

OUR WORK

PUBLICATIONS

STATE CENTER

MEDIA CENTER

TABLEMAKER

search

Family Planning Perspectives Volume 31, Number 1, January/February 1998

Provider Attitudes Toward Dispensing Emergency Contraception in Michigan's Title X Programs

By Joseph Winchester Brown and Matthew L. Boulton

The efficacy and potential side effects of emergency contraceptive pills have been documented.¹ Until recently, however, the method was relatively obscure. Largely because opponents of the method equate it with abortion, pharmaceutical companies were reluctant to apply to the Food and Drug Administration (FDA) for a license to package and market birth control pills specifically for emergency contraception; thus, the method consisted of off-label use of birth control pills, the number depending on the formulation used.² Although some physicians have prescribed the method in this way since the 1970s,³ few studies have addressed the method's availability and dispensation, or providers' attitudes about it.⁴ But overall use of this method has been low, and for years, its characterization as the "nation's best-kept secret" seemed appropriate.⁵

Despite the lack of any licensing applications, the FDA's Reproductive Health Drug and Urologic Product Advisory Committee initiated action in June 1996 by unanimously declaring emergency contraceptive pills a safe and effective way to prevent pregnancy if taken in recommended dosages up to 72 hours after unprotected intercourse. In February 1997, the FDA published dosage information for six pill brands; although the agency stopped short of requiring pill manufacturers to relabel their products with instructions for emergency use, the notice was "intended to encourage manufacturers to make this additional contraceptive option available."⁶

Two months after the FDA's announcement, which appeared in many newspapers, the Department of Health and Human Services (DHHS) issued a memorandum to all Title X regional health administrators advising that "grantees should consider the availability of emergency contraception the same as any other method which has been established as safe and effective."⁷ The DHHS memorandum essentially directed all Title X delegate agencies to include emergency contraceptive pills as part of their standard family planning services.

In February 1998, the FDA accepted for review a new drug application filed by Gynétics for prepackaged emergency contraceptive pills. The application was approved, and the company began marketing the product (under the trade name Preven) in September 1998. This development presumably indicates a more open and positive policy climate for emergency contraception, and the product should lead to

- » article in pdf
- » table of contents
- » search the FPP archive
- » guidelines for authors

Joseph Winchester Brown is assistant professor of health behavior and health education, and Matthew L. Boulton is adjunct associate professor of epidemiology, both at the School of Public Health, University of Michigan, Ann Arbor. standardization of postcoital contraception service delivery at the clinic level.

Despite these recent, rapid policy changes, any confusion and reservations about the method's use that family planning service providers had before the FDA approved emergency contraceptive pills are likely to persist and influence its future dispensation. In this special report, we describe results of a survey conducted in Michigan in October 1996, prior to these policy developments, to assess Title X-funded family planning providers' attitudes toward and perceptions about the provision of emergency contraception. Results of this survey illuminate obstacles to the provision of postcoital pills and provide insights into how best to integrate this method within the range of Title X reproductive health services.

TITLE X POLICY

The 1980 federal Title X rules and regulations require that grantees "provide a broad range of acceptable and effective medically approved family planning methods."⁸ Emergency contraception is specifically mentioned in the section of the 1981 Title X program guidelines outlining required services for fertility regulation.⁹ However, the guidelines refer only to the use of diethylstilbestrol (DES) and make no mention of emergency contraceptive pills.

Title X grantees, usually state or regional organizations that disburse funds to selected family planning programs, also adapt the federal guidelines for use at the state level; providers receiving funding through the program use the state version of the guidelines as their main reference. Michigan's Title X grantee, the Department of Community Health, completed its adaptation of the guidelines in 1991 and revised them in 1997.

Like the federal guidelines, the original Michigan guidelines limited emergency contraception to DES. While substantially similar to the federal version, the 1997 revision reflects more recent developments, adding: "Delegate agencies must comply with FDA recommendations for the administration of drugs or devices for postcoital contraception. Written protocols must be in place if this service is provided." ¹⁰ Notably, it lets stand unchanged a recommendation that "thorough birth control counseling ... accompany or follow any method used for postcoital purposes in order to discourage women from considering this a routine method of contraception, "¹¹ even though there is no evidence that women adopt postcoital methods as their primary method of birth control. ¹²

Appended to the program guidelines is a comprehensive set of minimum program requirements, which establish standards for program management and administration, client services, and clinic management in local public health departments and other programs receiving Title X funds. While the requirements call for family planning clinics to offer a broad range of acceptable and effective methods, they do not specifically mention emergency contraception.¹³

