

Shifting abortion care from a hospital to a community sexual and reproductive health care setting

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ABSTRACT

Background Community sexual and reproductive health (SRH) services are well placed to deliver abortion assessment services and early medical abortion (EMA), but comparative data on safety and acceptability from both settings are important for future service planning.

Methods Retrospective review of computerised records of 1342 women undergoing outpatient EMA (≤ 9 weeks) in a community SRH or hospital department of gynaecology in the same city, and a self-completed, anonymous survey of 303 women requesting abortion at both sites. Primary outcome was safety in terms of re-attendance rates for a complication related to EMA. Secondary outcomes were telephone contact with each site for an EMA-related concern and satisfaction with information about abortion (defined as score out of 10) received at each site.

Results There was no difference in re-attendance rates to either service for a complication following outpatient EMA (2.7%). A higher proportion of women undergoing EMA at the SRH site made telephone contact compared to women at the hospital site (18.8% vs 10.8%; $p=0.033$). Women rated both settings highly in terms of information received before abortion (9.2 and 9.6 out of 10) at the hospital and SRH sites, respectively.

Conclusions This study suggests that provision of outpatient EMA in a community SRH setting is as safe as that delivered from a hospital setting, and that women are similarly satisfied with the information they receive about abortion from each setting. More abortion assessment and outpatient EMA services in Great Britain could shift from hospital to community SRH settings.

INTRODUCTION

Throughout Europe, early medical abortion (EMA) (≤ 9 weeks' gestation) is delivered from a range of settings including

Key message points

- ▶ This study suggests that outpatient early medical abortion (EMA) in a community sexual and reproductive health (SRH) setting appears to be as safe as that delivered from a hospital.
- ▶ Women appear just as satisfied with the information they receive about abortion from community SRH and hospital services.
- ▶ More abortion assessment and EMA services in Great Britain could shift from hospital to community SRH services.

hospitals, specialist abortion clinics, family planning centres and general practice.¹ In 2013 in Scotland, almost all abortions were provided from departments of obstetrics and gynaecology within National Health Service (NHS) hospitals, and in England and Wales the corresponding figure was 34%.^{2 3} There are advantages to providing abortion care from a hospital setting including accessibility, care of women with complex medical conditions, and management of serious complications following treatment. The hospital also fulfils an important role in teaching and training future providers of abortion care. However, there are notable disadvantages to delivery of abortion care from this setting. The abortion service may have to compete with acute medical services for both accommodation and staffing. Furthermore, trainees in obstetrics and gynaecology in the UK may be less interested in abortion care than other parts of the speciality.⁴ In contrast, a survey of UK clinicians in sexual and reproductive health care (SRH) showed enthusiasm to offer more abortion care

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from SRH settings.⁵ A significant proportion of all abortions in Britain is now conducted in the first 9 weeks of pregnancy^{2 3} with increasing proportions conducted medically with women choosing to go home to pass the pregnancy.⁶ This outpatient procedure does not need to be delivered from an acute hospital setting. Provision of EMA from community settings has been piloted and evaluated by the UK Department of Health, in England and Wales, as suitable for potentially providing more EMA care.⁷ However, there have been no large-scale comparative studies of outcomes of care from community and hospital settings.

The Chalmers Sexual Health Centre in Edinburgh, UK is a community SRH service provided by the NHS that until 2012 delivered only abortion counselling, referral for abortion and post-abortion care. Until 2012, all the abortion assessment clinics and medical abortions conducted within Edinburgh were delivered from a hospital setting [Royal Infirmary of Edinburgh (RIE)]. In 2012, a decision was made to shift half the assessment clinics for women requesting abortion from the main abortion provider in the region (RIE)² to the Chalmers SRH site and to establish and deliver an outpatient EMA service (where women receive medical abortifacients on the premises and then go home to pass the pregnancy).

The aim of the present study was to compare the services at the community SRH and the hospital in terms of safety of outpatient EMA and patient satisfaction with information provided about abortion. We therefore conducted (a) a review of the computerised databases of women who had an outpatient EMA from each site for outcome of the procedure and unscheduled contact (in person visit or telephone contact) with the service for a complication or concern related to the EMA and (b) an anonymous self-completed survey of women attending both services about satisfaction with the quality of information about abortion provided at the assessment clinics.

