
Birth Control Failure Among Patients With Unwanted Pregnancies: 1982-1984

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Three hundred twenty-three patients who underwent abortion counseling between 1982 and 1984 were interviewed to determine the cause of birth control failure. Twenty-three percent employed no birth control and 27 percent used diaphragms, the majority either inconsistently or incorrectly. Twenty-two percent of the pregnancies were due to oral contraceptive-related failures; and the remainder were due to spermicide, condom, rhythm method, multiple method, and intrauterine device failures.

Overall, fewer than one quarter of unwanted pregnancies among the predominantly white, middle-class population studied resulted from failure to obtain contraception, and only 19 percent represented technical failure despite correct and consistent use. The majority (51 percent) occurred because of human error, ie, either incorrect or inconsistent use of available contraceptive modalities.

These findings contrast sharply with those of a similar study performed between 1969 and 1974. At that time failure to obtain contraception accounted for more than one half of the failures. Whereas the development and distribution of contraceptive technology was the challenge of the 1960s and the 1970s, reducing the number of birth control failures through anticipatory patient counseling is the challenge of the current decade.

Familiarity with the effectiveness of available forms of contraception and an understanding of the reasons for birth control failure are central to the physician's role as birth control counselor. Data on the effectiveness, side effects, and contraindications of all forms of contraception are readily available,¹ but the literature on the causes of birth control failure is less accessible and less current.

When Anderson et al² studied reasons for birth control failure between 1969 and 1974, lack of contraception accounted for more than one half of the unwanted pregnancies. In the past decade, however, the pill, intrauterine device (IUD), and other forms of birth control have become more readily

available to all age and socioeconomic groups in the United States. Despite this advance more than 4.6 million pregnancies ended in abortion between 1980 and 1982 in this country.³

The present study was designed to determine the causes of birth control failure in the 1980s and to learn what health care providers can do to reduce the number of unwanted pregnancies.

METHODS

Three hundred twenty-three of 326 consecutive patients who came to the Breckenridge Medical Center (Breckenridge, Colorado) for abortion counseling subsequent to the diagnosis of an unplanned pregnancy between January 1982 and April 1984 were interviewed by the same physician (A.S.).

Responses were recorded on the patients'

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BIRTH CONTROL FAILURE

TABLE 1. CAUSES OF BIRTH CONTROL FAILURE

Reason	Number	Percentage
No birth control	73	23
Diaphragm failure	88	27
Oral contraceptive failure	72	22
Condom failure	17	5
Spermicide failure	28	9
IUD failure	10	3
Rhythm method failure	9	3
Multiple method failure	6	2
Other	10	3
Undetermined	10	3
Total	323	100

TABLE 2. TYPES OF DIAPHRAGM FAILURE

Reason	Number	Percentage
Used correctly and consistently	26	30
Used incorrectly	9	10
Used inconsistently	5	60
Total	88	100

TABLE 3. TYPES OF ORAL CONTRACEPTIVE FAILURE

Reason	Number	Percentage
Used correctly and consistently	4	6
Used incorrectly	1	1
Used inconsistently		
Unacceptable side effects	24	33
Prescription expired	9	13
One or more pills missed	11	15
"Body needs a rest"	6	8
No anticipated need	7	10
Other	9	13
Total	72	99

TABLE 4. TYPES OF SPERMICIDE FAILURE

Reason	Number	Percentage
Suppositories		
Used correctly and consistently	7	25
Used incorrectly or inconsistently	6	21
Foam		
Used correctly and consistently	8	29
Used incorrectly or inconsistently	7	25
Total	28	100

written medical records and categorized as correct and consistent, incorrect, or inconsistent use of one of the following modalities: diaphragms, oral contraceptive pills, spermicides (foam or suppositories), condoms, intrauterine devices, multiple methods, or others (cervical caps, spermicidal sponges, or foam and condoms together). Rhythm method failures and the failure to obtain contraception were also recorded. Failure to obtain contraception (no birth control) means the patient either never obtained any form of contraception or failed to obtain any since her last pregnancy.

When categorizing reasons for failure, the principle of extended use failure as described by Vaughan et al⁴ was applied. When an unintended pregnancy occurred, it was attributed to the failure of the most recent method of birth control used, even if that method of contraception was abandoned long before the pregnancy occurred. A basic tenet of this approach is that the true

effectiveness of a contraceptive modality is a function of both its technical efficiency and the user's propensity to use it correctly and consistently.

RESULTS

Three hundred twenty-three patients were interviewed between January 1982 and April 1984. Their mean age was 24.6 years with a standard deviation of 3.6 years, and their ages ranged from 16 to 39 years. With few exceptions, they were white and middle class. All but three decided to terminate their pregnancies.

Table 1 reveals that reasons for failure to obtain contraception included the absence of previous sexual activity and failure to anticipate the need for birth control, previous sexual experience but failure to anticipate a need because of loss of sexual partner (divorce, death, separation), and

previous sexual activity resulting in unwanted pregnancy and abortion followed by the decision to remain celibate. Some patients thought they or their partners were infertile, and some feared any form of contraception because of previous problems with more than one type of birth control. Only one patient said she could not afford contraception.

