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Title	Cross-sectional study on the need to provide contraceptive services to women attending opioid-substitution therapy
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Publication date	2019-08
Original citation	Olioff, J., O Shea, T., Horan, A., Naughton, A. M. and O'Brien, D. (2019) 'Cross-sectional study on the need to provide contraceptive services to women attending opioid-substitution therapy', <i>Heroin Addiction and Related Clinical Problems</i> , 21(4), pp. 27-34.
Type of publication	Article (peer-reviewed)
Link to publisher's version	http://www.heroinaddictionrelatedclinicalproblems.org/ Access to the full text of the published version may require a subscription.
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Item downloaded from	http://hdl.handle.net/10468/8947

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Regular Article

Heroin Addict Relat Clin Probl 2019; 21(4): 27-34

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Cross-sectional study on the need to provide contraceptive services to women attending opioid-replacement therapy

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Summary

Background. Women with opioid use disorders who have unintended pregnancies face unique challenges. A common strategy for preventing unintended pregnancies among these women is to increase their use of long acting reversible contraception (LARC), especially the implant and intrauterine device. This study aimed to assess the pregnancy history, contraceptive use and access to contraceptive services of women attending Cork-Kerry Community Healthcare (CKCH) for opioid replacement therapy. The need for a contraceptive service within the Addiction Services at CKCH was evaluated. **Methods.** The study utilized a cross-sectional survey administered by healthcare providers to 39 women, ages 18-50, attending CKCH for opioid replacement therapy. Descriptive statistics were performed using IBM SPSS Statistics Data Editor. **Results.** 79.5% of participants had unintended pregnancies, and 23% had 3 or more unintended pregnancies. Of the participants' children, 35% lived with their mother, 37% lived in care, and 24% lived with another family member. 31% of participants reported never having used LARC. 18% of participants reported never having received information on pregnancy prevention and 21% reported never having received information on STI prevention. 92% of participants reported that they would use a contraceptive service if it were provided within the addiction services at CKCH. **Conclusions.** This study highlights the need to increase contraceptive services for women attending CKCH for opioid replacement therapy. Addiction services are ideal locations to also access contraceptive services because service-users already attend these clinics frequently for treatment, and thus have continuity of care with healthcare providers.

Key Words: Opioid-replacement therapy; unintended pregnancy; long acting reversible contraception (LARC)

1. Introduction

In Ireland, there is an estimated 6,000 women with opioid use disorders [16]. These women face numerous difficulties. The majority have experienced troubled upbringings and have subsequently developed maladaptive adult relationships [6,8], Most have low socioeconomic status [15] and many have comorbid mental health disorders [6]. These factors contribute to low self-esteem, poor self-efficacy and feelings of shame [6], which are exacerbated by recurrent experiences of social stigma [17]. Women with opioid use disorders often use substances for temporary re-

lief from their painful memories and current difficulties [6].

In regard to reproductive health, women with opioid use disorders face unique challenges. Long term use leads to amenorrhea (absent menstruation) [15], which often leads women to mistakenly believe they are not at risk of becoming pregnant. Women with opioid use disorders are also more likely to engage in high-risk sexual behaviors, including having multiple sexual partners, being involved in the sex trade, having sex for drugs and having sex while intoxicated [4]. In addition, they are at increased risk of being sexually abused, and studies indicate that ap-

proximately 55% report having been raped [7]. Furthermore, studies have shown that women with opioid use disorders have low rates of effective contraceptive use, with approximately 50% using no form of contraception [17].

