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Miscommunication between healthcare providers and patients may result in unplanned pregnancies☆

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Abstract

Our objective was to examine the impact of prior healthcare provider counseling on previous use of contraception and knowledge of emergency contraception in women seeking surgical abortion. We performed a retrospective analysis of 342 patient charts from women seeking an office abortion in a private practice setting from January 1999 to June 2001. Data extracted included demographic information, primary method of contraception over the preceding few months, compliance with that method, contraceptive history, knowledge of emergency contraception and postabortion contraception. Patients were primarily white (69%) and unmarried (63%) and had private insurance that covered abortion services (72%). Only 19% of women were using a birth control method with no recognized potential failure. Twenty-two percent of women were using their birth control method correctly but experienced an event that put them at risk for pregnancy, 32% were using their birth control method incorrectly and 27% were using no birth control method at all. Miscommunication between patients and their healthcare provider(s) negatively affected use of a primary contraceptive method in 14% of patients. Of the 77% of women who did not know about emergency contraception, nearly two thirds had an identifiable event for which emergency contraception could have been used. Healthcare providers may contribute to the occurrence of unintended pregnancy if they provide poor medical advice or miscommunicate with patients. © 2003 Elsevier Inc. All rights reserved.

Keywords: Contraceptive counseling; Emergency contraception; Miscommunication; Abortion; Unplanned pregnancy

1. Introduction

A survey conducted about public perspectives regarding unplanned pregnancies and contraception revealed that 60% of Americans believe unplanned pregnancies to be a major problem in the United States [1]. This perception is real, as approximately half of all pregnancies in the United States are unintended. Excluding miscarriages, about 25% of all the pregnancies in the United States end in abortion [2].

Patterns of unplanned pregnancies and abortions vary by age. Pregnancies are unintended in 83%, 33% and 51% of women younger than 18 years, 30 to 34 years and 40 years

and older, respectively [2]. By age 45, 43% of women will have had an abortion [2]. These rates, on the surface, are surprising, given the numerous contraceptive options available to women in the United States.

Almost 50% of women with unplanned pregnancies were using some form of birth control during the month they became pregnant [2]. Even accounting for the variable efficacy between birth control methods, the fact that a couple was using a method demonstrates they were cognizant of their risk of pregnancy and were taking measures to prevent it. In addition, since the advent of emergency contraception, a woman's ability to decrease her risk of pregnancy has been extended from methods used before and during acts of intercourse to methods available after any particular act of intercourse. A 1993 study looking at secondary contraception among women seeking an abortion indicated that 93% would have preferred to use postcoital contraception than experience an unplanned pregnancy [3]. The majority (65%) of these women had received their contraceptive

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counseling from either a general practitioner or a community family clinic. Yet, only 20% of the women who might have benefited from emergency contraception (EC) (i.e., recognized a potential contraception failure or used no contraception) had adequate knowledge of its existence, timing or source.

Scenarios such as these highlight the importance of the relationship between preventative contraceptive counseling from a healthcare provider and unplanned pregnancies. While the element of a patient's compliance with any birth control regimen cannot be controlled, an open and accurate exchange of information between patient and healthcare provider can be controlled. Miscommunication or misinformation that is present during health provider contact can have a significant impact on future contraception choices. This study was performed to examine the impact of counseling by healthcare providers in the case of unintended pregnancy. The goal was to understand if there is potentially a need for healthcare providers to improve communication with patients in order to decrease the rate of unintended pregnancy.

2. Materials and methods

We retrospectively reviewed the records of private patients of one of the authors (M.D.C.) who performed elective surgical abortion in the office over an 18-month interval from January 1999 to June 2001. Patient charts were reviewed after obtaining approval from the Magee-Womens Hospital Institutional Review Board. Data were abstracted by one individual (J.N.I.) and 1 of every 10 charts was checked by another individual (M.D.C.) for accuracy. A total of 367 women had elective abortions performed and 354 charts were available for review at the time of the analysis. Seven women had initially planned the pregnancy but later decided to have an abortion for social or medical reasons; because the reason for no contraceptive use was a planned pregnancy in these instances, these patients were excluded from this analysis. One woman with a pregnancy after sexual assault and four women who had an abortion solely for genetic indications were also excluded. The data on the remaining 342 patients are presented in a descriptive manner.