Failure of diaphragm use resulted in 88 pregnancies (Table 2). Incorrect use of the diaphragm included failure to use spermicidal jelly, failure to leave the diaphragm in place following coitus, and failure to position the diaphragm properly. For every failure resulting from correct and consistent use, there were two human error failures because the patient either used the device incorrectly or failed to use it at all.

There were 86 pregnancies resulting from oral contraceptive failure (Table 3). Only 6 percent of those who suffered pill-related failures used the pill consistently. Fully 94 percent failed because they stopped taking their pills. The occurrence of unacceptable side effects was the most common reason for stopping. Side effects included nausea, weight gain, breakthrough bleeding, amenorrhea or oligomenorrhea, headaches, depression, bloating, fatigue, rash, hair loss, leg pains, weight loss, numbness, or fear of heart disease resulting from smoking and pill use.

The idea that one's body needs a rest after use of an oral contraceptive for a certain length of time resulted in 8 percent of pill-related failures, and expiration of pill prescriptions accounted for another 13 percent. Missing one or more pills and then stopping use of the pill led to another 15 percent of failures. Finally, 13 percent stopped using the pill because of loss of sexual partners (separation or divorce) and failure to anticipate future need for contraception.

The human error failures for suppositories and foam were similar, together representing over 46 percent of spermicide failures (Table 4). More than 54 percent of patients who suffered spermicide failures claimed correct and consistent use, however.

Technical failure (18 percent) resulted from rupture of condoms and accidental removal of a condom, whereas incorrect use included penetration prior to application of the condom (Table 5). The majority of condom failures

TABLE 5. TYPES OF CONDOM FAILURE

Reason	Number	Percentage
Used correctly and consistently	3	18
Used incorrectly	4	24
Used inconsistently	10	59
Total	17	101

TABLE 6. BIRTH CONTROL FAILURE SUMMARY

Reason	Number	Percentage
No birth control	73	23
Correct and consistent use	62	19
Incorrect and inconsistent use	165	51
Undetermined	23	7
Total	323	100

resulted from inconsistent use (59 percent).

Ten patients experienced IUD failures, nine of whom had properly positioned IUDs in utero and one of whom had had hers removed two months earlier because of pelvic infection. Nine patients experienced rhythm method failures, and five of six patients who used multiple methods (either sponges, diaphragms, condoms, or condoms and foam) at different times failed. Three who used spermicidal sponges and three who used cervical caps failed. Two of the latter admitted to using the cervical cap inconsistently, and one reported that hers fell off during intercourse.

DISCUSSION

As shown in Table 6, three major types of birth control failure emerge from this study: failures that result from a total lack of birth control, those that occur despite correct and consistent use of contraception, and those that are caused by human error. Those at risk because of lack of contraception include those with no previous sexual experience and those who had been sexually active but failed to anticipate the need for contraception in the future. That this group

comprises only 23 percent of the failure recorded between 1982 and 1984 contrasts sharply with the experience recorded in the early 1970s. Then, 56 percent of unwanted pregnancies among middle-class women resulted from lack of contraception.² This change is probably due to better distribution through publicly funded programs, statutory changes permitting easier access by all age and socioeconomic groups, secularization of contraceptive decision making, and a more permissive attitude on the part of health care providers.

The second type, technical failure, caused 19 percent of unwanted pregnancies. Diaphragm and spermicide users experienced the majority of technical failures. This finding is not surprising considering that observed failure rates range from 2 to 18.6 pregnancies per 100 women years for diaphragms and 3 to 17.9 pregnancies per 100 women years for spermicides.⁴⁻⁹ Reduction of technical failure will require technological advancement on the part of manufacturers and appropriate counseling by contraception providers.

The third and most common type of failure, human error, results from incorrect or inconsistent use of contraceptive technology and accounted for 51 percent of unwanted pregnancies. Diaphragm users experienced two human error failures for every technical failure, and oral contraceptive users had six for every technical failure. Similarly, condom users had four human errors for each technical failure, and multiple method users had five for each technical failure. Inconsistent use was the predominant mistake that led to unwanted pregnancies. Among oral contraceptive users, cessation of pill use occurred because of unacceptable side effects, prescription expiration, missed pills, the notion that a vacation from pill usage was indicated, and failure to anticipate the need for contraception in the future.

A reduction in the number of human error failures will require anticipatory patient

counseling at the time of contraceptive selection and real informed consent on the part of patients. The former must be based on familiarity with the causes of failure so that health care providers can warn contraceptive users in advance of trouble. The latter will require that published effectiveness rates of every birth control modality reflect not only technical (ideal use) failure but also the number of human error failures among users.

Whereas the challenge for health care providers in the 1970s was to make contraception more available to all age and socioeconomic groups, the challenge for the future is to reduce the number of contraception failures. To decrease the number of abortions in the United States, physicians and other providers must resolve to understand the causes of birth control failure and systematically solve these problems. It is hoped that this study will advance us toward that important goal.

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