



Use of linked data in the Australian Longitudinal Study on Women's Health

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Australian Longitudinal Study on Women's Health (ALSWH)

- Longitudinal cohort study of the health and well-being of Australian women *initially* in 3 age groups, now 4 age groups
- Designed to run for at least 20 years (1996-2015+)
- More than 50,000 participants from all parts of Australia
- Funded by Australian Department of Health

ALSWH 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
 - 2010 National Women's Health Policy
 - Health Targets e.g. Continence, Quality Use of Medicines, National Tobacco Strategy, Obesity Taskforce, Framework for Physical Activity, ...

ALSWH cohorts

Department of Health (& Ageing) announced funding for a new cohort as part of the 2010 National Women's Health policy:

1946-51 Cohort

Aged 45-50 in 1996 now aged 63-68



1921-26 Cohort

Aged 70-75 in 1996 now aged 88-93



1973-78 Cohort

Aged 18-23 in 1996 now aged 36-41

1989-95 Cohort



Study design of original ALSWH

- Women in 3 age groups sampled randomly from universal health insurance system (Medicare) database
- Intentional over-sampling in rural/remote areas
- Postal surveys every 3 years

Study design of the New Young Cohort

Women born in 1989-95: aged 18-23 years in 2012-13

- All women with internet access and a Medicare number
- Mainly internet based recruitment
- Dynamic process to ensure representativeness
- Online surveys annually
- Incentives provided

1989-95 cohort recruitment methods in 2012-13 (aged 18-23 years)

- Facebook
- Other web activities
- Referral
- Traditional media
- Fashion promotion

Survey waves and response numbers: year, cohort, age

	1921-26		1946-51		1973-78		1989-95	
year	age	N	age	N	age	N	age	N
1996	70-75	12432	45-50	13715	18-23	14247		
1998			47-52	12338				
1999	73-78	10434						
2000					22-27	9688		
2001			50-55	11226				
2002	76-81	8647						
2003					25-30	9081		
2004			53-58	10905				
2005	79-84	7158						
2006					28-33	9145		
2007			56-61	10638				
2008	82-87	5561						
2009					31-36	8200		
2010			59-64	10011				
2011	85-90	4055						
2012	Six-monthly				34-39	8126	18-23	17069
2013		~2000	62-65	9151			19-24	11461

ALSWH was designed for data linkage

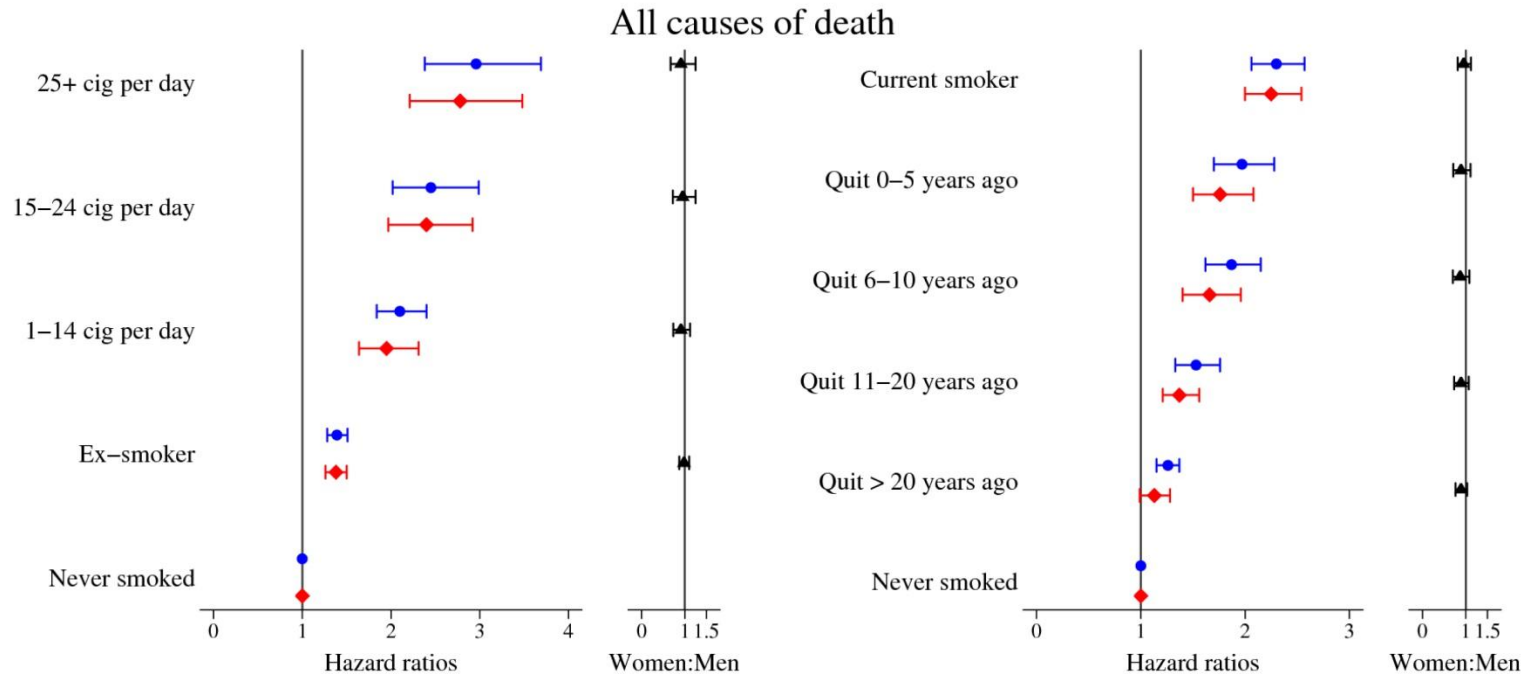
- Necessary for health service use research
- Medicare numbers for all participants
- Explicit (or implicit) consent from participants

