



Living with urinary incontinence: A Longitudinal study of older women

*Julie Byles, Cynthia Miller,
David Sibbritt, Pauline Chiarelli*

Incontinence

- Incontinence is common
- Can be socially debilitating

It affects people socially, emotionally, physically, psychologically and economically.

- Can be prevented
- Can be managed



1996 baseline surveys



Australian Longitudinal Study of Women's Health (ALSWH)

- Leaking Urine:
 - Mid-age women (45-50) N= 14070
 - **15% rarely**
 - **15% sometimes**
 - **5% often**
 - Older women (70-75) N= 12800
 - **13% rarely**
 - **15% sometimes**
 - **7% often**
- Cross-sectional associations between incontinence severity and
 - BMI,
 - other urinary symptoms,
 - smoking,
 - hormone replacement therapy,
 - hysterectomy.
- Many women who had incontinence were employing methods to prevent incontinence that may have other detrimental health outcomes: eg.
 - reduced fluid intake
 - avoid physical activity

Miller et al. Neurourology and Urodynamics, 2003
 Miller et al. International Journal of Behavioral Medicine, 2003
 Brown & Miller. Journal of Science and Medicine in Sport, 2002

Follow-up Surveys



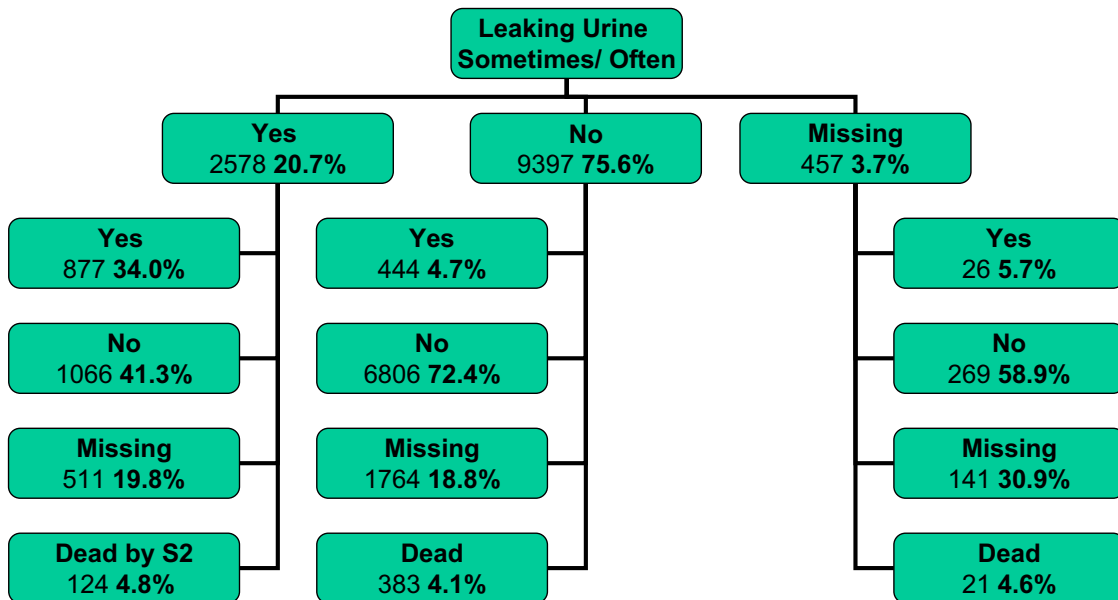
	96	98	99	00	01	02	03	04	05	06	07	08	09	...2015
Younger	☒			☒			☒			☒			☒	
Mid-aged	☒	☒			☒			☒			☒			→
Older	☒		☒			☒			☒			☒		→
	S1		S2			S3			S4			S5		→

At each survey women were asked about:

- ✓ Leaking Urine in past 12 months
- ✓ Urine that burns or stings
- ✓ Constipation
- ✓ Prolapsed vagina, bladder or bowel
- ✓ Comorbid conditions
- ✓ Gynaecological procedures
- ✓ Height and Weight (Body Mass Index)
- ✓ Other health and social circumstances (eg. area, education, need for care)
- ✓ SF-36 Health Profile