Almost all patients were referred by their primary healthcare provider or self-referred to the office for abortion services. All patients had been questioned about their most recent primary method of contraception, contraceptive history, why she switched between methods in the past, how she became pregnant and knowledge of EC. In addition, patients received personalized contraceptive counseling and the choice of postabortion contraception was recorded. Gestational age was determined by last menstrual period or, when clinically indicated, by ultrasound examination.

Two primary outcomes were assessed based on the patient's medical history. First, the reason why the patient was

using her most recent method of contraception and her past use of other methods were explored, including why she was using her most recent method. Based on this information, we assessed what the patient stated as the reason she was using her most recent method of contraception. For this assessment, we felt that the patient's understanding of the counseling she had previously received as the only true measure of the efficacy of the patient-provider communication. Thus, we defined miscommunication based solely on her understanding of this counseling. Examples of miscommunication or misinformation include a healthcare provider discontinuing combined oral contraceptives (OCs) for an estrogen contraindication but not offering progestin-only pills or other effective methods, discontinuation of a highly effective method for an incorrectly perceived contraindication, patients reporting difficulty obtaining EC and patients who state they were confused about how to properly use their contraceptive method of choice.

Second, a patient's knowledge of EC was determined as adequate by the patient stating that she knew about EC, had been counseled about it at a previous appointment or had previously used EC. If a patient stated she had heard about it but was not sure what it was, stated she did not know about EC or had no record of EC counseling in her chart, then her EC knowledge was considered inadequate. To stratify each patient's risk of pregnancy with regard to potential for EC use, each patient's contraceptive method was divided into one of four categories:

- Used correctly with no known risk: women used a recognized form of birth control, regardless of its efficacy, in its proper way.
- Used correctly with known risk: women used their birth control method properly, but identifiable events occurred that put the patient at risk for pregnancy. Examples of this category include women who were using condoms with a known break, taking OCs with concurrent antibiotic use and no back-up method, vasectomies not yet cleared by a urologist and miscalculation of rhythm method.
- Incorrect use: women used a recognized form of birth control but not in the correct way. Examples of this category include sporadic barrier method use, forgetting to take an active OC pill every day, and not counting days (rhythm method) correctly. Women who were using two forms of birth control together (i.e., condoms plus rhythm method or spermicide plus rhythm) were included in this category (as opposed to the correct use with known risk category) if the contraceptive method with higher efficacy was being used incorrectly. An example includes use of barrier methods except after menses or when the patient felt she was "safe."
- No method: women used no recognized form of birth control.

Table 1
Demographics of study population (n = 342)

Age (y), mean	28 ± 7
Gestational age (weeks), mean	8-2/7
Gestational age (weeks), range	4-5/7–13-4/7
Race, n (%)	
White	237 (69)
Black	67 (20)
Other	33 (10)
Data not available	5 (1)
Marital status, n (%)	
Single	196 (57)
Married	99 (29)
Divorced	27 (8)
Separated	14 (4)
Data not available	3 (1)
Widowed	2 (1)
Gravidity, n (%)	
1	86 (25)
2	69 (20)
3	78 (23)
4	65 (19)
≥5	44 (13)
Parity, n (%)	
0	139 (41)
1	73 (21)
2	93 (27)
≥3	37 (11)
Prior abortion, n (%)	131 (38)
Insurance, n (%)	
Yes, abortion covered	245 (72)
Yes, abortion not covered	39 (11)
None	58 (17)

3. Results

Patient demographics are described in Table 1. Using the history given by each patient about how she became pregnant in regard to birth control use, we stratified each patient's risk of pregnancy. True birth control failure accounted for 19% of pregnancies (women were using their birth control method correctly with no known risk of failure). Twenty-two percent of women were using their birth control method correctly but experienced an event that put them at risk for pregnancy, 32% of women were incorrectly using their birth control method and 27% were using no birth control method at all.