Linked data available for analysis

	First Year Available									
	National	NSW	QLD	WA	VIC	SA	ACT	NT	TAS	
National Death Index	1996 - 2013									
Cause of Death (incl. coroners)	1996 - 2011									
MBS	1995									
PBS	~2002									
Aged-care data	vary									
Joint replacement registry	~2003									
Cancer Registry		1994	1982	1982	1982	July 2003	1994			
Perinatal Data		1994	July 2002	1980	NA	NA	1997			
Admitted Patients		2000	July 2002	1970	NA	July 2003	July 2004			

Examples of Use: Deaths from any cause

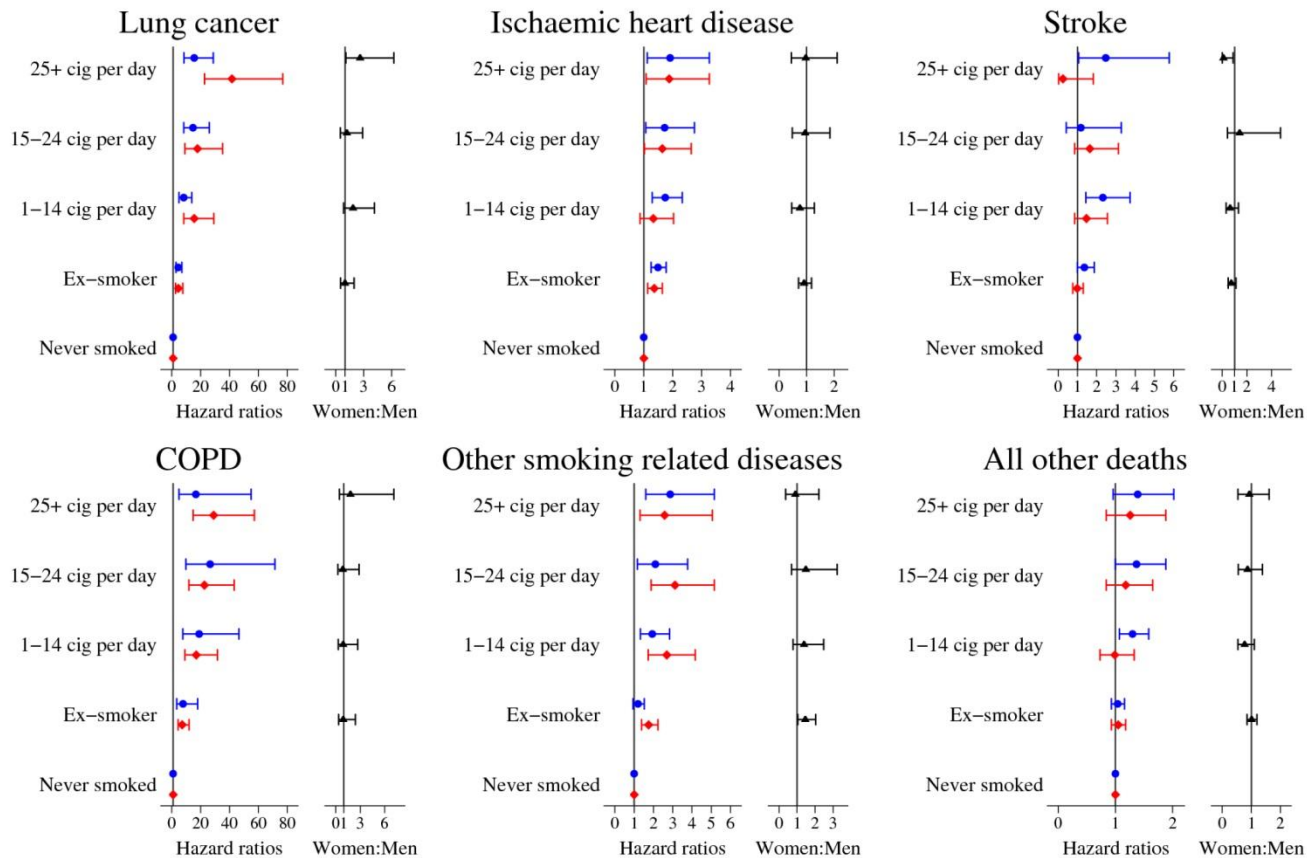
Death rates from smoking are the same for women and men