However, emergency contraception is mentioned twice in an appendix on evaluation criteria. (This section contains a series of detailed checklists used for the state's formal program audit, which allows for self-review and evaluation to determine whether the minimum program requirements are being met.) Thus, the same document offers no clear policy on whether to dispense emergency contraceptive pills, yet provides a

systematic approach for evaluating their dispensation. $\frac{14}{2}$

The development of policy about emergency contraception at the national level, however, has been quickly translated to action at the state level. Following the April 1997 DHHS memorandum to regional health administrators encouraging Title X grantees to dispense emergency contraceptive pills, the state's Department of Community Health reiterated that position in a memorandum to all Michigan Title X recipients in July. Yet, six months later, more than one health department had been cited under the state's family planning audit for failing to provide postcoital pills.

Nonetheless, the policy and programmatic guidelines for Michigan remain confusing about emergency contraception's medicolegal status. However, new federal Title X program guidelines are imminent, and when they are disseminated through the regional offices, the current confusion should be addressed.

THE STUDY

In all, 53 agencies in Michigan received Title X funds in 1996: 43 of the state's 49 health departments (many of which serve more than one county) and 10 Planned Parenthood affiliates. Six of the Planned Parenthood affiliates delivered Title X services collaboratively with health departments, and four operated in areas where both they and local health departments independently provided family planning services.

In August 1996, we mailed a questionnaire to each Title X recipient's family planning coordinator, who has administrative and managerial oversight for all family planning services. After three rounds of mail and telephone follow-up, a 100% response rate was achieved.

The 35-item questionnaire included 16 Likert-scaled items that asked respondents to rate their level of agreement with a variety of statements regarding policies about and provision of emergency contraceptive pills, as well as two open-ended questions about barriers to dispensation. Additional questions permit us to examine the context in which emergency contraceptive pills are dispensed in the Michigan Title X system.

SERVICE PROVISION IN 1996

At the end of 1996, emergency contraceptive pills were still a relatively new component of Michigan's Title X family planning services. The family planning coordinators of all 53 programs receiving Title X funds were aware of the method, but only 32 (24 from health departments and eight from Planned Parenthood affiliates) said that their facilities provided it. Most of these programs had dispensed emergency contraceptive pills for less than one year; only two had done so for longer than 10 years.

Moreover, provision of this method at the time of the survey was limited to about 1,000 women annually; more than 800 of these women were seen by only five programs—four Planned Parenthood affiliates and a local health department. Thus, on average, the 27 remaining programs provided emergency contraceptive pills to no more than one woman per month.

PERCEPTIONS AND ATTITUDES

Overall, 62% of providers "completely agreed" or "generally agreed" with the statement that postcoital pills are primarily a form of contraception, while 20% expressed similar agreement with the statement that they are primarily an abortion-inducing agent (Table 1). Examining the answers of the 52 respondents to these two statements more closely indicates that 31 completely or generally agreed that the method is primarily a contraceptive, not an abortifacient (not shown). Nine had the opposite responses. One respondent agreed with both statements, while 11 disagreed with both; thus, 12 providers were unable to conceptually "position" emergency contraceptive pills.

Table 1. Percentage distribution of family planning coordinators from Title X grantees,
by level of agreement with statements regarding emergency contraceptive pills
(ECPs), Michigan, 1996 (N=53)

(Let s), withigan, 1990 (14=55)						
Statement	Completely agree	Generally agree	Generally disagree	Completely disagree	Total	
ECPs are primarily a form of contraception	26	36	19	19	100	
ECPs are primarily an abortion-inducing agent	8	12	38	42	100	
Title X clinics should be obliged to offer ECP services	49	36	13	2	100	
I am satisfied with the current guidelines governing ECP use in our program	32	40	12	16	100	
Poor/underprivileged women would be better off if ECPs were more freely advertised and made more widely available in Title X clinics	46	29	17	8	100	
Patients in our family planning program usually have heard about ECPs	4	28	53	15	100	
Patients in our program usually know specific information about ECPs, such as their use as a postcoital method that should be administered soon after (unprotected) intercourse	0	26	47	26	100	
Clinicians in our family planning program are very knowledgeable about ECPs	40	42	17	2	100	
te: Some questions were missing responses from 1-3 respondents.						

Half of respondents (49%) completely agreed that Title X programs should be obliged to offer emergency contraceptive pills; only 15% disagreed. Although 72% of those surveyed reported that they were satisfied with the current guidelines governing the method's dispensation in their programs, the survey did not assess the extent of respondents' knowledge about the Title X policy documentation.

