



Intrauterine device insertion - a prospective study in Family Planning clinics in Qld and NSW

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Background

- Intrauterine contraception in Australia
- 2002 - only 1.2% women using IUDs¹
- ?Use increasing but no recent population data
- Increasing use by nulliparous women- NOT a contraindication
- Issues with access, need for GP training
- Known variable range of practices for insertion - particularly use of local anaesthetics, cervical blocks

¹Richters, J et al 2003 'Sex in Australia: contraceptive practices among a representative sample of women' *Aust N Z J Public Health*, vol. 27, no. 2, pp. 210-216.

Background

- FP clinics have long history of IUD insertions in primary care setting
- Audit conducted to investigate
 - User demographics
 - Inserter rated ease of insertion
 - Inserter practices
 - complications

Agreed insertion best practice^{1 2}

- Individuals responsible to maintain competency (? >10 over 6-12 months)
- Training and update re complications and emergencies
- Emergency equipment and procedures
- Bimanual examination
- Assistant present
- No touch technique
- Forceps or tenaculum
- Assessment of uterine cavity (sounding)

¹ UK Faculty Sexual & Reproductive Health 2007

² Sexual Health & Family Planning Australia 2008

Audit

- 12 month prospective audit - data collected at insertion visit
- 1002 insertions - in 3 centres in Qld and 1 in NSW
- Ages 17-53 (mean 36.5) yr
- 78.4% Levonorgestrel IUDs (IUS)
21.6% Copper IUDs
- 24.5 % were removal/reinsertion procedures



Inserters

- 16 inserters across 4 clinics
(10-154 insertions per inserter)
3 inserters > 100 insertions
7 inserters 20-100 insertions
6 inserters 10- 20 insertions
- 103/1002 (10.3%) inserted by trainees



Age Distribution

| | N | Percent |
|-----------------------|-------------|----------------|
| < 25 yrs | 59 | 5.9 |
| 25 to 29 years | 140 | 14.0 |
| 30 to 34 yrs | 197 | 19.7 |
| 35 to 39 yrs | 280 | 27.9 |
| 40 to 44 yrs | 191 | 19.1 |
| 45+ yrs | 135 | 13.5 |
| Total | 1002 | 100.0 |



Parity

| Parity | N | % |
|-----------|------|-------|
| 0 | 126 | 12.6 |
| 1 | 174 | 17.4 |
| 2 | 418 | 41.7 |
| 3 or more | 284 | 28.3 |
| Total | 1002 | 100.0 |

- 126 nulliparous
- 128 only caesareans
- 25% no vaginal delivery

Ease of insertion

| | N | % |
|---|-------------|--------------|
| 1.very easy, insertion completed | 365 | 36.4 |
| 2.quite easy, insertion completed | 317 | 31.6 |
| 3.OK, insertion completed | 174 | 17.4 |
| 4.quite difficult, insertion completed | 80 | 8.0 |
| 5.very difficult, insertion completed | 26 | 2.6 |
| *very difficult, insertion started then abandoned | 34 | 3.4 |
| *insertion not attempted, not suitable | 6 | .6 |
| Total | 1002 | 100.0 |

- Inserter rated on 5 point scale at time of insertion
- *Additional categories added
 - attempted but abandoned
 - unsuitable, not attempted



Ease of insertion

| | N | Percent |
|--|------|---------|
| "EASY" (very easy, easy,OK) | 856 | 85.4 |
| "DIFFICULT" (difficult, very difficult, abandoned) | 140 | 14.0 |
| TOTAL | 996 | 99.4 |
| insertion not attempted, not suitable | 6 | .6 |
| | 1002 | 100.0 |

Age and ease of insertion

| | | < 25 yrs | 25 – 29 yrs | 30 -34 yrs | 35 - 39 yrs | 40 - 44 yrs | 45+ yrs | Total |
|------------------|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Easy | N | 51 | 120 | 169 | 252 | 159 | 105 | 856 |
| | % | 86.4% | 86.3% | 86.7% | 90.3% | 83.7% | 78.4% | 85.9% |
| Difficult | N | 8 | 19 | 26 | 27 | 31 | 29 | 140 |
| | % | 13.6% | 13.7% | 13.3% | 9.7% | 16.3% | 21.6% | 14.1% |
| Total | N | 59 | 139 | 195 | 279 | 190 | 134 | 996 |
| | % | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

Difference in ease of insertion across age groups not significant $p=0.07$
Trend is to increase in difficulty >40 years

Parity and ease of insertion

| | | had vag delivery | no vag delivery | Total |
|------------------|----------|------------------|-----------------|---------------|
| easy | N | 666 | 190 | 856 |
| | % | 89.8% | 74.8% | 85.9% |
| difficult | N | 76 | 64 | 140 |
| | % | 10.2% | 25.2% | 14.1% |
| Total | N | 742 | 254 | 996 |
| | % | 100.0% | 100.0% | 100.0% |

Difference in ease of insertion between vaginal or no vaginal delivery was significant ($p < 0.001$) and was significant across all ages when stratified except < 25 yrs and > 45 yrs

Complications

| | N | % |
|-----------------------|------------|--------------|
| none | 971 | 96.9% |
| Perforation* | 1 | 0.1 |
| excess pain | 1 | 0.1 |
| excess bleeding | 1 | 0.1 |
| vasovagal MILD | 20 | 2.1 |
| Vasovagal MODERATE | 9 | 0.9 |
| vasovagal SEVERE | 1 | 0.1 |
| other | 2 | 0.7 |
| Total | 996 | 100.0 |

* Diagnosed at 10 days post insertion

Relative risks for “nulliparous cervix” (no vaginal delivery)

| OUTCOME | Rate ratio (95% CI) |
|---------------------|---------------------|
| Difficult insertion | 2.4 (1.8-3.2) |
| Abandoned insertion | 5.3 (2.7-10.6) |
| Vasovagal | 3.1 (1.53-6.38) |

Conclusions

- 85% insertions “easy”
- ~ 3% insertions abandoned due to difficulty
- Complications ~3% overall and mild vasovagal the commonest complication
- An insertion rated as difficult, an abandoned insertion and vasovagal (usually mild) more likely in those who have not had a vaginal delivery
- BUT even in women without a vaginal delivery 90% insertions completed, 75% insertions were rated as easy and 95% without complication



Conclusions

- IUD insertion appears to be appropriate in the primary care setting
- Importance of training and ongoing maintenance of competence
- Nulliparous cervix issues
- Preparation for the occasional vasovagal
- Knowing when to abandon/ refer