METHODS

Outpatient EMA service

Both settings used the same centralised referral service that received all referrals in the city and allocated appointments on a first-available basis. Clinics for women requesting abortion took place on 2 days each week at the hospital and on two different days at the SRH site. The same numbers of referrals were seen at each clinic and the same numbers of doctors and nursing staff worked at each site. Clinic nursing staff were unique to each site, but some doctors worked at both. Both abortion services had the same clinical lead, followed the same protocols, and used the same laboratories. All women had their gestational age assessment by ultrasound, performed by the same team of ultrasonographers. Women who were at ≤ 9 weeks' gestation and who fulfilled the criteria for outpatient EMA (Box 1) could have this provided at

Box 1 Summary of criteria for outpatient early medical abortion

- ▶ No contraindications to medical abortion
- ▶ ≤ 9 weeks gestation (ultrasound)
- ▶ ≥ 16 years old
- ▶ Adult support at home
- ▶ Live within 40 minutes travel time
- ▶ No cause for concern (no child protection issues, domestic violence, etc.)
- ▶ Does not require interpreter

either the SRH or the hospital site. However, surgical abortion and admission for medical abortion was only provided at the hospital site. Therefore, women attending the SRH site choosing the latter methods were counselled about these procedures, prescribed all medication (including contraception), and arrangements made for subsequent admission to the hospital.

The EMA drug regimen used by both the SRH and hospital services has previously been described and consisted of a single oral 200 mg dose of mifepristone followed 24–48 hours later by 800 μ g misoprostol (self-administered) vaginally.⁶ The method used to confirm the success of outpatient EMA has previously been described⁸ and consisted of women themselves conducting a low-sensitivity urinary pregnancy (LSUP) test at home 2 weeks after the abortion, and contacting the service if the LSUP test was positive or there were signs/symptoms of ongoing pregnancy.

Complications and unscheduled contact after outpatient EMA

A retrospective review was undertaken of the computerised databases of women requesting abortion at the hospital and SRH services (September 2012–August 2013). These databases recorded identical information about the women including demographics (reproductive history, postcode area of residence, gestation at presentation), outcome of the pregnancy and method of contraception provided at discharge from the service. The databases complied with NHS data protection standards. The postcode area of residence was used to derive a deprivation category score.⁹ In order to compare the safety of outpatient EMA delivered by the hospital and SRH sites, the regional hospital and SRH computerised databases were checked to determine if women made an unscheduled visit to either site (or another hospital within the region) with a complication within 3 months of treatment. The abortion service telephone call registers at each site were also checked to determine if women made telephone contact and the reason for this. The chair of the local ethics committee confirmed that formal ethical committee approval was not required for this retrospective database review.

Satisfaction with information on abortion

Satisfaction surveys of women were conducted at both sites between January and March 2013 inclusive. Women were handed an anonymous self-completed questionnaire on arrival at the assessment clinic by a research nurse assisting with the evaluation. Questionnaires were only distributed on days that the research nurse was present in the clinic. Questionnaires were not given to women who appeared distressed or who were accompanied by an interpreter. The questionnaire outlined the reason for the survey and contained simple questions that requested simple 'tick box' responses, collected basic demographic data on respondents, and asked women to indicate their level of satisfaction with aspects of the service (e.g. care/information/contraceptive advice they have received) on a five-point Likert scale. The survey also asked women to rate the *overall* care they received as a score out of 10. Women were instructed to complete the survey after the consultation with the doctor and/or nurse. Women could choose to place the completed questionnaire in an accompanying opaque envelope (sealed) in a secure survey collection box in the clinic, or to hand the sealed envelope containing the questionnaire to the research nurse.

The study questionnaires were reviewed by the ethical officer of NHS Lothian, who confirmed that ethical committee approval was not required for this health services research. The NHS Lothian Quality Improvement Team for abortion approved the project.

STATISTICS

Statistical analysis was performed on coded data. Questionnaires were coded and data entered into a Microsoft Excel™ database. Excel was used to perform descriptive statistics. Comparisons between the SRH and hospital sites were made using Graphpad™ software and the unpaired *t*-test or Fisher's exact test (for association between dichotomous variables) as appropriate. Statistical significance was defined as $p < 0.05$.