Some 75% of providers agreed that poor or underprivileged women would be better off if emergency contraceptive pills were more freely advertised and made more widely available in Title X programs. This includes 13 respondents whose programs did not provide the method at the time of the survey. Four respondents (8%) completely disagreed with this statement, although two added comments indicating that singling out poor or underprivileged women was inappropriate and that emergency contraception would benefit women in general, not just certain groups.

Only two respondents (4%) completely agreed that clients in their programs have usually heard about emergency contraceptive pills, and 15 (28%) generally agreed with this. A smaller proportion (26%) generally agreed that clients have specific knowledge about the method, but none indicated complete agreement with this statement.

A large majority (82%) of respondents agreed that clinicians in their programs are very knowledgeable about emergency contraception. Those whose programs dispensed the method were more likely than others to give this response (94% vs. 62%—not shown).

BARRIERS TO PROVISION

Eight items on the questionnaire asked the extent to which respondents agreed that a list of factors are possible barriers to the provision of emergency contraceptive pills in their programs. Two open-ended questions allowed for more detailed exploration of this topic, and because the responses to the latter are more nuanced and contextually revealing, we focus on them in this report.

The first open-ended question asked respondents whose programs did not dispense emergency contraceptive pills to "state the reasons that best describe" the program's decision not to provide the method. The second asked providers to list "any other barriers" to dispensation. A total of 25 respondents answered the first question (including five whose programs provide emergency contraceptive pills), and 19 answered the second; 11 respondents answered both questions.

From the majority of reponses, four main themes emerged as obstacles to the inclusion of emergency contraceptive pills in Title X programs: the logistics of dispensing the method in the clinic; legal and political aspects of dispensation; service guidelines and the lack of client requests; and concerns about how the method might affect sexual risk-taking and contraceptive use. The verbatim responses presented below represent positions that were articulated by a majority of respondents.

LOGISTICS

Thirteen providers cited issues of clinic staffing and the problems stemming from the emergency nature of clinic visits for postcoital contraception as barriers to provision of the method. Responses suggested that programs new to emergency contraceptive pill dispensation may not have optimal staffing to deal with the additional burden of serving clients who request this method. Furthermore, many respondents noted that it is difficult to provide walk-in emergency contraception services in rural areas, where clinics often are run only one or two times a week and are not fully staffed. One participant wrote:

"We have only one [full-time employee]—me—and two part-time RNs. We would be unable to provide [emergency contraceptive pills] on a walk-in basis, because appointments and other walk-ins take up all of our time."

Several providers added that staff were needed not only to provide services in the clinic, but also to respond to questions and concerns about the method over the telephone.

And many of the responses focusing on staffing implied concern about the safety and proper use of the therapy. Typical of these was the following:

"We do not have a clinician on staff during all normal business hours [and] would have to work on standing orders. I'm not sure my staff wants that responsibility." Notably, two respondents who said that staffing constraints prevented their programs from providing emergency contraceptive pills were from large, densely populated urban centers. Therefore, these concerns are not the exclusive domain of rural or multicounty health departments.

Providers believed that the need to begin the emergency contraceptive pill regimen within a relatively short time frame (72 hours after unprotected intercourse) intensified the personnel and logistical demands of providing the method. At the same time, they thought that many clients either were unaware of this requirement for using the method or had difficulty getting to a clinic on time:

"For those patients needing a complete exam, it's hard to fit them in the schedule. They generally call toward the end of the acceptable time frame."

Another respondent wrote about the lack of emergency time slots in the clinic's schedule and said that this often prevented staff from seeing clients within 72 hours of unprotected intercourse.

One participant noted that the clinic always plans for more emergency slots after a three-day weekend. If it can be verified that the demand for emergency contraception is likely to rise at predictable times, this might help clinic managers to more effectively deal with staffing issues.

LEGAL AND POLITICAL ISSUES

Another 13 respondents mentioned controversy and confusion over medicolegal guidelines as barriers to dispensation. One respondent wrote: "We are unsure of ... our legal responsibility in the case of adverse effects." The family planning coordinator at a major metropolitan health department wrote simply "concerns regarding legal issues" as the reason for not providing emergency contraceptive pills. Several responses indicated that postcoital contraception is confused with and constrained by the debate over abortion. One participant bluntly reflected that perception in explaining why her agency did not offer emergency contraceptive pills: "Politics. People may see this as an abortion issue."

