

# Intrauterine techniques: contentious or consensus opinion?

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(Accepted 1<sup>st</sup> November 2002)

*Journal of Family Planning and Reproductive Health Care* 2002; **29**(1): 21–24

## Abstract

**Context.** Insertion of intrauterine devices (IUDs) is a routine procedure in Contraception & Sexual Health (C&SH) Service clinics. Techniques for IUD insertion vary between practitioners.

**Objective.** To describe the preferred approach to various aspects of IUD provision of experienced doctors working in three large, teaching C&SH Services, including policies on screening for chlamydia, antibiotic prophylaxis, use of tenaculæ, use of analgesia/anaesthesia and use of assistants at the time of IUD insertion.

**Design.** An anonymous questionnaire to all doctors working in three neighbouring services.

**Setting.** Three community C&SH Services in Hampshire seeing in total approximately 92 000 patients each year.

**Participants.** Doctors working regularly in target C&SH Services.

**Results.** A total of 94% of doctors cleanse the cervix prior to IUD insertion, 96% test for chlamydia before fitting an emergency coil and 18.5% always prescribe prophylactic antibiotics. For routine IUD insertions, 50% of doctors always screen for chlamydia prior to fitting the device. A total of 86% of doctors always stabilise the cervix with an Allis or similar instrument, with 14% reporting using an Allis 'sometimes' or 'rarely/never'. Instillagel® was the most commonly used method of anaesthesia. A total of 75% of doctors have an assistant present for every insertion, eight doctors 'sometimes', and one 'rarely/never'.

**Discussion.** Arguments for and against each area of contention are discussed, and evidence reviewed.

**Conclusion.** Practice varies between practitioners, and doctors training in intrauterine techniques may be given conflicting advice. All clinicians should be able to justify their practice on clinical grounds and audit outcomes.

## Key message points

- Experienced operators report wide variations in their preferred techniques for fitting intrauterine devices (IUDs) with respect to cleansing the cervix, chlamydia screening, antibiotic prophylaxis and use of tenaculæ.
- Trainees in intrauterine techniques may receive conflicting 'expert opinions'.
- Use of IUDs is an area of significant clinical risk for Contraception & Sexual Health Services, and clinicians whose practice deviates from 'consensus opinion' should be able to justify their practice on clinical grounds.

## Introduction

Many fields of clinical medicine lack robust evidence on which to base clinical practice and clinicians are obliged to fall back on consensus or expert opinion. In reality, expert

opinion simply reflects what so-called experts of the day have chosen to believe and is strongly influenced by established practice and anecdote. We should all constantly review our practice in the light of clinical evidence and audit results, and be prepared to justify our actions where these fly in the face of expert opinion.

At a Wessex Instructing Doctors Meeting in November 2001 we planned a session on using Zoe anatomical models to instruct Diploma of the Faculty of Family Planning (DFFP) trainees in practical procedures. When we started discussing techniques for fitting intrauterine devices (IUDs) it quickly became apparent that there was wide variation in the techniques used for this routine procedure within this group of experts. Opinions, although polarised, were held in good faith and strongly held.

This report describes the results of a simple survey of reported techniques when fitting IUDs by doctors employed in Southampton, Winchester and Portsmouth Contraception & Sexual Health (C&SH) Services. There is a brief discussion of the published evidence related to techniques of IUD insertion.

## Method

A brief questionnaire was sent to all doctors employed by Southampton, Winchester and Portsmouth C&SH Services in December 2001 (a copy of the questionnaire is available from the author on request). The questionnaire, which was completed anonymously, posed questions about the individual clinician's preferred techniques for cleansing the cervix, screening for chlamydia, use of tenaculæ, analgesia/anaesthesia, use of lithotomy, use of assistants, number of IUD insertions per month, and possession of the Faculty of Family Planning Letter of Competence in Postgraduate Education (FFP LoC PG Ed). A series of questions was asked to which the response could be 'always', 'sometimes' or 'rarely/never'. Comments were also invited. All doctors employed by the participating C&SH Services hold the Faculty Letter of Competence in Intrauterine Techniques.

## Results

A total of 67 questionnaires were sent out to an estimated 58 individual doctors (nine doctors are known to work for more than one service). Doctors were asked to indicate which service(s) they worked in and to only complete the questionnaire once. Thirty-six completed forms were returned, giving an estimated response rate of 62%. The place of work and training status of the respondents is shown in Table 1.