RESULTS

Characteristics of women undergoing outpatient EMA at each site

Over the 12-month period a total of 1342 women from the hospital ($n=601$) and SRH ($n=741$) settings underwent an outpatient EMA. The demographics of the women and their gestation (determined by ultrasound) are shown in Table 1. There were no statistically significant differences in the demographic characteristics among women attending either site. However, a statistically higher proportion of women attending the SRH setting were < 6 weeks' gestation compared to the hospital site ($p=0.0002$). The mean [standard deviation (SD)] days waiting time from referral to assessment clinic at each site were significantly different [hospital 7.0 (3.2) vs SRH 5.9 (3.4) days; $p < 0.0001$].

Table 1 Demographics of women choosing outpatient early medical abortion

Demographic	Hospital group ($n=601$) [n (%)]	SRH group ($n=741$) [n (%)]
Age (years)		
Range	16–45	16–46
Mean (SD)	26 (6.7)	26.6 (6.0)
DepCat score*		
1–2 (Affluent)	116 (19.3)	118 (15.9)
3–5 (Moderate)	422 (70.2)	532 (71.7)
6–7 (Deprived)	61 (10.1)	83 (11.2)
Unknown	2 (0.3)	8 (1.0)
Reproductive history		
Previous birth	282 (46.9)	333 (44.9)
Previous abortion	203 (33.7)	240 (32.3)
Previous miscarriage	60 (9.9)	66 (8.9)
Previous ectopic	10 (1.6)	14 (1.8)
Gestation (days)		
≤ 42	227 (37.7)†	356 (48.0)†
43–49	108 (17.9)	153 (20.6)
50–56	151 (25.1)	142 (19.1)
57–63	114 (18.9)	89 (12.0)
≥ 63	1 (0.1)	1 (0.1)

*The DepCat score is a marker of deprivation in Scotland based upon postcode area of residence, scoring from 1 (least deprived) to 7 (most deprived).

†A significantly higher proportion of women in the SRH group were at/under 42 days' gestation ($p=0.0002$, Fisher's exact test). SD, standard deviation; SRH, sexual and reproductive health.

Safety of outpatient EMA

Significantly more women who underwent an outpatient EMA at the SRH site ($n=110$, 14.8%) compared to the hospital site ($n=65$, 10.8%; $p=0.033$), made contact with the respective service for a concern related to the EMA. Most contact was made by telephone. The most common reason for contact was concern about the success of the treatment (because the woman experienced only scant bleeding, ongoing pregnancy symptoms or a positive or uncertain pregnancy test result) (Table 2). Clinic reviews were scheduled for these women; five were found to have ongoing pregnancies (0.4% of the total outpatient EMA; hospital $n=4$, SRH $n=1$). All women

Table 2 Reasons for contact with the hospital or the sexual and reproductive health service after outpatient early medical abortion

Reason for contact	Hospital ($n=65$) [n (%)]	SRH ($n=110$) [n (%)]
Concern about possible failure of EMA	29 (45)	60 (55)
Persistent/heavy bleeding/pain	28 (43)	40 (36)
Well, seeking reassurance	6 (9)	9 (8)
Other reason*	2 (3)	1 (1)

*Vasovagal, renal tract infection, ovarian cyst.

EMA, early medical abortion; SRH, sexual and reproductive health.

proceeded to have a successful repeat medical or surgical abortion.

The second most common reason for contact was persistent bleeding/pain (Table 2). Only 14/28 (50%) and 19/40 (48%) women who contacted the hospital and SRH services, respectively, with heavy or persistent bleeding/pain attended the service in person; the remainder received only telephone advice. Two women (one from each service) presented as an emergency with haemorrhage (0.15% total); one required blood transfusion and the other required emergency surgical evacuation of the uterus. Three women who presented with bleeding/pain post-EMA (SRH site) also underwent surgical evacuation of the uterus for retained products of conception. All women phoning for reassurance (hospital $n=6$, SRH $n=8$) received telephone advice only.