Ten responses mentioned that the program's medical director was reluctant to authorize emergency contraception, largely on the basis of unspecified "medical and legal issues." The coordinator of one program made it very clear that politics and the medical director played the deciding roles in whether to dispense the method:

"ECPs had no support from the previous medical director and health officer—the method was too politically incorrect. Our current medical director is supportive, but we do not advertise or make it a priority to promote this service."

To a lesser extent, respondents also pointed to the role of county commissioners, elected officials who provide political oversight for local public health departments. One participant wrote: "The board of commissioners mandated that we will not do this in our clinics, nor will the subject be discussed." Echoing this comment, another provider reported: "The moral and philosophical objections have been clearly defined by our county board of commissioners. ECPs are not an option."

GUIDELINES AND LACK OF REQUESTS

Reflecting that the survey took place prior to the 1997 FDA announcement, eight respondents wrote about the lack of federal approval or guidelines for postcoital medications. Some expressed a clear desire to include emergency contraception in clinic services, including one who said: "The practitioners and physicians are 'pushing' for use of OCs as ECPs in our clinics."

In some instances, however, respondents said that their program was willing to provide emergency contraceptive pills, but that clients rarely asked for them. This situation could affect the development of clinic policy on efficiently dispensing the method, as indicated in this comment: "Not many requests for this, so we have not developed a policy." Others cited a lack of marketing as a major constraint to use.

PERCEPTIONS ABOUT CLIENT BEHAVIOR

Four respondents focused on how the availability of emergency contraceptive pills might affect a woman's sense of responsibility and discipline. One participant, for example, commented: "Our [medical] director does not want Family Planning to dispense emergency [pills] because she feels they will be 'overused' as a method of birth control. We would like this policy reconsidered."

Another example echoes this concern: "Staff have divided opinions regarding ECPs. Some feel that general knowledge of ECPs may lead to lack of responsibility and compliance in clients."

One provider remarked that the program did not dispense emergency contraceptive pills because of "clients' ambivalence or apathy towards pregnancy."

The perception that the availability of emergency contraception will reduce family planning clients' likelihood of engaging in preventive behaviors is not supported by published research. And while it is probably uncommon among providers, it needs to be addressed if the public health system is to continue providing high-quality family planning services. For example, more educational efforts might be needed for both providers and clients to alleviate doubts about the role of emergency contraception in a person's approach to sexuality and preventive behavior.

SERVICE PROVISION ISSUES

When emergency contraception first became available in Michigan, Planned Parenthood affiliates were the predominant provider of the method. Health departments' relatively meager contribution to the total number of emergency contraceptive pills dispensed undoubtedly resulted in part from incompletely defined policy at the national, state and local levels. This lack of a clear policy, coupled with the reluctance of pharmaceutical companies to apply for product licensing, may have supported the perception among providers that the method is controversial and its medicolegal status questionable.

The number of clients receiving emergency contraception also was related to a program's overall caseload and the extent to which the method was promoted inside the clinic (mainly through posters and the availability of fact sheets).¹⁵ Planned Parenthood affiliates tend to have larger numbers of family planning clients and engage in more promotional activities than health departments do. Equally important is Planned Parenthood's unique focus on reproductive health, representing a mandate

to serve women and couples with as wide a range of services as possible, perhaps with an associated willingness to prescribe politically sensitive methods.

On the other hand, two of the 10 Planned Parenthood affiliates in the Michigan Title X system did not dispense the method at all, and two heavily populated, highly urbanized counties had neither a health department nor a Planned Parenthood site providing emergency contraceptive pills.

NEXT STEPS

Although some interpretive inconsistencies may remain in Michigan's adaptation of national family planning standards on the delivery of emergency contraceptive pill services, they are generally minor and probably characteristic of many states' difficulty in developing guidelines consistent with the limited scope of federal policy. Recent state-level developments should substantially assist in standardizing delivery across agencies, and the federal regulations that are expected to be issued shortly will almost certainly contribute to an enhanced and more normal distribution of emergency contraception in the Michigan Title X system. The rapid policy developments of the past two years have helped to clarify the medicolegal status of emergency contraceptive product now being marketed should help alleviate providers' concerns over the method's status and contribute to a general expectation that it will be offered in all clinics funded through Title X.

However, the factors determining service delivery are still likely to vary from clinic to clinic. Judging from the survey results, if providers are to regard emergency contraceptive pills as "just another method in the range of contraceptive options," considerations unique to this method must be addressed—namely, deeply felt concerns regarding the relationship between postcoital pills and abortion, and the presumed effect of this method on an individual's long-term contraceptive behavior.