Doctors who hold the FFP LoC PG Ed are qualified to teach intrauterine techniques and are referred to as 'training doctors' in this paper.

**Table 1** Training status of doctors returning questionnaires

Location	Training doctors (n)	Non-training doctors (n)	Total (n)
Southampton	15	5	20
Portsmouth	13	5	18
Winchester	5	1	6
Total	29 <sup>a</sup>	7 <sup>b</sup>	36

<sup>a</sup>One training doctor worked in all three services, and three worked in two services.  
<sup>b</sup>Four non-training doctors worked in two services.  
NB. Eight training doctors and three non-training doctors indicated that they also work in primary care.

The majority (94%) of doctors always cleanse the cervix prior to instrumentation. One doctor responded ‘rarely/never’ and one ‘sometimes’; both were training doctors.

The policy on screening for chlamydia and use of prophylactic antibiotics varied between doctors and was different when the device was being used for postcoital contraception. The results are summarised in Table 2.

The use of prophylactic antibiotics when fitting an IUD for emergency contraception differed between training doctors (holders of the FFP LoC PG Ed) and non-training doctors. A total of 18.5% of training doctors ‘always’ and 52% ‘sometimes’ prescribed antibiotics when fitting a postcoital IUD. Of the non-training doctors none reported ‘always’ providing prophylactic antibiotics, 75% did so ‘sometimes’ and 25% ‘rarely/never’. ‘Always’ testing for chlamydia at the time of fitting a postcoital IUD was similar at > 90% in both groups of doctors.

Doctors were asked to indicate whether they used an Allis/tenaculum or another instrument to stabilise the cervix at the time of IUD insertion for each of the devices they regularly fitted. Twenty doctors fitted Gynefix® and unsurprisingly all used an instrument to stabilise the cervix on every occasion. All 36 respondents fitted standard T-shaped devices with 31 (86.1%) always stabilising the cervix, three (8.3%) ‘sometimes’ and two (5.6%) ‘rarely/never’ doing so. Four of the five doctors not routinely stabilising the cervix were training doctors, and one was a non-training doctor. Non-use of an Allis/tenaculum was identical at approximately 14% of both instructing and non-instructing doctors.

Use of an Allis/tenaculum for Mirena® (intrauterine system, IUS) insertions was broadly similar to that for standard T-shaped devices, with 32 (88.9%) of doctors ‘always’ stabilising the cervix and four (10.1%) doing so ‘sometimes’ or ‘rarely/never’.

**Table 2** Testing for chlamydia and use of prophylactic antibiotics: all doctors

	Always (%)	Sometimes (%)	Rarely/never (%)	Total (%)
Routine IUD insertions				
Screen and see result before fitting	5 (16.6)	14 (46.7)	11 (36.7)	100
Screen at time of fitting	17 (50)	17 (50)	0	100
Prescribe prophylactic antibiotics	0	18 (59.2)	11 (40.8)	100
Emergency (postcoital) insertions				
Screen for chlamydia at fitting	33 (94.3)	2 (5.7)	0	100
Prescribe prophylactic antibiotics	6 (17.6)	18 (52.9)	10 (29.5)	100

IUD, Intrauterine device.

**Table 3** Use of analgesia/anaesthesia prior to IUD insertion<sup>a</sup>

	Always (%)	Sometimes (%)	Rarely/never (%)	Total (%)
Pre-insertion				
NSAID	3 (9)	10 (30.3)	20 (60.7)	100
Instillagel®	6 (16.7)	26 (72.2)	4 (11.1)	100
Cervical/precervical block	0	1 (3.3)	29 (96.7)	100
GTN spray	0	1 (3.3)	29 (96.7)	100

<sup>a</sup>Some doctors did not complete all the sections hence the totals vary. GTN, Glyceryl trinitrate; IUD, intrauterine device; NSAID, non-steroidal anti-inflammatory drug.

The results on the use of analgesia/anaesthesia before and during IUD insertion are shown in Table 3. Instillagel® was the most widely used method, with six (16.7%) doctors using this routinely and a further 26 (72.2%) using it ‘sometimes’. Fifteen doctors (42%) indicated that this was the only method of analgesia they provided. Four doctors (all trainers) answered ‘rarely/never’ to all types of analgesia/anaesthesia, despite it being available in the service in which they worked.

The option to use the lithotomy position (leg stirrups available) was available to only seven (19.4%) doctors completing the questionnaire.