Misperceptions about infertility, high-risk sexual behaviors and low rates of effective contraceptive use increase the likelihood of unintended pregnancies. While all women who experience unintended pregnancies face consequences, there are distinct repercussions for women with opioid use disorders. Compared to women without substance use disorders, women with opioid use disorders are at a higher risk of obstetrical complications, including placental abruption, preeclampsia [8], ectopic pregnancy [6], and pregnancy loss due to miscarriage or stillbirth [4]. These women are also at a higher risk of death during pregnancy and following pregnancy termination [14]. Babies of women with opioid use disorders are more likely to be born premature and to have low birth weight, growth retardation, neurobehavioral deficits and neonatal abstinence syndrome [15]. Furthermore, women with opioid use disorders commonly use other substances which pose additional risks to babies, such as alcohol and cocaine, which can cause fetal alcohol syndrome and cardiovascular malformations, respectively [13]. Many babies who survive do not remain in their mothers' care. Studies show that 64% of children of women with opioid use disorders do not live with their mother [6]. In cases where women maintain custody, the wellbeing of both mother and child are significantly diminished due to the difficulties of raising a child in the socially disadvantaged and unstable environments typical for most women with opioid use disorders [8].

Increasing use of effective contraception is a key strategy for reducing unintended pregnancies. The World Health Organization categorizes implants (e.g. "Implanon") and intrauterine devices (IUD, e.g. "Mirena Coil") as "very effective" methods of contraception because they provide safe and highly effective contraception for 3-10 years once inserted [5]. Implants and IUDs are the most effective types of long acting reversible contraception (LARC) and are important for women with opioid use disorders due to their increased sexual risks [5].

Several studies have shown that women with opioid use disorders have higher rates of unintended pregnancies than women without substance use disorders. An Australian study of women attending opioid treatment programs found that 84.2% of pregnancies among these women were unintended [6]. A study

in the U.S. found that 86% of pregnancies among women attending eight opioid treatment programs were unintended, and 27% were unwanted [17]. An additional study in the U.S. of women with opioid use disorders attending two drug treatment clinics found that 48.1% had 1-2 unintended pregnancies, 26% had 3-4 unintended pregnancies and 19.5% had over 5 unintended pregnancies [12].

The present study is the first to evaluate the pregnancy history and contraception use of women with opioid use disorders in Ireland. The study examined women who attend addiction services at Cork-Kerry Community Healthcare (CKCH) for opioid replacement therapy. This study aimed to assess the pregnancy history, contraceptive use and access to contraceptive services of women attending Cork-Kerry Community Healthcare (CKCH) for opioid replacement therapy. It aimed to determine whether there is a need to provide contraceptive services for women who attend CKCH for opioid replacement therapy and whether women would use these services if available.

2. Method

2.1. Design of the study

The study utilized a cross-sectional questionnaire designed to gain information on participants' pregnancy history, contraceptive use, access to contraception, and use of healthcare services for contraception and STI prevention advice. We reviewed and drew on the existing literature, as well as validated surveys of related topics when creating the questionnaire. These surveys include: The National Survey of Sexual Attitudes and Lifestyles (UK) [9], The National Campaign to Prevent Teen and Unplanned Pregnancy (US) [18], and The National Health Statistics Report on Sexual Activity and Contraceptive Use Among Teenagers 2011-2015 (US) [1]. The research team which designed the questionnaire included doctors and nurses working at CKCH, doctors and nurses working within the HSE Homeless Service, and a medical student. The questionnaire was composed of 31 questions and took 12 minutes to complete on average.

2.2. Sample

The questionnaire was administered to women of childbearing age (18-50) who attend CKCH for opioid replacement therapy. Three centres provide

Table 1. Population Characteristics

	Median/Number
Age	Median: 32
20-29	35.9% (14)
30-39	53.8% (21)
40-49	10.3% (4)
Living situation	
Stable accommodation	79.5% (31)
Friend's/Family member's accommodation	12.8 % (5)
Homeless Accommodation	5.1% (2)
Rough sleeping	2.6% (1)

these services within CKCH: Arbour House and Heron House in Cork city, and Edward Court in Tralee, Kerry. Three women were excluded from the study because they were inebriated at the time of their appointment.

2.3. Procedure

The questionnaire was administered by a doctor or nurse during service users' scheduled appointments. We provided participants with an information leaflet on the study and they signed a consent form to participate in the study.