Jamrozik K, McLaughlin D, McCaul K, Almeida OP, Wong KY, Vagenas D, Dobson A. Women who smoke like men die like men who smoke: findings from two Australian cohort studies. *Tobacco Control* 2011; 20: 258-265

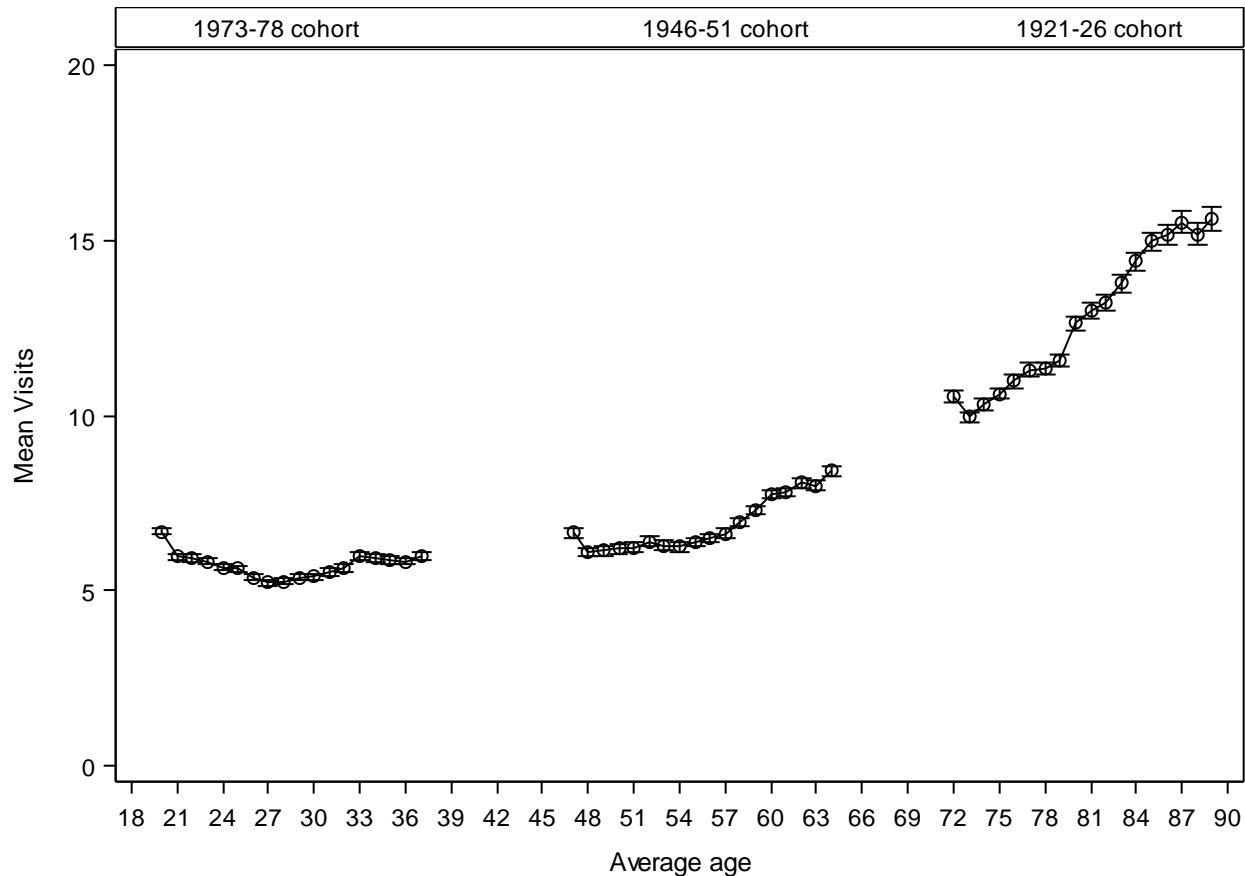
Examples of Use: causes of death

Death rates from smoking are the same for women and men