Thirty-six doctors gave information about having an assistant present at the time of IUD insertion. The great majority always do so 27 (75%), with eight doctors (22%) indicating ‘sometimes’ and one ‘rarely/never’. Several doctors responding ‘sometimes’ or ‘rarely/never’ stated that the nurse would ‘always be within earshot’ and that they would tell her they were performing the insertion.

The majority of respondents reported fitting 5–10 devices per month (14 doctors) with 10 fitting more than 10 devices and 11 fitting fewer than five devices per month (one doctor did not complete this section).

Discussion

It is widely believed that the incidence of adverse events for IUD users is inversely related to the experience of the clinician fitting the device. Of procedures routinely performed in community contraception clinics, events surrounding IUD insertions are the commonest source of litigation. This small survey has shown that even amongst a group of highly experienced and well-qualified doctors there are significant variations in practice. It has also demonstrated that DFFP candidates undergoing practical training with several different trainers may observe/be taught contradictory techniques. This is not uncommon in medicine but on what evidence do we base our practice?

The arguments for and against each contentious issue are set out below.

### 1. Should we cleanse the cervix?

Two doctors in this survey do not routinely do so.

*For:*

- Standard teaching is that the cervix is mechanically debrided with a cotton wool ball soaked in antiseptic. This should reduce the transmission of cervicovaginal organisms to the upper genital tract.

*Against:*

- The reported six-fold increased risk of pelvic inflammatory disease (PID) in the first 20 days after IUD insertion is related to insertion in the presence of a sexually transmitted infection (STI), and cleansing the cervix will not prevent inaccessible organisms within the cervical canal from being transferred.<sup>1</sup>
- A policy of routinely screening for chlamydia (and other STIs in areas of high prevalence/clinical risk) and checking the result before fitting the device, or prescribing prophylactic antibiotics, is more likely on empirical grounds to prevent spread of an asymptomatic infection.

### 2. Should we screen for chlamydia/STIs prior to IUD insertions, and should we prescribe prophylactic antibiotics?

*For:*

- The prevalence of chlamydia is increasing and up to 70% of women with the infection are asymptomatic. Women requesting (or who have recently used) emergency contraception have particularly high rates. A total of 11% of women having emergency IUDs fitted in one study had a positive chlamydia result.<sup>2</sup>
- The Royal College of Obstetricians and Gynaecologists (RCOG) have recommended a 'screen and treat' policy for any instrumentation of the cervical canal in women aged under 35 years in their guidelines for reducing PID.<sup>3</sup>

*Against:*

- Women being offered routine IUD insertion for long-term contraception typically are at low risk of STIs. The lower prevalence of chlamydia in this group makes screening less cost-effective and less accurate due to a higher proportion of false-positive results.
- Indiscriminate use of antibiotics is wasteful of resources and promotes antibiotic resistance.

### 3. Should the cervix be stabilised at the time of IUD insertion?

In this survey 5/36 doctors used an Allis or other device only 'sometimes' or 'rarely/never'.

*For:*

- Applying gentle downward traction on the cervix will straighten the uterocervical axis and allow more accurate fundal placement of the device.
- Perforation of the uterus may be less likely if the uterocervical angle is reduced.

A small study in 1991<sup>4</sup> looked at the effect of cervical traction on the uterocervical angle. The median uterocervical angle in 24 women undergoing diagnostic curettage under general anaesthetic was 75°. This was reduced to 10° when applying a mean traction of 2 N. The author concludes that fitting IUDs was technically easier when a tenaculum was used, and should be the preferred technique. There is no published evidence comparing outcome with and without tenaculum use.

*Against:*

- Applying an instrument to the cervix is uncomfortable for many women (which may be reduced by analgesia/anaesthesia) and for some is a potent vasovagal stimulant.
- Anecdotal evidence suggests that applying a tenaculum is more likely to produce cervical spasm and hence a difficult insertion, than instrumentation of the canal alone.
- Experienced doctors who use an Allis/tenaculum 'as required' maintain that a clinical judgement can be made about the likelihood of successful fundal placement based on clinical examination and sounding of the uterus. If they are confident the device can be correctly introduced without applying traction the overall procedure will carry less risk if a tenaculum is *not* applied.
- Toothed tenaculae can perforate the cervical mucosa leading to bleeding and rarely haemorrhage.
- Overzealous traction/poor application of the device can cause small avulsions of cervical mucosa or cervical lacerations.
- If technique is poor (the tenaculum simply held, rather than being used to manipulate the uterocervical angle) then the patient is exposed to the risks and discomforts, with no benefit in terms of the correct insertion of her IUD.

