The LARC methods are increasing in popularity amongst Irish women and have several advantages over pills or barrier methods of contraception.

**Case report 1**
Sarah is a 24-year-old nulliparous in a stable relationship. She has epilepsy, which is well controlled on carbamazepine. She has a regular 28-day cycle and her periods are light. She attends requesting contraception. She is currently using condoms but regularly forgets to use them especially when she has been out drinking. She says she is currently struggling to lose weight.

Carbamazepine is an enzyme-inducing drug so this would reduce the effectiveness of a combined pill (COC), progesterone only pill (POP) and subdermal implant so these methods cannot be used. Depo medroxy progesterone acetate (Depo) would be effective but Sarah is struggling to lose weight and as the Depo has been shown to put on weight she refuses this option. As Sarah has light periods, a copper intrauterine device (IUD) could be offered. The levonorgestrel releasing intrauterine system (IUS) is also a suitable option. When Sarah has chosen between these two devices, I would do a vaginal examination, send either an endocervical swab or first pass urine to test for Chlamydia and then plan the insertion. I would counsel Sarah that if her relationship status changes and if she is at higher risk of STIs at some time in the future she should reconsider her choice of contraception.

**Case report 2**
Mary is 50-years-old. She had an IUS inserted for heavy periods as well as contraception five years ago. She has been amenorrhoeic for past two years. She is experiencing some flushes. She comes in for an IUS change.

I would leave the device in situ because it has been shown that an IUS inserted at or after aged 45 years is effective for up to seven years. When someone is on progesterone hormones you cannot rely on amenorrhoea to diagnose the menopause. Therefore, I would check two FSH levels six weeks apart and if both FSH levels are raised, then menopause is confirmed and Mary can stop using contraception after one year (i.e. remove her IUS in one year).

**Case report 3**
Katie is 18-years-old, in a new relationship. She could not handle pill taking routine. She had a sub dermal implant inserted 4 months ago. She is experiencing erratic, frequent, heavy bleeding. She attends asking if she could have it taken out, as it clearly does not suit her.

You can leave the implant in situ and put her on a POP or COC for three months to see if this will control the bleeding.
Discussion
The average age for first sex in women in Ireland is 18 years and the average age of menopause is 51, meaning many women need contraception for more than 30 years of their life. Women want a contraceptive that is safe, reliable and easy to use, affordable and which suits their lifestyle. Women are often not aware of the wide range of options available to them and doctors often only think of the pill when asked to prescribe contraception. The NICE guidelines 2005 state that women requiring contraception should be given information about, and offered a choice of all methods, including long acting reversible contraception (LARC). The LARC methods are increasing in popularity amongst women and have several advantages over pills or barrier methods. In addition the likely is increased amongst women and have several advantages over pills or barrier methods. In addition NICE guidance states that increasing uptake of the LARCs will reduce the numbers of unintended pregnancies.

The LARC methods discussed in this article are:
• Levonorgestrel releasing intrauterine system (IUS),
• Copper releasing intrauterine device (IUD),
• Progesterone subdermal implant.

Depo medroxyprogesterone was previously included as a LARC but it has been shown to reduce bone density so is no longer recommended for long-term use. However it is still considered a really good contraceptive option and can be used for up to two years in women with no risk factors for osteoporosis.

All the LARC methods have lower failure rate than barrier methods and hormonal pills. User error contributes to the failure rate of pills and barrier methods. When used perfectly, the failure rate of the combined COC is 0.3 per cent (0.3 pregnancies per 100 couples using the method for one year). However, with typical use (actual use including inconsistent or incorrect use) the failure rate is 9 per cent (nine pregnancies per 100 couples using the method for one year). There is also a very high discontinuation rate with use. The LARC implant and IUS have a failure rate comparable to sterilisation and thus offer a reliable alternative to sterilisation. The LARC methods do not contain oestrogen and so they are a useful alternative for women who have co-morbidities and cannot take oestrogen. LARC methods also have non-contraceptive benefits and the LNG-IUS is licensed for use in menorrhagia. All the LARC methods have been shown to be more cost effective than the pill even at one year of use.