Table 2. Pregnancy history

	Median/Number
Number of pregnancies	Median=2
0	20.5% (8)
1-2	38.5% (15)
3-4	30.8% (12)
5-6	12.8% (5)
7	2.6% (1)
Number of children	Median=2
0	15.4% (6)
1-2	43.6% (17)
3-4	17.9% (7)
5-6	25.6% (3)
Number of pregnancy losses	Median=1
0	43.6% (17)
1-2	53.9% (21)
3-4	2.6% (1)
5	2.6% (1)

2.4. Data analysis

Collected data was transferred to IBM SPSS Statistics Data Editor for analysis. Descriptive statistics were performed. Ethical approval was obtained from the University College Cork Clinical Research Ethics Committee.

3. Results

3.1. Population characteristics

Thirty-nine women attending CKCH for opioid replacement therapy completed the questionnaire. The median age of participants was 32. The participants' age and living accommodations are summarized in Table 1.

3.2. Pregnancy history

84.6% (33) of participants reported having been pregnant and 69.2% (27) had children. The number of pregnancies ranged from 0-7 (median=2); and the number of children born ranged from 0-6 (median=2). 56.4% (22) reported having one or more pregnancy loss/termination. Details of pregnancy history are summarized in Table 2.

79.5% (31) reported having an unintended pregnancy. The reported number of unintended pregnancies ranged from 0-6 (median=2). 96.3% (26/27) of participants with children reported having had an unintended pregnancy. The number of unintended pregnancies are depicted in Figure 1.

Of participants with children, 63% (17) reported having children who did not live with them (excluding children who are adults). Among all participants who had children, 57 children were under 18. Where participants' children live are illustrated in Figure 2.

When participants were asked how important it was to avoid becoming pregnant right now, 84.6% (33) reported it was very important, 7.7% (3) reported that it was somewhat important, 5.1% (2) reported it was not at all important and 2.6% (1) reported not knowing.

3.3. Contraceptive methods

97.4% (38) of participants reported having used contraception in the past. 51.3% (21) had used very effective methods of contraception (IUD, implant), and 10.3% (4) had used very effective methods in the past four weeks. 53.8% (21) reported that they were