A total of 36 women attended the hospital or SRH in person. Although the SRH service received more telephone calls from women with a range of concerns, there was no significant difference in the proportion of women who attended either service for complications (bleeding/pain/other) following outpatient EMA [16/601 (2.7%) women undergoing outpatient EMA at hospital and 20/741 (2.7%) women at SRH]. Attendances from women assessed at the hospital (14/16) and the SRH group (19/20) were due to bleeding/pain. The remaining three women who attended the services did so with other complaints (Table 2).

Women's satisfaction with pre-abortion care

Questionnaires were given to a total of 305 women and were completed by 151 and 152 women attending the hospital and SRH settings, respectively (a completion rate of 99% at both sites). Based upon the numbers of women attending the clinics on the days that questionnaires were given out, the overall distribution of questionnaires was to 75% and 59% of the women attending and requesting abortion at the hospital and SRH sites, respectively. The mean age of respondents was 25 years; 88% were from moderately and severely deprived postcode areas, 48% had previously given birth; and 33% had previously had an abortion. There were no significant differences in the demographic characteristics of respondents at each site (results not shown).

Women rated highly the care they received at both clinics (consultation, written and verbal information) with mean (SD) scores out of 10 for this care of 9.2 (1.1) and 9.6 (0.7) for the hospital and SRH sites, respectively. A statistically significantly higher proportion of respondents from the SRH site rated their care as 10 out of 10 (115/149, 77%) compared to the hospital site (85/148, 57%; $p=0.0003$).

Almost all (99%) women at both sites reported having had a discussion with the doctor and/or nurse in the clinic about ongoing contraception, and similar proportions of respondents who answered this

Table 3 Participants' responses to the question: 'Overall, how do you feel *all* the information you received today at the clinic has prepared you for having an abortion?'

Response	Hospital ($n=150$) [n (%)]	SRH ($n=149$) [n (%)]
Feel very prepared	96 (64.0)†	125 (83.9)†
Feel quite prepared	44 (29.3)	24 (16.1)
Feel neither prepared nor unprepared	10 (6.6)	0
Feel a bit unprepared	0	0
Feel totally unprepared	0	0

*This question was not answered by one woman in the hospital group and three women in the SRH group.

†A significantly higher proportion of respondents in the SRH group were 'very prepared' compared to the hospital group ($p=0.0001$, Fisher's exact test).

SRH, sexual and reproductive health.

question stated that this discussion had been helpful or very helpful (140/148, 95% and 143/147, 97% at the hospital and SRH sites, respectively). Most women stated that they did not feel under pressure to choose a particular method of contraception (140/151, 93% and 145/152, 95% at the hospital and SRH sites, respectively).

Most of the respondents at the hospital (93%) and SRH (100%) services agreed that the information they had received at the assessment visit made them feel 'very well' or 'well' prepared for the abortion (Table 3). However, a small but significantly higher proportion of respondents from the SRH compared to the hospital setting ranked themselves as feeling 'very prepared' for having an abortion (84% vs 64%; $p=0.0001$) and 'very clear' about what this would involve (95% vs 87%; $p=0.0141$) (Table 4).

DISCUSSION

The study provides evidence that outpatient EMA delivered from a newly established abortion service within a community SRH setting appears to be as safe and effective as that delivered from an established

Table 4 Participants' responses to the question: 'After talking to the doctor or nurse in the clinic today, how clear is it to you about what will be happening to you/what the abortion will involve?'

Response	Hospital group ($n=149$) [n (%)]	SRH group ($n=148$) [n (%)]
I am very clear	129 (86.5)†	141 (95.2)†
I am quite clear	19 (12.7)	7 (4.7)
I am not sure	0	0
I am a bit confused	1 (0.6)	0
I am very confused	0	0

*This question was not answered by two women in the hospital group and four women in the SRH group.