Transitions in incontinence

Survey 1 – Survey 2 N= 12432 older women

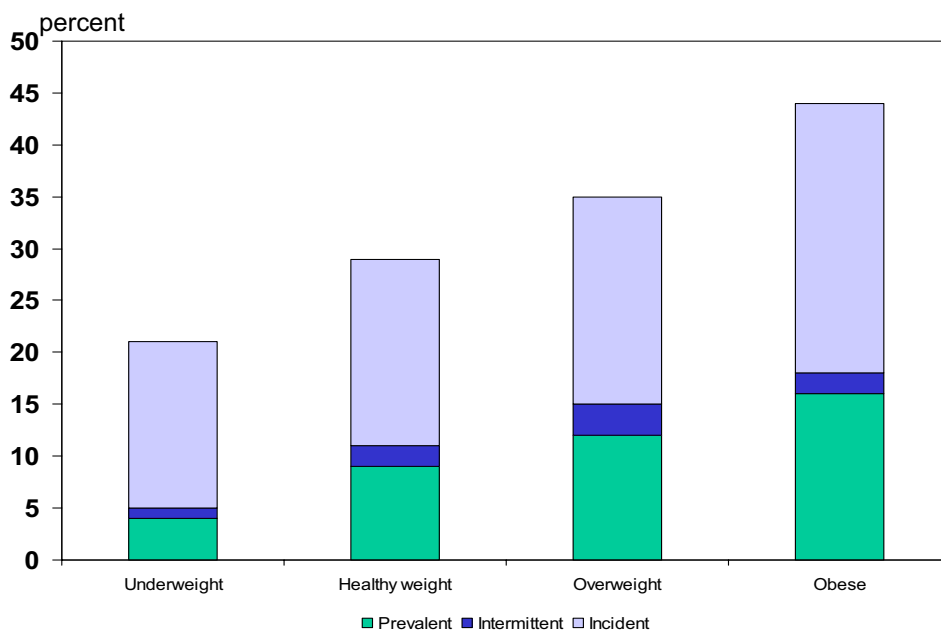


Transition Status S2-S4

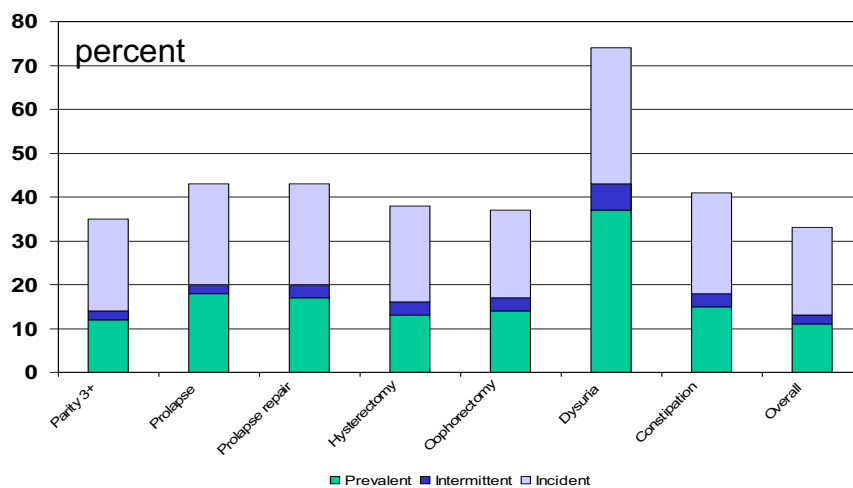
n= 12432 women at S1

Incontinence Sometimes/ often	N	%
Prevalent (Yes at S1)	738	11
Intermittent (Yes at S1; No at S2 or S3)	162	2
Incident (No at S1; Yes at S2 or S3)	1389	20
Never	4612	67
Missing/withdrew (S1-S4)	3667	30%
Dead	1864	15%