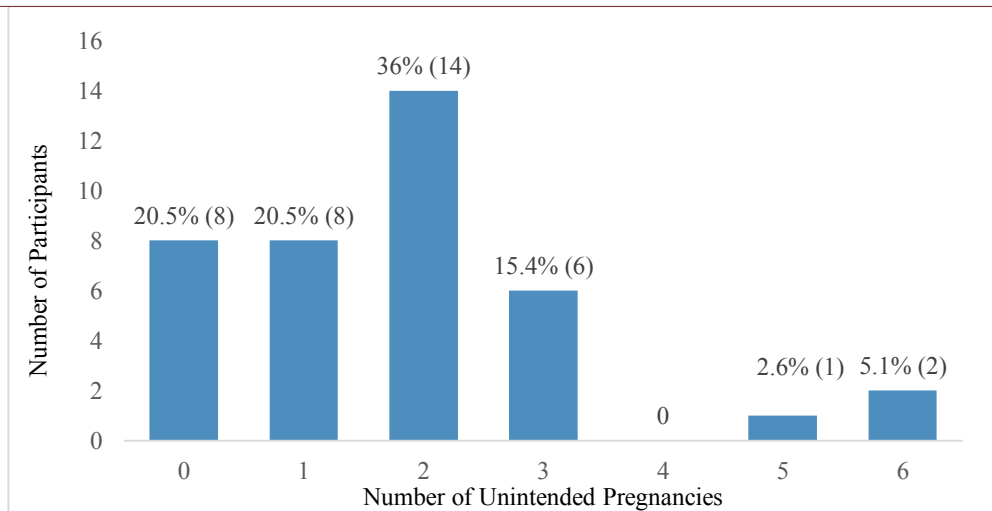


Figure 1. Number of unintended pregnancies

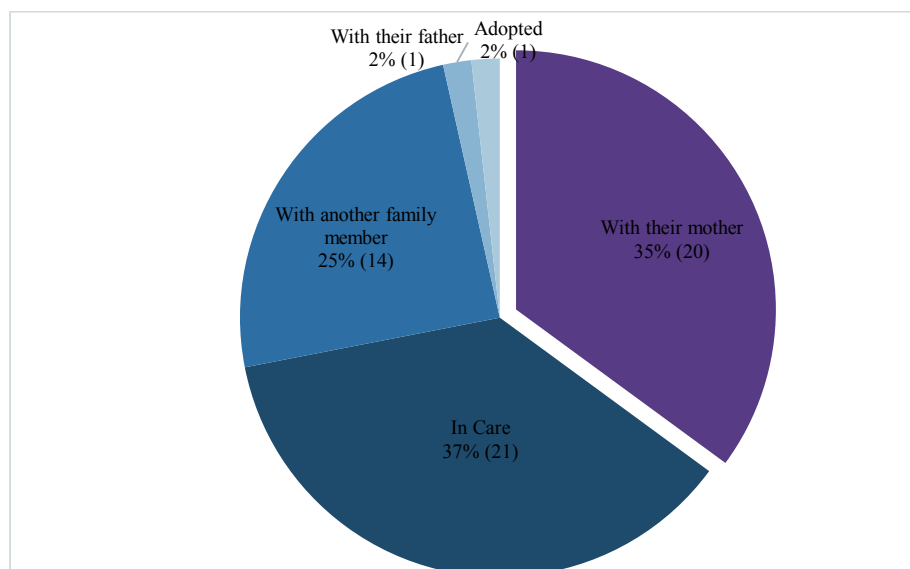


Figure 2. Living situation of participants' children

Figures 1-2. Number of unintended pregnancies and living situation of participants' children

currently sexually active with a man. Of these participants, 61.9% (13) reported having used very effective contraception, and 9.5% (2) reported using very effective methods in the past four weeks. 79.5% (31) of all participants had used condoms, and 5.1% (2) reported use of condoms in the past four weeks. A summary of the contraceptive methods used, examined by category of the WHO classification of contraception effectiveness, is provided in Table 3. Where participants accessed contraception is presented in Table 4.

41% (16) of all participants reported having used emergency contraception in the past year. The number of times emergency contraception was used ranged from 0-10 times, with 15.4% (6) having used it over four times.

3.4. Contraception and STI prevention advice

82.1% (32) of participants reported having received information on birth control or pregnancy pre-

Table 3. Contraceptive methods used

	Total (Ever)	Total (Past 4 weeks)	Currently sexually active (21) (Ever)	Currently sexually active (21) (Past 4 weeks)
“Moderately effective”				
Condoms	79.5% (31)	5.1% (2)	100% (21)	9.5% (2)
“Effective”				
OCP	66.7% (26)	7.7% (3)	85.7% (18)	9.5% (2)
Patch	12.8% (5)	0	14.3% (3)	0
Ring	2.6% (1)	0	4.8% (1)	0
Injectable	46.3% (18)	7.7% (3)	52.4% (11)	9.5% (2)
“Very effective”				
Implant	41% (16)	7.7% (3)	47.6% (10)	4.8% (1)
IUD	15.4% (6)	0	14.3% (3)	0
Tubal ligation	0	0	0	0

Table 4. Where participants accessed contraception

Source	Ever	Past 6 months
Service provider at CKCH	5.1% (2)	0
Doctor or nurse at their GP’s surgery	79.5% (31)	23.1% (9)
Sexual health/family planning/reproductive health clinic	17.9% (7)	2.6% (1)
Pharmacy/chemist	12.8% (5)	2.6% (1)
Shop	5.1% (2)	0
Online	2.6% (1)	0