†A significantly higher proportion of women were 'very clear' in the SRH group compared to the hospital group ($p=0.0141$, Fisher's exact test). SRH, sexual and reproductive health.

abortion service within a hospital department of obstetrics and gynaecology. There was no difference between the two service settings in rates of complications (which were low), no difference in the success of EMA and no difference in attendance rates for possible complications. Clearly the success of medical abortion is not dependent on the skill of the provider; however, one could hypothesise that if one setting provided superior advice or clinical expertise then that might impact upon the recognition of complications or the rate of intervention. The same low rate of women attending each site with a suspected complication (<3%) is reassuring and is no higher than previously reported among women after EMA.¹⁰ However, there was a higher telephone contact rate for the SRH setting. While it is possible that this higher rate might reflect greater anxiety or inferior information provision to woman attending the SRH site, it is also possible that easier access to health care providers in one setting might lower the threshold for contact with a possible complication or concern post-EMA. It is possible that women found contacting the SRH site easier, or that documentation of telephone calls received was better at the SRH site. It is also possible that since more women attending the SRH setting were at very early gestations (<6 weeks), this may have triggered more telephone calls due to lighter bleeding at this early gestation and the need to seek reassurance that EMA had been successful. Indeed, most of the calls made to the SRH service were related to concerns about the success of the procedure, which women are instructed to make as part of the simplified follow-up regimen used by the service.⁸

Our study also showed that women rated pre-abortion care at both services highly, in terms of the information provided both about abortion and ongoing contraception. High levels of reported satisfaction with care are in keeping with previous studies in this population.¹¹ Although a higher proportion of women at the SRH site rated aspects of their care at the highest level, this difference could be confounded by the difference in distribution rates of questionnaires between the two sites. Nevertheless, we can conclude that the provision of pre-abortion information is at least as good at the community SRH setting compared to a hospital department of obstetrics and gynaecology.

A strength of this study is that it is the only comparative study of outpatient EMA delivered from a community and hospital setting in the same city, in the same population, using the same clinical protocols, and compared over the same time frame. Although this was not a randomised controlled trial, the site of care was allocated from the centralised referral service depending on the next available appointment only. Nevertheless we cannot entirely exclude the possibility of some women preferentially being sent to one or other site. Furthermore, a

weakness of the study is that the proportion of women at ≤ 6 weeks' gestation at the SRH setting was higher than at the hospital, so it is possible that this may have impacted positively upon the complication rates in the SRH group. It is possible that the earlier gestation at the SRH site was related to the slightly shorter waiting times to be seen in this setting, which may be linked to the days of the week that clinics were held. Another strength of our study is that we were able to access regional computer systems (that record attendances to all hospitals in the region), databases and telephone registers to maximise the accuracy of capturing of post-abortion complications. However, this study was unable to capture complications that may have been managed only by a general practitioner (more likely to be minor) or in another city. In addition, our study assessed satisfaction with care at the assessment visit only.

Although the safety of outpatient EMA is well established,^{1 5 8 12} there are potential benefits to offering it from the specialist contraceptive setting of SRH, in terms of the expertise being available to provide quality advice on future contraception, and the availability of skilled providers who can offer and insert the most effective long-acting reversible methods of contraception that may prevent more further unintended pregnancies for more women¹³ (Cameron *et al.*, unpublished data, 2015). Also, integrated SRH services have genitourinary medicine specialists available and may do a better job of managing sexually transmitted infections among women requesting abortion, and undertaking contact tracing of partners, than those working in obstetrics and gynaecology departments.

Furthermore, shifting more abortion care from hospital settings could help relieve staffing pressures in acute parts of the service such as emergency gynaecology and the labour ward. It is also possible that there may be cost savings to the NHS from moving abortion services from an acute hospital site to a community setting.¹⁴ Of course, shifting all abortion care out of hospitals would risk obstetricians and gynaecologists losing experience in abortion care, and knowledge of contraception and associated skills, that have been shown to enhance other parts of gynaecological training.¹⁵ A careful balance of abortion care delivered from the hospital and community, and/or rotation of hospital trainees to community abortion services as part of their core training, is essential. Qualitative research on the providers of abortion services working in hospital and community settings will therefore continue to be important.

This study suggests that provision of outpatient EMA from a community SRH setting is as safe as that delivered from a hospital setting, and that women are similarly satisfied with the information they receive about abortion from both settings. The important benefits of providing abortion care from a community

SRH setting may also include better ongoing contraception provision for women with possibly fewer further unintended pregnancies, and these outcomes merit further exploration.

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