Miscommunication between patients and their healthcare provider(s) could be determined by patient history to have potentially affected contraceptive practice in 14% of patients. These women were incorrectly switched to a less effective primary method of birth control or were using no contraception based on their understanding of counseling from their healthcare provider (Table 2).

Overall, 64% of patients could have used EC. Only 23% of patients had adequate knowledge of EC prior to the time of their abortion. Importantly, 68% of women with adequate knowledge of EC and 63% of women without adequate knowledge of EC could have used the treatment. One of 77 women who knew about EC, and could have used it, actu-

Table 2
Patient reports of miscommunication with or misperception of information from healthcare provider that resulted in poor contraceptive practice (n = 49)

	n	%
Method switched by healthcare provider and patient not offered an equally or more effective method	19	(39)
Using an OC, given antibiotics, and not told to use back-up method	11	(22)
OC stopped for noncontraindication and switched to a less effective method	10	(20)
Difficulty obtaining or incorrect instruction on use of EC	6	(12)
Prescribed a birth control method she did not want and no other method offered by provider	3	(6)

ally did so. After the abortion, although all women were counseled about the availability of EC, only 21% chose to take home a prescription for EC.

4. Discussion

Because slightly more than half of all pregnancies in the United States are unintended, any efforts to decrease this number would have significant impact on women. Popular misconceptions about the women who are most affected by unintended pregnancies are numerous. Yet, the women evaluated in this study are from a private practice office and the issues are the same: unintended pregnancies still occurred and can be avoided.

In this private patient population, 14% of the women in the study had a communication failure that resulted in use of a less effective method of contraception than the patient had initially been using or no contraception. Although patients' attitudes and experience may have influenced compliance, the method she started after the counseling is reflected by her understanding of the interaction. The most common form of miscommunication took the form of inadequate contraception counseling. The most notable of these were women told to stop the use of the combined OC pills because of a contraindication (i.e., 35-year-old who smokes cigarettes) without what the patient felt to be an adequate review of alternative contraceptive options. Many of these women chose to use either condoms or no contraception at all because they did not know about the possibility of progestin-only contraceptives or, when appropriate, intrauterine methods. Thus, this "miscommunication" represents the healthcare provider's failure to fully inform the patient, at a level she understood, about options other than and more effective than barrier methods. This conclusion assumes that all providers are fully knowledgeable about all contraceptive methods; it is possible that the providers themselves are lacking the information they need to provide appropriate counseling.

A common example of miscommunication in our patient population included women not being told about the potential decrease in OC efficacy with concomitant use of oral antibiotics. A recent review by Dickinson et al. [4] discussed possible drug interactions between antibiotics and OCs. The conclusion was that, although only rifampin has been shown to impair the effectiveness of OCs, there is great individual variation in plasma hormone concentrations when patients take certain antibiotics. This does not suggest that OC use with concomitant antibiotic use is responsible for the pregnancies that may fall within OC failure range. However, it does indicate that there may be a more vulnerable population of OC users. Thus, with the use of low-dose hormonal contraception, this effect may not be predicted in advance in women particularly at risk and a “cautious approach is advisable to safeguard the few women using oral contraceptives who may be at risk for OC failure” [4]. As providers, we must also keep in mind that population-based studies of the effect of antibiotics on OC efficacy do not include many of the products we commonly prescribe today [5]. As doses of both hormones decline in newer oral OC formulations, we cannot necessarily rely on these population-based surveys to be applicable to our current prescribing habits. If healthcare providers neglect to discuss the theoretic risks of concomitantly taking antibiotics, how are patients to know they may be at increased risk for pregnancy?

Only a small percentage of our population was aware of EC, a finding similar to that found in national surveys [6]. For women who knew about EC and did not use it, the question then remains as to why not. Several studies have demonstrated that advance prescription increases the likelihood of use when needed without evidence of abandoning more reliable methods of birth control in order to use EC repeatedly [7–9]. Maintaining EC at home also serves to potentially improve efficacy because EC is more effective the sooner it is used after unprotected intercourse [10].