– for all smoking related causes



Examples of Use: MBS

Annual average number of GP visits by single year of age

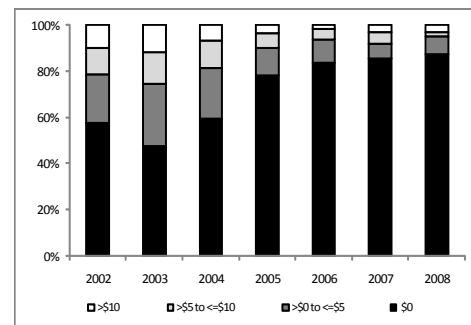
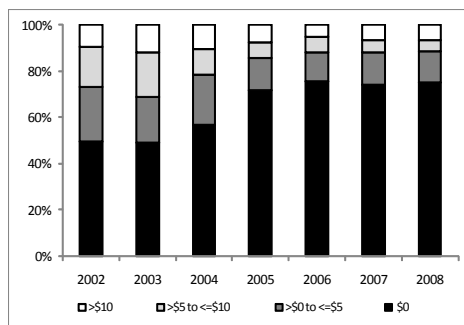
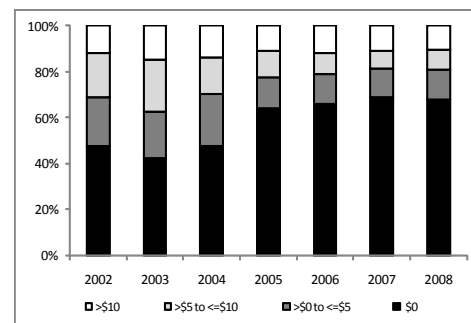
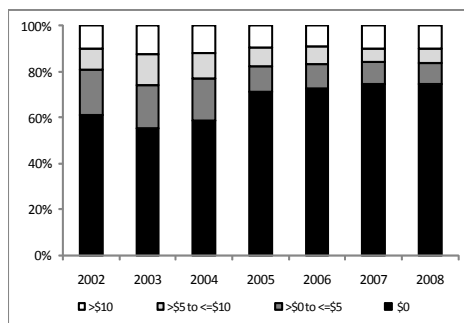
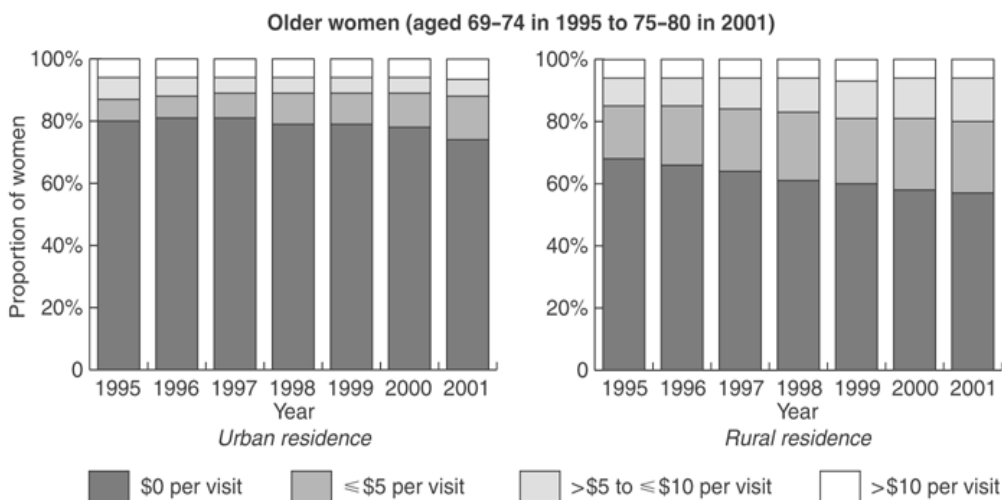