Table 5. Where participants received contraceptive/STI prevention advice

Source	Ever	Past 6 months
Contraception/birth control advice		
Service provider at CKCH	33.3 % (13)	12.8% (5)
Doctor or nurse at their GP’s surgery	69.2% (27)	23.1% (9)
Sexual-health/family planning/reproductive health clinic	23% (9)	0
Chemist	2.6% (1)	0
Hospital	7.7% (3)	0
STI prevention advice		
Service provider at CKCH	25.6% (10)	5.1% (2)
Doctor or nurse at their GP’s surgery	53.8% (21)	5.1% (2)
Sexual-health/family planning/reproductive health clinic	25.6% (10)	0

vention. 76.9% (31) reported having received information on STI prevention. Sources where participants received information are documented in Table 5. 66.7% (26) of participants reported having received information on drugs and alcohol during pregnancy. When asked whether they would use a contraceptive clinic if it were provided within the addiction services at CKCH, 92.3% (36) reported they would.

3.5. Barriers to contraceptive services

When asked what barriers prevent participants from accessing contraceptive services, 66.7% (26) reported there were none, 5.1% (2) reported that they would not know where to access these services, 5.1% (2) reported not being registered with a regular GP, 2.6% (1) reported not wanting to discuss contracep-

tion with their GP, 7.7% (3) reported not having a medical card, 7.7% (3) reported contraception not being available enough, 2.6% (1) reported being “lazy”, 2.6% (1) reported forgetting and 5.1% (2) reported that their addiction is the barrier.

4. Discussion

There was a high rate of unintended pregnancies among women attending CKCH for opioid replacement therapy. The rate found in this study (79%) is similar to rates noted by other studies of women attending opioid treatment programs worldwide [4, 8, 10]. This rate is significantly higher than estimates of women in the general population who have had unintended pregnancies, which range from 31%-47% [5]. Many of the participants' pregnancies did not result in live births, which is consistent with other research indicating that women with opioid use disorders are at a greater risk of pregnancy loss than the general population [12]. Of children born to participants, 65% did not live with their mothers.

The low rate of very effective contraception use found in this study likely contributed to high rates of unintended pregnancies among participants. Less than half of participants reported ever using very effective methods of contraception, including the IUD and implant. This is consistent with other studies that indicate that women with opioid use disorders have low rates of effective contraceptive use [17]. Moreover, many participants are currently at risk of having unintended pregnancies due to low rates of very effective contraception use. Of participants who reported being in a current sexual relationship, less than 5% reported using very effective methods of contraception in the past four weeks, and only 33.3% had used any contraceptive method over the past four weeks. Furthermore, 41% of all participants had used emergency contraception in the past year, indicating that they had perceived themselves as being at risk of an unintended pregnancy. An additional concern is the low rate of barrier contraception use (i.e. condoms) among participants, which is necessary for STI prevention. Of participants who were currently sexually active 90.5% (19) indicated that they had not used condoms in the past four weeks. We did not ask participants about their STI history; however similar studies of women attending opioid treatment programs have found high rates of STIs among participants [7, 8, 17].

The results of the present study suggest that gaps in the provision of contraception and STI prevention advice may be contributing to low rates of very ef-

fective and barrier contraception use among participants. Notably, seven (17.9%) participants reported never having received information on pregnancy prevention, nine (21.3%) reported never having received information on STI prevention, and thirteen (33.3%) reported never having received information on drugs and alcohol during pregnancy. It may be assumed that this advice would be provided to participants by their GP. However, 94.9% of participants had visited their GP in the past six months, and only 23.9% reported having received contraceptive advice from their GP during this time. Furthermore, 30.7% of participants reported having never received contraceptive advice from their GP. There are many possible reasons for why GPs do not provide contraceptive advice, such as needing to prioritize other health concerns and not having adequate time to address contraception. Nonetheless, these findings suggest that women on opioid replacement therapy require an alternative healthcare source to obtain consistent advice on contraception and STI prevention.