Prevalence of incontinence according to BMI at S1



Prevalence of incontinence according to Gynae history at S1



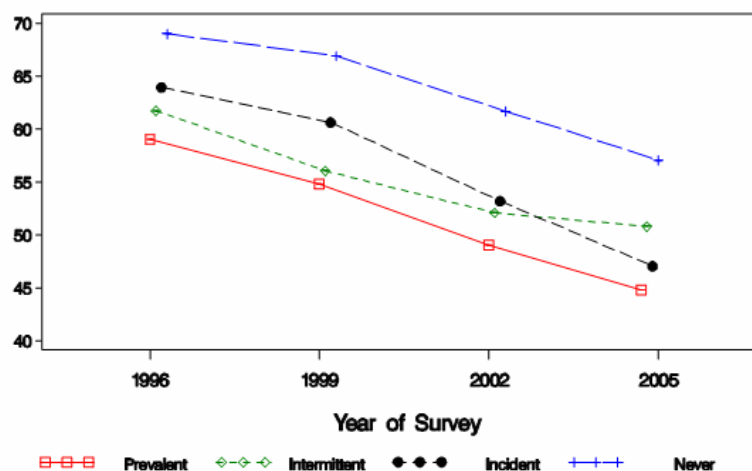
Longitudinal analysis

S2:73-78, S3:76-81, S4: 79-84 years

1999, 2002, 2005 ALSWH surveys (Generalised Estimating Equations):

- **Increase over time** OR S4:S2 1.94 (1.79-2.09)
- **Associated with** (P<0.005)
 - Stroke** OR 1.3 (1.1-1.6)
 - (Dementia)** OR 2.3 (1.6-3.3)
 - Dissat. Phys. Ability** OR 1.7 (1.5-1.9)
 - Falls to ground** OR 1.2 (1.1-1.3)
 - 5+ GP visits** OR 1.2 (1.01-1.3)
 - Prolapse** OR 1.5 (1.4-1.7)
 - Hysterectomy** OR 1.1 (1.1-1.4)
 - Prolapse repair** OR 1.2 (1.1-1.4)
 - Obese BMI** OR 2.2 (1.7-2.8)
 - Dysuria** OR 2.1 (1.9-2.3)
 - Constipation** OR 1.5 (1.3-1.6)
- **No ass'n with:**
 - Education
 - Smoking
 - Diabetes
 - Parity
- **Adjusted for**
 - Area

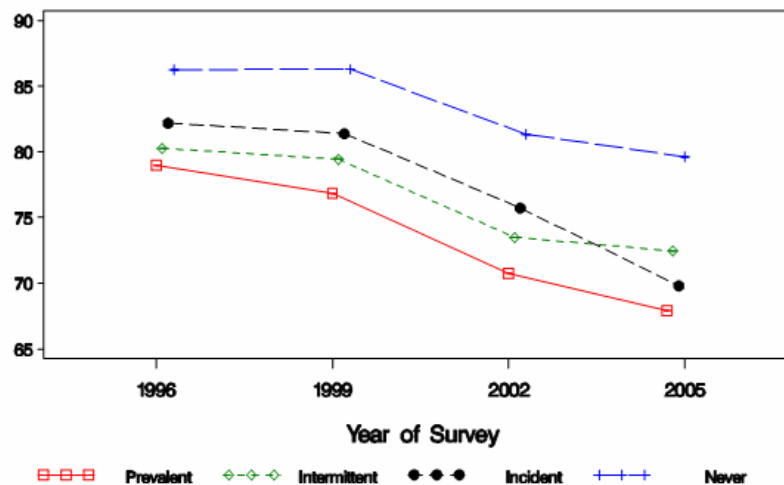
SF-36 Physical Function scores



P<0.0001

SF-36 Social function scores

SF-36 Social Function scores



P<0.0001

Summary and conclusion

- Incontinence is associated with poorer levels of physical and social function, but these differences often preceded reports of “leaking urine”
- Women with incontinence may have other conditions which also affect their physical and social functioning (eg. Stroke, dementia, other physical disability)
- Women with incontinence were not less likely to provide care, to be married, or to undertake volunteer work. Social disability associated with incontinence may be overstated in those contexts where incontinence can be managed.
- Parity not such an important risk factor at older ages, but other gynaecological factors are.
- Dysuria and constipation may precede the onset of incontinence and may make incontinence worse – prevention of dysuria and constipation may provide opportunity to prevent or manage incontinence
- Obesity is associated with incontinence – prevention of obesity may be important in preventing incontinence
- Women with incontinence have high contact with the health care system providing many opportunities for prevention and management of this condition