Numerous women in this study could have benefited from information and access to EC as well as education about events that put them at risk for pregnancy. Based on the history provided by each woman, 64% of all the patients could have used EC to decrease their chances of having the unintended pregnancy. Assuming an 85% decrease in the rate of expected pregnancy with EC use [11], approximately 54% of the women in this report would have avoided their unplanned pregnancy. In China, where use of primary contraceptives differs significantly from US women, Yimin et al. [12] found a similar rate of women (62%) seeking abortion could have used EC.

This study serves as an indicator of potential pitfalls in patient–physician communication related to contraceptive counseling. However, questions still remain. Without a control group of women who had an unplanned pregnancy that was not ending in abortion or women presenting for routine care, we do not know if the level of miscommunication is greater for women who choose abortion. Although recall bias is possible, this study serves to identify the patient’s understanding of her prior communication. With recall bias, we would expect sub-

jects to remember more information, not less. Even with the potential bias in this study, the information may be of particular benefit in the development of studies in the future which address why unintended pregnancy occurs.

It is important for us as healthcare providers to understand that we contribute on some level to the unintended pregnancy rate and the number of abortions performed annually in the United States. Although we cannot control the imperfectness of human nature, we do influence our patients’ risk of pregnancy based on the choices we offer them. In this review, we found that 14% of women having an abortion were using a less effective method of contraception because of poor advice from or miscommunication with their healthcare provider. Additionally, more than half of these abortion procedures would have been avoided if women received appropriate education from their healthcare providers about EC and had full and easy access to EC treatment. We also found, however, that even when knowledge about EC is provided, not all women will choose to take EC home to have available “just in case.” Only by providing accurate and complete information about contraceptive counseling, and making sure that patients have all of their questions answered to minimize confusion, do healthcare providers fully advocate for their patients’ best interests.

References

- [1] Delbanco S, Lundy J, Hoff T, Parker M, Smith MD. Public knowledge and perceptions about unplanned pregnancy and contraception in three countries. *Fam Plann Perspect* 1997;29:70–5.
- [2] Henshaw SK. Unintended pregnancy in the United States. *Fam Plann Perspect* 1998;30:24–9.
- [3] Bromham DR, Cartmill RSV. Knowledge and use of secondary contraception among patients requesting termination of pregnancy. *BMJ* 1993;306:556–7.
- [4] Dickinson BD, Altman RD, Neilsen NH, Sterling ML. Drug interactions between oral contraceptives and antibiotics. *Obstet Gynecol* 2001;98:853–60.
- [5] Weaver K, Glasier A. Interaction between broad-spectrum antibiotics and the combined oral contraceptive pill: a literature review. *Contraception* 1999;59:71–8.
- [6] Delbanco SF, Stewart FH, Koenig JD, Parker ML, Hoff T, McIntosh M. Are we making progress with emergency contraception? *J Am Med Womens Assoc* 1998;53:242–6.
- [7] Glasier A, Baird D. The effects of self-administering emergency contraception. *N Engl J Med* 1998;339:1–4.
- [8] Raine T, Harper C, Leon K, Darney P. Emergency contraception: advance provision in young, high risk clinic population. *Obstet Gynecol* 2000;96:1–7.
- [9] Ellertson E, Ambardekar S, Hedley A, Coyaji K, Trussell J, Blanchard K. Emergency contraception: randomised comparison of advance provision and information only. *Obstet Gynecol* 2001;98:570–5.
- [10] Piaggio G, von Hertzen H, Grimes DA, Van Look PF. Timing of emergency contraception with levonorgestrel or the Yuzpe regimen [letter]. *Lancet* 1999;353:721.
- [11] Task Force on Post Ovulatory Methods of Fertility Regulation. Randomized controlled trial of levonorgestrel versus the Yuzpe regimen of combined oral contraceptives for emergency contraception. *Lancet* 1998;352:428–33.
- [12] Yimin C, Wei Z, Zhimin L, Yang Z, Aiyang W. Contraceptive practices of women requesting termination of pregnancy: a study from China. *Contraception* 1997;55:15–7.