If these attitudes are common among clinical providers of family planning services, then almost assuredly they are widely held by the public as well. These perceptions, even if misinformed, represent doubts and fears not necessarily addressed by the new policies and Title X directives, but potentially capable of constraining service delivery. Understanding these attitudes better will help facilitate and guide educational efforts aimed at providers and clients.

Responses to the open-ended questions suggest that programmatic factors may affect emergency contraceptive pill dispensation. Given the relative newness of these services for many Michigan Title X agencies, it is not surprising that health departments are often inadequately staffed to effectively provide the method. However, this reflects a critical need for evaluation research on the public health system's ability to provide emergency contraceptive pills to clients in advance of actual need; such a system could greatly reduce staffing burdens and is potentially cost-effective in the context of pregnancy prevention programs.¹⁶ A few of the more active emergency contraception programs in the Michigan Title X system have begun advance provision to selected family planning clients. Their results, together with experimental research,¹⁷should help speed the way toward establishing this mode of service delivery in all Title X programs. Most respondents considered clinicians at their facilities to be very knowledgeable about emergency contraception. However, preliminary results from a survey of Title X medical directors in Michigan reveal that a significant proportion of these clinicians lack technical knowledge about postcoital pills' mechanism of action,

contraindications, timing of use and appropriate dose.¹⁸ While the prepackaged product may help reverse this trend, physicians and other providers still may need better technical knowledge about emergency contraceptive pills. Lack of information among Title X medical directors could hamper the provision of clinical protocols or perpetuate misinformation and thereby adversely affect widespread acceptance and dispensation.

A systematic analysis of how the decision to provide emergency contraceptive pills is made at the clinic level would be a very useful area for future research, but our results provide some insight into this issue. Although we have no measures of family planning coordinators' own impact on the decision, their responses to the open-ended questions reveal the central role of local health department medical directors and boards of commissioners. In several cases, the decision not to dispense the method was made by a medical director or health officer who viewed its medicolegal status as unclear or the political risk inherent in providing it too great.

County boards of commissioners provide significant local funding to health departments and therefore indirectly, or often directly, govern their policies and programs. These administrative bodies may exert a strong influence over provision of emergency contraceptive pills as a component of family planning services; in certain jurisdictions, they have threatened to forgo all Title X funding if it requires providing postcoital pills. One can also reasonably surmise in an era of local government downsizing that these boards are not interested in the increased staffing that respondents said was necessary to provide emergency contraceptive services efficiently.

Michigan Planned Parenthood affiliates receiving Title X funds do not feel as constrained by staffing problems as do health departments; nor do their medical directors seem as reluctant to dispense emergency contraceptive pills because of medicolegal or political considerations. Planned Parenthood facilities almost certainly have a more central focus on reproductive health than public health departments, and they therefore seem more likely to aggressively promote a new contraceptive method or technology. Understanding the varied nature of the political pressures and programmatic constraints to which different types of Title X agencies are subject is essential if comprehensive strategies for promoting the uniform dispensation of emergency contraceptive pills in all these settings are to be developed.

The Michigan situation suggests that women in rural areas are not the only ones who face logistical difficulties in reaching a clinic in the short time frame required for the administration of postcoital pills. A few urban providers reported that they dispensed few, if any, emergency contraceptive pills. Although commercial emergency contraceptive products will help in the mechanics of dispensation, clinics will still, for a time, be inadequately equipped to accommodate walk-in clients. Presumably, requests for postcoital pills will increase, and as they do, clinics will learn how to arrange their personnel and medical resources to best handle emergency visits.

One aspect of this learning process is likely to be a better understanding of patterns in the demand for emergency contraceptive pills. Episodes of unprotected intercourse might occur more frequently on weekends than during the week, for example. (More than one respondent alluded to the busy emergency contraception activity in the clinic on Mondays.) Staffing patterns, including telephone access, might eventually be formulated to accommodate such potential fluctuations.

A large proportion of respondents indicated that clients never requested emergency contraceptive pills. Lack of regular demand for the method could indicate that it needs greater promotion at all levels or could reflect insufficient provider knowledge. The prepackaged product will undoubtedly be a major breakthrough for promotional efforts and should contribute substantially to greater visibility and availability of emergency contraceptive pills. Lack of client requests also speaks to the need for more research to determine which promotional and educational interventions at the clinic level most effectively enhance clients' knowledge of the method.