The Choice Study was a large prospective cohort study in the USA to promote the use of LARC as a means of reducing unintended pregnancies. Participants were provided with contraception of their choice at no cost. They compared the failure rate of LARC with other contraceptive methods. Among women who chose a LARC method, 86 per cent were still using their method at one year. Only 55 per cent of women who chose non–long-acting methods were still using the same method at one year. Women using LARC and Depo had the lowest unintended pregnancy rates at one two and three years of follow up. Pill, ring and patch users had much higher unintended pregnancy rates, more than 16 times higher than LARC users in year one. The study concluded that the effectiveness of LARC is superior to that is contraceptive pills, patch or ring and is not altered in adolescents and young women.

Myths dispelled
There are many myths surrounding the use of IUDs and IUS and it is important that healthcare professionals help dispel these myths.

It was widely thought that IUDs caused pelvic inflammatory disease (PID), tubal infertility and ectopic pregnancy, however evidence suggests that these are all false. The risk of ectopic pregnancy is actually lower in women with an IUD than in those using no contraception indicating a protective effect. Available evidence suggests that the risk of PID contracted through sexually transmitted infection (STI) is not greater in women with IUD contraception. The risk of PID with IUD use is low and relates to the insertion process and background risk of STIs. It is considered good practice to assess STI risk by taking a sexual history and to screen for Chlamydia prior to insertion if indicated. Since the test for Chlamydia is a simple first pass urine or endocervical swab, some doctors have a policy of screening all women prior to insertion of IUS/ IUD.

It is often incorrectly thought that an IUD/IUS is only suitable for women who have had children; an IUD/ IUS can be appropriate for nulliparous women who are at low risk of STIs, for example, if in a stable relationship. In addition, an IUS may be appropriate for young nulliparous women who have menorrhagia and /or dysmenorrhoea. Expulsion of the device, bleeding and pain are slightly more likely among nulliparous women than among women who have had children.

Another myth is that these devices must be inserted during menstruation. Provided that it is reasonably certain that the woman is not pregnant, an IUS or IUD may be fitted at any time in the menstrual cycle. They may also be inserted four weeks post partum or immediately post termination of pregnancy. Patients can choose to take an anovulant method of contraception such as the COC or the desogestrel-containing POP for a month or two as a bridging method of contraception. They can then plan to have their IUD/IUS inserted at a time that suits them at any time during the pack, provided they have taken the pill correctly.
A new contraceptive option with up to 3 years of freedom from daily routine

- New, low dose contraceptive option with no daily, weekly, or monthly routine.
- Its narrow insertion tube aids ease of placement.
- Studied in a broad range of women aged between 18-35 years.

This medicinal product is subject to additional monitoring. This will allow quick identification of new safety information. Healthcare professionals are asked to report any suspected adverse reactions. Jaydess 13.5 mg intrauterine delivery system is a class of medicines known as Progestogen-Duplication (MUP-DUPlication) before prescribing. The product consists of a white or pale yellow drug core (13.5 mg levonorgestrel) covered with a network of very thin copper wire, which is mounted on the central part of U-shaped T-body. In addition, the system contains a silver ring located close to the horizontal arms. Indication. Contraception. For use up to 3 years. Dosage and administration. Jaydess can be inserted at any time during the menstrual cycle when contraception is needed. Thereafter, the strong suppression of the endometrium results in the reduction of the duration and volume of menstrual bleeding. Scanty flow frequently develops into oligomenorrhea or amenorrhea. Pregnancy should be excluded and timely removal of the system is recommended since any intrauterine pregnancy may result in spontaneous abortion. Clinical experience of the outcomes of pregnancies under Jaydess treatment is limited due to the high contraceptive efficacy. Breast-feeding: A levonorgestrel-containing intrauterine delivery system may be used in breastfeeding women without any limitation. Breast-feeding: A levonorgestrel-containing intrauterine delivery system may be used in breastfeeding women without any limitation. Jaydess is not for use as a post-coital contraceptive. The use of Jaydess for the treatment of heavy menstrual bleeding or protection from upper genital tract infection, dysmenorrhea, breast pain/discomfort, device expulsion (complete and partial), unusual vaginal bleeding, and other conditions not specifically approved by the EMA is not recommended. "Nelson 2 years, 3 months, and 4 days: I haven't taken the pill in
2 years, 3 months, and 4 days
and I've been more than 99% protected ever since