Over 90% of participants reported that they would use a contraceptive clinic if it were provided within the addiction services at CKCH. The addiction services at CKCH are ideally located for women to also access contraceptive services because service users already attend these clinics frequently for treatment. Women attend these clinics biweekly when they begin opioid replacement therapy and return at least once a month throughout their treatment. It would therefore be convenient for women to have their contraceptive needs addressed at the addiction services while they are there for treatment. Previous studies have also suggested implementing contraceptive services within drug treatment centres and have found that women at these centres reported that they would use these services if provided [4, 10, 15, 17]. Furthermore, studies have demonstrated the efficacy of providing contraceptive services at drug treatment centres. An American study found that introducing family planning services into drug treatment centres increased the reported rate of contraception use among service users at their follow up appointments [3]. Another study of a centre that combined drug treatment services with obstetric care in the U.S. found that providing contraceptive services to women with substance use disorders postpartum increased the use of very effective methods of contraception by 32% [8].

Strengths and limitations

The main strength of the present study is that it is the first in Ireland to examine the reproductive health needs of women with opioid use disorders. The main limitation is the small sample size, which reduces the study's statistical significance. Another limitation is the possibility of recall bias in some participants. Questions on whether participants had received information on contraception, STI prevention, and use of drugs and alcohol during pregnancy would have been particularly susceptible to this bias.

Further Research

The results of the present study indicated a high number of pregnancy losses among participants. Further research is required to determine what proportion of these pregnancies resulted in miscarriage, stillborn or termination. It would be particularly topical to investigate the number of participants who had pregnancy terminations, as legislation to legalize pregnancy termination in Ireland will soon be enacted following the May 2018 Referendum to Appeal the 8th Amendment [11]. Since this legislation has yet to be passed, participants who had pregnancy terminations would have most likely travelled to the UK to do so. While we did not investigate this matter in the present study, the experience of clinicians working with women with opioid use disorders is that many of these women have had unintended pregnancies terminated in the UK. Once legislation to legalize pregnancy termination is enacted in Ireland, it would be of value to explore the impact this has on women with opioid use disorders who become pregnant.

5. Conclusions

Unintended pregnancies among women with opioid use disorders result in physical, psychological and emotional consequences for both women and their children. The impact on children of having a mother with an opioid use disorder is multifaceted and depends on a variety of circumstances. Nonetheless, these children tend to grow up in unstable settings, whether with their mothers, in care or going between various family members. This lack of stability negatively impacts children's psychosocial development and ability to form adaptive relationships, putting them at increased risk for substance abuse disorders when they grow up [2]. Preventing unplanned pregnancies among women with opioid use disorders

is thus crucial in reducing the occurrence of intergenerational cycles of substance use disorders.

In a study of women with opioid use disorders by Heil et al., the majority of participants agreed with the statement "In life, things just seem to happen to me", indicating their perceived lack of control over their lives [10]. Having a contraceptive service that is easily accessible is especially important for women on opioid replacement therapy due to the unstable and often impoverished nature of their lives. The addiction services at CKCH are ideally located for women to access contraceptive services because service users already attend these clinics frequently for treatment. The provision of an accessible contraceptive service would allow these women to focus on their well-being and recovery, as well as empower them to take control of a crucial aspect of their reproductive health. It would allow them to make a conscious and autonomous choice to become pregnant when they wish to do so.

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Acknowledgements

Nurses and GPs at Arbour House, Heron House and Edward Court for contributing to the study by administering questionnaires to participants.

Role of the funding source

Authors state that this study was financed with internal funds. No sponsor played a role in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the paper for publication.

Contributors

All authors were involved in the study design, had full access to the survey data and analyses, and interpreted the data, critically reviewed the manuscript and had full control, including final responsibility for the decision to submit the paper for publication.

Conflict of interest

All authors have no conflict of interest.

Ethics

Authors confirm that the submitted study was conducted according to the WMA Declaration of Helsinki - Ethical Principles for Medical Research Involving Human Subjects. The study has IRB review/approval.

Received February 20, 2019 - Accepted March 5, 2019