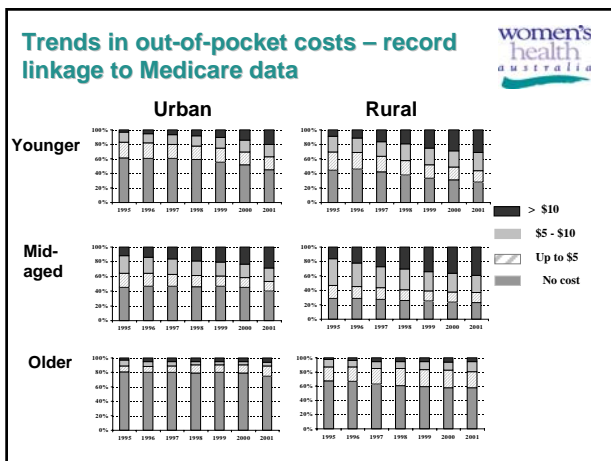
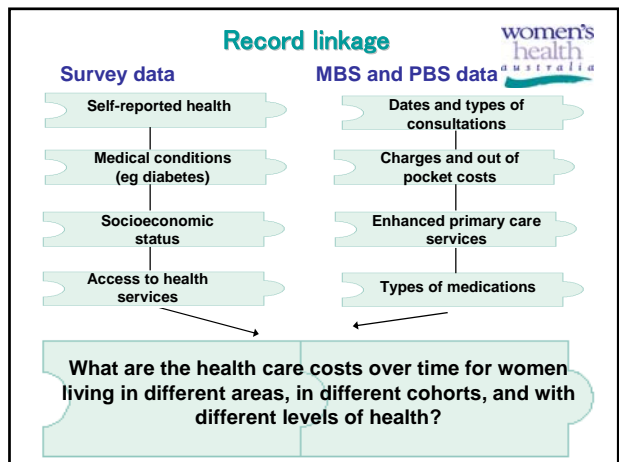
- Demographic and social changes
- Record linkage of ALSWH survey data and Medicare data
- Hysterectomy patterns

## Widowhood in the older cohort

Survey	Married	Widowed	Other
S1	54.6	35.2	10.2
S2	50.5	40.4	9.1
S3	44.0	47.0	9.0
S4	36.2	55.5	8.3



- ### Opportunities for life-course epidemiology
- Longitudinal data
  - Social context
  - Measures of health and morbidity
  - Outcomes - e.g. link to National Death Index



- ### Opportunities from record linkage
- Equity in use of medical services
    - Geography
    - Socio-economic position
    - Medical conditions
  - Appropriateness of medical management
  - Health related outcomes – potentially HACC, disability, institutionalization

### Patterns of hysterectomy



- Do rates differ by area of residence?
- By other demographic factors – e.g. country of birth and socio-economic position?
  - Comparison with British cohorts
- By other health variables, e.g. weight?

### Hysterectomy patterns – mid-aged women at survey 1



University degree	Trade/cert	Second. school	Not complete second
11%	21%	23%	31%
Capital cities	Other metropolitan	Rural	Remote
20%	29%	23%	28%
Aust.born	Europe	Asia	Other
23%	21%	15%	26%

Byles, Mishra, Schofield. Health & Place, 2000

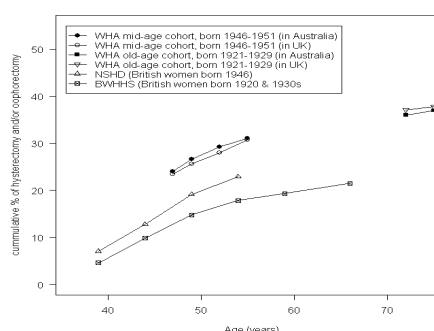
### Comparison with British cohorts



- ALSWH mid aged cohort – born 1946-51
- National Survey of health and Development – born 1946
- ALSWH older cohort – born 1920-26
- British Women’s Heart and Health Study – born 1920s and 1930s

Compare women born and living in Australia with those born in Britain at the same time and living in Australia and those born and living in Britain

### Hysterectomy rates in Australia and the UK



### Hysterectomy patterns – socio-economic position, e.g. age left school – odds ratios and 95% CIs



Age left school (years)	ALSWH mid-aged women	ALSWH older women
19 or more (ref)	1	1
17-18	1.27 (0.96, 1.69)	1.39 (0.94, 2.04)
15-16	2.01 (1.54, 2.62)	1.46 (1.01, 2.11)
14 or less	2.57 (1.90, 3.46)	1.57 (1.09, 2.27)

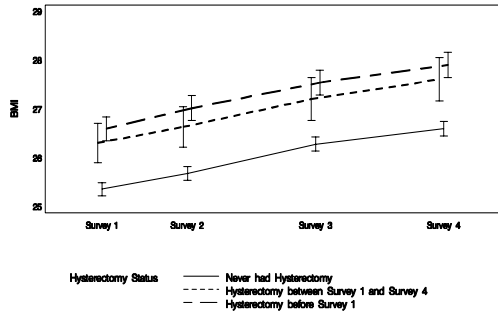
### Hysterectomy patterns – e.g. relative socio-economic position based on age left school – ALSWH and British cohorts



Cohort	ALSWH mid-aged	UK mid	ALSWH older	UK older
Year of birth	1946-51	1946	1920-26	1920-39
OR for relative disadvantage	2.65	1.87	1.19	0.92
95% CI	2.13-3.30	1.10-3.19	0.97-1.46	0.66-1.29

## Hysterectomy patterns – by body mass index and weight change – mid-aged women

Mean BMI by Hysterectomy Status (Mid)



## Patterns of hysterectomy

- Levels determined by medical system
- Socio- economic gradients are increasing across generations
- Weight is a major risk factor

## Opportunities for health services research

- Longitudinal data
- Social context for health
- Self-report and official data on service use

## Summary

### Strengths

- Large sample size
- High retention
- Representativeness
- Linkage with Medicare and potentially other data sources

## Summary

Strengths	Limitations
Large sample size	Self reported measures
High retention	Lack of biomarkers
Representativeness	Breadth rather than depth
Linkage with Medicare and potentially other data sources	<b>Lack of men</b>

women's health australia

Please visit our website at [www.alswh.org.au](http://www.alswh.org.au)

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THE UNIVERSITY OF QUEENSLAND