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LNG IUS
The primary mode of action of the IUS is endometrial atrophy, preventing implantation. Secondary effects include a cervical mucus effect and ovulation suppression. The IUS has a pregnancy rate of fewer than five in 1,000 over five years so it is a very reliable contraceptive. It is licensed for five years of use as a contraceptive. However, randomised trials show that the IUS provides effective contraception for up to seven years and the Faculty of Reproductive and Sexual Health (FRSH) in the UK has recommended that women who have an IUS inserted at or after the age of 45 years and are amenorrhoeic may retain the device until the menopause is confirmed. The IUS is also licensed as a treatment for menorrhagia and is being used increasingly for this indication. Endometrial pathology must be excluded prior to insertion for this indication in women over 40 years. IUS can be used as the progesterone component of hormone replacement therapy (HRT) to prevent endometrial hyperplasia. For example, if a woman with an IUS in situ develops menopausal symptoms and wants to start HRT, she can leave the IUS in situ and commence oestrogen-only HRT. When using the IUS for this indication, a new device must be inserted after five years as per the licence.

Pre-insertion counselling must include a discussion about the risk of perforation, expulsion and lost threads as well as bleeding problems and hormonal side effects. Approximately, 65 per cent of women are amenorrhoeic or have light bleeding at one year following insertion of an IUS. However, irregular, light or heavy bleeding is common in the first six months following insertion and some women request removal of the device if they find the bleeding intolerable. It is thought that continuation rates may be better if women are counselled in advance to expect these side effects for the first few months.

Copper IUD
The copper (Cu)-IUD primarily acts by its toxic effect on ovum and sperm, preventing fertilisation. It also has an effect on the endometrium that prevents implantation and an effect on cervical mucus that affects sperm penetration. The pregnancy rate is fewer than 20 in 1,000 over five years. Cu-IUDs are rarely offered to women in Ireland which is a shame as this can be a really good option for women who want a completely hormone free method. Spotting, heavier or longer periods are common the first three-six months following insertion so this method should ideally be considered in women who have light periods.

Pill, ring and patch users had much higher unintended pregnancy rates, more than 16 times higher than LARC users in year one.

Doctors who offer Cu-IUDs must buy the devices either individually or in bulk from medical supply companies. These devices are not covered on the GMS but the cost is low. For example, the gold standard device, the Cu T 380 S, costs the patient approximately €25 and lasts 12 years so this is money well spent.

Emergency contraception
Insertion of a Cu-IUD is the most effective method of emergency contraception. It can be inserted up to five days post unprotected sexual intercourse (UPSI) or up to five days post earliest expected day of ovulation in a woman with a regular cycle irrespective of when UPSI occurred in the cycle (for example up to day 19 in a woman with a regular 28-day cycle). As the risk of STI may be higher in this situation, prophylactic antibiotics may be considered. The Cu-IUD can be removed at next menses or can be left in situ if the woman requires long-term contraception. The insertion of a Cu-IUD for emergency contraception is almost 100 per cent effective.

Progesterone subdermal implant
The progesterone subdermal implant is a single rod, measuring 40mm by 2mm, which is inserted sub dermally in a woman’s upper arm. Etonogestrel is released in a controlled fashion over three years. It primarily acts by inhibiting ovulation but in the third year the effect on the cervical barrier is an important secondary effect. It is an extremely effective contraceptive and the pregnancy rate is fewer than one in 1,000 over 3 years. The device is inserted with a small amount of local anaesthetic. Removal involves a small incision and the ease of removal is related to the insertion. A deep implant may require ultrasound guidance for removal. The bleeding pattern post insertion is variable and unpredictable and women should be warned about this pre insertion so they do not have unrealistic expectations. NICE guidelines state that at one year post insertion, 20 per cent of women are amenorrhoeic and 50 per cent of women have infrequent, frequent or prolonged bleeding which may not settle with time. It is important to note that the efficacy of the device is reduced by enzyme-inducing drugs and this includes St John’s Wort, which you may not be aware the woman is taking so remember to ask. Like the IUS and IUD, this device can be inserted any time in the cycle once you are reasonably certain that the woman is not pregnant.

References on request
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