Example: MBS

Out-of-pocket costs for GP visits for women in the 1921-26 cohort by area of residence – showing effect of 2004 changes to incentives for GPs to bulk bill

Young A and Dobson A. *Med J Aust*, 2003; 178: 122-126.

Dolja Gore X, Byles JE, Loxton D, Hockey R, Dobson AJ.. *Med J Aust*, 2011; 195: 203-4



Outer Regional

Remote/Very Remote

Example: Hospital, PBS and Cancer Registry data

Validation of self-reported conditions and health service use
e.g. stroke, breast cancer, asthma, osteoporosis, diabetes,
use of IVF

Side effects of common medications
e.g. statins, proton pump inhibitors

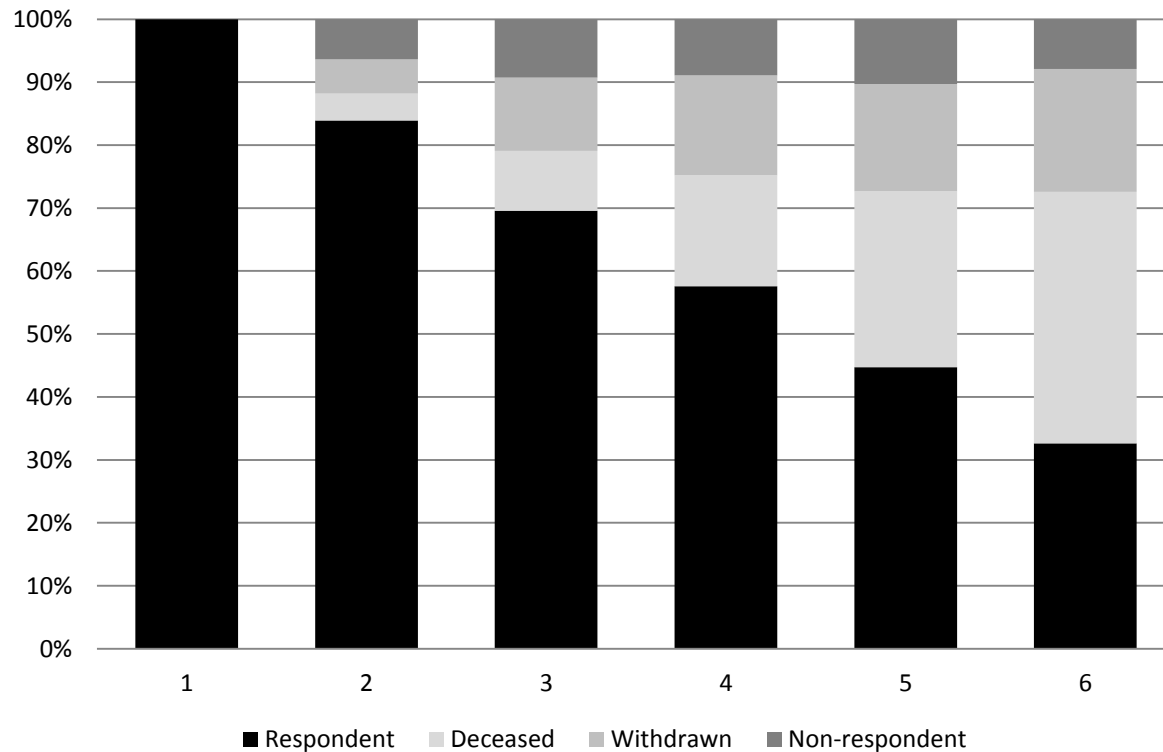
Which women use specific services such as:
Better Access Scheme for people with mental health problems,
diabetes annual cycle of care,
75+ health assessment,
and their health outcomes

women's
health
a u s t r a l i a



<http://www.alsw.org.au/>

Response patterns for cohort born in 1921-26 over first 6 surveys, 1996 to 2011



Increasing proportions dying, withdrawing or not responding