



## Trends in prescription of the levonorgestrel intra-uterine device: associations with age and patient location

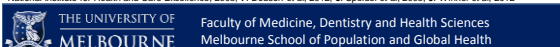
Bingham A Garrett C Kavanagh A Keogh L Bentley R Hocking JS

Melbourne School of Population and Global Health,  
University of Melbourne, Victoria, Australia

### Background

- High rates of unplanned pregnancy/abortion in Australia
  - 30 – 50% of women have had an unplanned pregnancy [1,2]
  - 19.7 terminations per 1000 women aged 15 – 44 [3], vs 17.5 per 1000 (UK), 7.7 per 1000 (Germany) and 8.7 per 1000 (Netherlands) [4]
- Pill - most common form of contraception in Australia [5]
- Long-acting reversible contraceptives (LARCs)
  - Convenient, no daily adherence, no ongoing prescriptions/GP visits, cost effective, effective [6 - 8]
  - Women using LARC 21 times less likely to become pregnant than women using short-acting methods like oral contraception [9]
- Lack of data about IUD use in Australia

1. Marie Stopes International, 2008; 2. Weisberg et al, 2008; 3. Chan & Sage, 2005; 4. Sedgh et al, 2008 5. Lucke et al, 2008; 6. National Institutes for Health and Care Excellence, 2005; 7. Dodson et al, 2012; 8. Speidel et al, 2008; 9. Winner et al, 2012



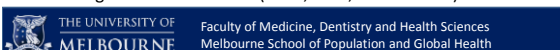
### Aims

- To calculate age standardised prescribing rates for uptake of the levonorgestrel intrauterine device (LNG-IUD) in Australia using PBS data
- To investigate trends in uptake according to patient age, geographical area of patient's location, and proximity to specialist medical services (family planning clinics and Aboriginal medical services)

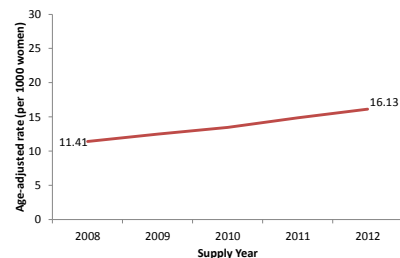


### Methods

- Data sets:
  - PBS data for LNG-IUD by patient location (SA3 level)
    - March 2008 – December 2012
    - Five year age groups from 15 – 49 y.o.
  - ABS population data 2008 - 2011
- Directly aged standardised rates calculated for each year
- Prescription trends by predictor variables
- Logistic regression:
  - supply year
  - age group
  - Rurality – ABS remoteness classifications
  - Family planning clinic
  - Aboriginal Medical Service (none, AMS, remote AMS)



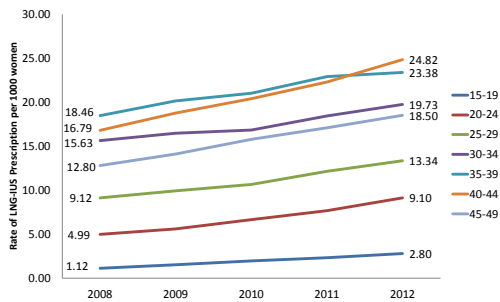
### Results: Age-adjusted prescription rates, 2008 - 2012



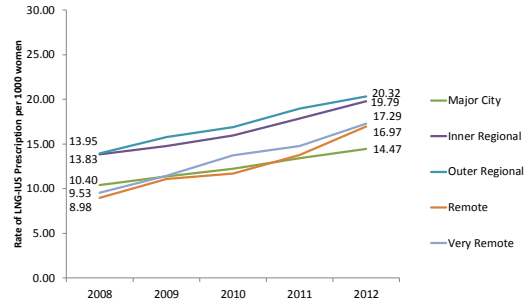
	2008	2009	2010	2011	2012
Total prescriptions	59,749	66,339	72,196	79,981	86,934



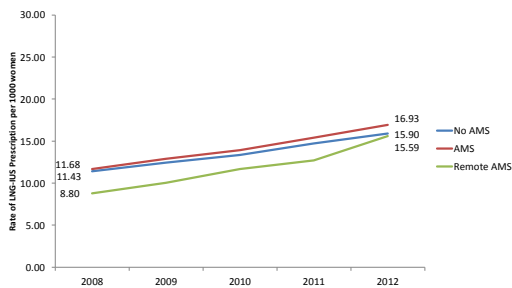
## Trends in uptake by age-group



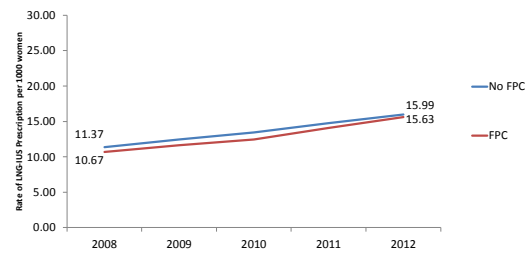
## Trends in uptake: Remoteness



## Trends in Uptake: Proximity to Aboriginal medical service



## Trends in Uptake: Proximity to Family Planning Clinic



## Results: Regression analyses

	Odds Ratio	95% CI
Year	1.09*	1.09, 1.10
Age		
15 – 19	Ref.	
20 – 24	3.32*	3.16, 3.50
25 – 29	5.42*	5.11, 5.80
30 – 34	8.55*	8.03, 9.11
35 – 39	10.37*	9.70, 11.10
40 – 44	10.03*	9.36, 10.76
45 – 49	7.52*	7.02, 8.07
Location		
Major City	Ref.	
Inner Regional	1.35*	1.23, 1.47
Outer Regional	1.41*	1.27, 1.26
Remote	1.43*	1.08, 1.488
Very Remote	1.61	1.14, 2.27
Family Planning Services		
No	Ref.	
Yes	0.98	0.84, 1.14
Aboriginal Medical Service		
None	Ref.	
AMS	0.97	0.87, 1.07
Remote-area AMS	0.64	0.45, 0.90

\*P&lt;0.001

## Discussion

- Increasing annual rates overall
- Uptake significantly associated with age
- Higher number of prescriptions for women in rural/regional areas
- Potential for increased prescription – international experience

## Declaration of Interests

- Funding provided by the Brown Bequest granted to the Centre for Women's Health, Gender & Society, MSPGH
- Amie Bingham is supported by an Australian Postgraduate Award

## References

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