There is good reason to believe that many of Michigan's family planning coordinators are now more knowledgeable and informed about emergency contraception than they were, before the FDA approved the method. But developing a greater understanding of the many concerns and sentiments they expressed about providing emergency contraception is essential as we look to mandating this service and making it universally available in Title X clinics.

Now that national and state policy about emergency contraception have changed to reflect strong and broad-based advocacy for the method, the attitudes and practices of health departments toward emergency contraceptive pills are likely to grow more similar.

References

1. Trussell J and Ellertson C, Efficacy of emergency contraception, *Fertility Control Reviews*, 1995, 4(2):8-11; Trussell J, Ellertson C and Stewart F, The effectiveness of the Yuzpe regimen of emergency contraception, *Family Planning Perspectives*, 1996, 28(2):59-64; Webb A, How safe is the Yuzpe method of emergency contraception? *Fertility Control Reviews*, 1994, 4(2):16-18; and Glasier A, Emergency postcoital contraception, *New England Journal of Medicine*, 1997, 337(15):1058-1064.

2. U.S. Food and Drug Administration, Use of approved drugs for unlabeled indications, *FDA Drug Bulletin*, 1982, 12:4-5.

<u>3.</u> Ellertson C, History and efficacy of emergency contraception: beyond Coca-Cola, *International Family Planning Perspectives*, 1996, 22(2):52-56.

4. Grossman RA and Grossman BD, How frequently is emergency contraception prescribed? *Family Planning Perspectives*, 1994, 26(6):270-271; Delbanco SF, Mauldon J and Smith MD, Little knowledge and limited practice: emergency contraceptive pills, the public and the obstetrician/gynecologist, *Obstetrics and Gynecology*, 1997, 89(6):1006-1011; Frost JF and Bolzan M, The provision of public-sector services by family planning agencies in 1995, *Family Planning Perspectives*, 1997, 29(1):6-14; and Gold MA, Schein A and Coupey SM, Emergency contraception: a national survey of adolescent health experts, *Family Planning Perspectives*, 1997, 29(1):15-24.

5. Hatcher RA et al., *Emergency Contraception: The Nation's Best Kept Secret*, Decatur, GA: Bridging the Gap Communications, 1995; and Kessler D, The best-kept contraceptive secret is no longer a secret, as quoted in the *Detroit Free Press*, Feb. 25, 1997.

<u>6.</u> Prescription drug products: certain combined oral contraceptives for use as postcoital emergency contraception, *Federal Register*, 1997, 62(37):8610-8612.

7. Department of Health and Human Services (DHHS), Office of Population Affairs, Memorandum: OPA program

instruction series, OPA 97-2: emergency contraception, Washington, DC, Apr. 23, 1997.

8. Rules and regulations, part 59—grants for family planning services, *Federal Register*, 1980, 45(108), section 59.5(a)1.

<u>9.</u> DHHS, Bureau of Community Health Services (BCHS), *Program Guidelines for Project Grants for Family Planning Services*, Washington, DC: BCHS, 1982.

<u>10.</u> Michigan Department of Community Health, *Title X Family Planning Program: Standards and Review Manual*, rev., 1997, section 8.4B, para. a.

11. Ibid., para. c.

12. Glasier A and Baird D, The effects of self-administering emergency contraception, *New England Journal of Medicine*, 1998, 339(1):1-4; and Trussell J et al., Preventing unintended pregnancy: the cost-effectiveness of three methods of emergency contraception, *American Journal of Public Health*, 1997, 87(6):932-937.

<u>13.</u> Michigan Department of Community Health, *Minimum Program Requirements for Categorical Funded Services: Family Planning*, 1996.

14. Michigan Department of Community Health, *Title X Family Planning Program: Standards and Review Manual: Evaluation Criteria*, rev., 1997.

<u>15.</u> Brown JW and Boulton ML, Emergency contraceptive pill dispensation in Michigan Title X clinics, *American Journal of Public Health*, 1998, 88(9):1380-1383.

<u>16.</u> Trussell J et al., Medical care cost savings from adolescent contraceptive use, *Family Planning Perspectives*, 1997, 29(6):248-255 & 295.

17. Glasier A and Baird D, 1998, op. cit. (see reference 12).

18. Boulton ML and Brown JW, unpublished data from a survey of Title X medical directors in Michigan, 1999.

© copyright 1996-2009, Guttmacher Institute

RSS :: contact :: statement of accuracy :: privacy policy :: help