### 4. Should we be offering analgesia/anaesthesia, and if so what?

In this survey 4/36 doctors (11%) 'rarely/never' offered any form of analgesia/anaesthesia. Of the remaining 32, 14 used Instillagel and no other method, with six (16.7%) doctors using Instillagel for every IUD insertion.

*For:*

- Fear of pain associated with IUD insertion deters some women from choosing this otherwise appropriate method, and anxiety during insertion may increase the risk of adverse events, e.g. vasovagal attacks.
- Women offered analgesia/anaesthesia may be more relaxed and better able to co-operate with the procedure.
- A placebo-controlled trial<sup>5</sup> has demonstrated that use of Instillagel reduces the discomfort associated with IUD insertion.

*Against:*

- Non-steroidal anti-inflammatory drugs (NSAIDs) may reduce the discomfort of postinsertion cramps but will not reduce the pain associated with instrumentation of the cervical canal.
- For maximum benefit Instillagel requires 3–5 minutes to be effective, so prolonging the procedure.
- Use of Instillagel slightly increases costs.
- Use of cervical or paracervical anaesthesia may encourage a clinician to persevere with a difficult insertion that would be better abandoned.

### 5. Access to lithotomy

Use of the lithotomy position, which requires leg stirrups, is thought to be unpopular with patients but from the clinician's point of view affords much better access. If the operator is positioned between the patient's legs (rather than at the side, reaching over) it is easier to visualise the cervix and to ensure that downward traction on a tenaculum is in line with the axis of the uterus. This should facilitate correct fundal placement of any device but is particularly important for Gynifix, which must be inserted exactly perpendicular to the fundus if the anchoring knot is to be correctly placed.

The manufacturers of Gynefix now recommend lithotomy as the preferred position for fitting this device.<sup>6</sup> Only seven doctors in this survey indicated that they have access to lithotomy in their usual place of work. This suggests that Gynefix should not be fitted in some community clinics but should be reserved for nominated sessions with a suitable couch.

### 6. The presence of an assistant for IUD insertions

Insertion of an IUD is occasionally associated with vasovagal collapse, epileptic fit or even cardiopulmonary arrest. It should also be an aseptic or no-touch technique to reduce the risks of infections. Despite this, 25% of doctors indicated that they only 'sometimes' (eight) or 'rarely/never' (one) have an assistant present. It is assumed that those using assistants will rely on nursing staff in community clinics.

For:

- The assistant can help monitor the patient during the procedure.
- If any resuscitation is required, help is on hand.
- The assistant can open sterile packs, etc. if the doctor is 'gloved up'.
- The assistant can fulfil the role of chaperon according to the criteria set out in the General Medical Council (GMC) guidelines on consent to intimate examinations.<sup>7</sup>
- Most patients find the presence of a nurse reassuring.

Against:

- There are practical difficulties in releasing a nurse to work in this way for some providers, especially in primary care.
- A small number of patients feel more embarrassed with more staff present.

### Conclusions

If 'consensus opinion' means the most widely held view amongst a group of expert practitioners then the consensus opinion of family planning doctors in Southampton, Winchester and Portsmouth is as follows:

1. For routine IUD insertions chlamydia testing should ideally be carried out and the result available before the procedure. If not tested in advance, chlamydia screening should take place at the time of insertion.
2. For emergency IUDs, screening and prophylactic antibiotics should be provided.
3. The cervix should be cleansed before instrumentation.
4. An Allis, tenaculum or other device should be used to stabilise the cervix during insertion.
5. Lignocaine Instillagel is the preferred anaesthetic.
6. An assistant should be present during the procedure.

Patients are individuals and doctors rightly exercise clinical discretion when deciding how best to meet their needs. Differences in practice may evolve uncritically, especially for practitioners working in isolation; doctors whose practice falls outside the norm should be willing and able to justify on clinical grounds their practice. All doctors should audit their clinical practice and high-risk procedures should be monitored through clinical risk management strategies.

### Acknowledgements

The author wishes to thank the doctors of Southampton, Winchester and Portsmouth Contraception & Sexual Health Services for completing questionnaires, and Sandy Andrews for typing the manuscript.

### Statements on funding and competing interests

Funding. None identified.

Competing interests. None identified.

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