Physician Refuses to Fill Prescription for Morning-After Pill

Scenario: Your small town contains only one pharmacy. The pharmacist there, Dr. Smith, has refused to fill prescriptions for Plan B for young clients claiming that it violates his religious conscience about abortion. The assistant director at the town’s women’s shelter, Kelsi Alvarez-Johnson, is demanding that the city’s manager put pressure on the pharmacy to get a court order to require him to fill the prescriptions. You have been hired by the city’s attorney to research the issue and give a presentation to the manager and other city staff so they can make a reasoned evaluation of this situation and determine how to proceed.

Local media have been running stories about this issue. In particular, Dr. Smith has been quoted several times in recent days about his positions. Three of note are: (1) during a radio show, he said that the morning-after pill might be used to abort an early pregnancy, (2) in a newspaper article he argued that children raised without fathers were more likely to become criminals and that women using the morning-after pill were more likely to become single mothers than other women, and (3) a neighboring city’s major television station interviewed Dr. Smith last week when he claimed that prescriptions for the morning-after pill are being used by local medical professionals to cover up the sexual abuse of young women and girls.

Instructions: You will be preparing a written response to a hypothetical but realistic situation. This assessment contains a series of documents that includes a range of information sources. (Most of these documents are real primary sources produced during the time period in question; a few have been fabricated to fit this hypothetical situation.) While your personal values and experiences are important, you should base your response on the evidence provided in these documents. And, while you may have done different research if given this task, you are to complete this assignment using these documents and not any others you might research.

Task: Prepare a report to the city management to use in determining their best course of action. Your report should include references to the hypothetical individuals cited in the scenario.

Documents:
A. A piece from Huffington Post.
B. A piece from The Christian Post.
C. A piece from the Family Research Council.
D. The introduction from a piece published in Violence Against Women.
E. A graph showing Prescriptions for Plan B and Reports of IPV.
F. A letter to the editor in the Santa Monica Mirror.
In 2005, then-Illinois Governor Rod Blagojevich introduced a rule requiring pharmacists to distribute the so-called "morning-after pill" to women who asked for it. Plan B, an emergency contraceptive, delivers a concentrated dose of hormones like those found in regular birth control, such that if taken within 72 hours of unprotected sex, it can disrupt ovulation or fertilization, preventing pregnancy.

Someone seeking emergency contraception should have a right to obtain it, no matter what, Blagojevich insisted. "No delays. No hassles. No lectures. Just fill the prescription," he said, as the Chicago Sun-Times reported at the time.

But an Illinois judge ruled Tuesday that it can't be so cut-and-dried.

Sangamon County Circuit Judge John Belz sided with a pair of pharmacists who filed suit against the rule, claiming that it violated the state's "right-of-conscience" law, NBC Chicago writes. That law protects healthcare providers from being forced to give care that violates their belief.

When Blagojevich made his rule, he said that right-of-conscience only applied to physicians, not pharmacists. And circuit and appellate courts dismissed the lawsuit, as CBS reports, because the pharmacists hadn't been fired or suffered other consequences because of the rule.

The state Supreme Court, however, ruled that lower courts had to hear the case. And now, Judge Belz has sided with the plaintiffs, who argue that the pill is tantamount to abortion and violates their religious beliefs, says the Sun-Times.

Of course, this is a somewhat contentious claim. Plan B is distinct from RU-486, the abortion pill. In most if not all cases, Plan B acts by preventing ovulation, according to the FDA. In some cases, it interferes with fertilization of the egg. And studies from the 1970 and '80s suggested that there was some chance that the pill kept a newly-fertilized egg from being implanted in the uterine wall.

This last possibility provoked the outrage of hard-line anti-abortion activists, who believe that life begins at fertilization, and that the emergency contraceptive is therefore a very early form of abortion in those cases. But a slew of recent studies suggest that Plan B actually does not interfere with implantation.

The Illinois Attorney General’s office says it plans to appeal the ruling.

http://www.huffingtonpost.com/2011/04/06/morning-after-pill-illino_n_845562.html
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The Morning After Pill and the End of Parenthood
Tue, Apr. 28, 2009 Posted: 11:27 AM EDT

The secular left is a diverse amalgam of various interest groups and ideologies. Of course, the same is true to some extent on the conservative end of the spectrum as well. But on some issues the secular left is absolutely of one mind and voice, and the promotion of birth control and contraception is one of these issues.

To the left, birth control is central to the modern project of liberation. Pregnancy and parenthood limit other endeavors, to say the very least. The project of liberating sex from marriage and sex within marriage from reproduction is central to the modern quest for autonomy. The Pill allowed a radical expansion in non-marital sex, for example, now freed from concern about pregnancy. The Pill represented a moral revolution of incalculable magnitude.

For the feminist movement, support for birth control and abortion on demand is rooted in the explicit desire to "level the playing field" with men. The Pill, feminists announced, was the liberation of women from the problem of an unwanted and untimely pregnancy. If an unwanted pregnancy did occur, abortion on demand would resolve that problem.

This drive for reproductive control is a central obsession of the left, and it has infected many who would otherwise classify themselves as conservative as well. It also explains what is going on with the decision of the Food and Drug Administration [FDA] to allow the morning-after pill to be sold over the counter to girls as young as 17.

That announcement came April 22, and is the essence of brevity for a governmental agency:

On March 23, 2009, a federal court issued an order directing the FDA, within 30 days, to permit the Plan B drug sponsor to make Plan B available to women 17 and older without a prescription. The government will not appeal this decision. In accordance with the court's order, and consistent with the scientific findings made in 2005 by the Center for Drug Evaluation and Research, FDA notified the manufacturer of Plan B informing the company that it may, upon submission and approval of an appropriate application, market Plan B without a prescription to women 17 years of age and older. Plan B is manufactured by Duramed Research, Inc. of Bala Cynwyd, Pa.

"Plan B" is the commercial name of the morning-after pill (levonorgestrel). The tablet is indeed a form of birth control, and some believe it potentially to be an abortifacient. According to the Plan B Web site, the pill works this way: "Plan B contains two pills taken 12 hours apart that contain a higher dose of levonorgestrel, a hormone found in many birth control pills that healthcare professionals have been prescribing for more than 35 years. Plan B works in a similar way to prevent pregnancy."

The commercial name of the pill just about says it all. When "Plan A" doesn't work, use "Plan B." Plan A, we should note, means using birth control. No one in these circles would dare suggest that Plan A should mean not having sex.

Last month, a federal court judge in Manhattan ordered the FDA to allow over-the-counter sale of Plan B to girls as young as 17, reversing a Bush administration policy. The left erupted in celebration. The New York Times published an editorial declaring, "Judge Edward R. Korman wisely ordered the Food and Drug Administration to make the pill available without prescription to women as young as 17 and to consider approving it for girls of any age, as major medical groups have long advocated."

That's right, "girls of any age." Today, with the FDA decision just released, the Times celebrates the news with this lead: "Seventeen-year-olds will soon be allowed to buy morning-after contraceptive pills without a doctor's prescription after federal drug regulators complied with a judge's order and lowered the age limit by a year."
The paper went on to report:

*Like their older counterparts, 17-year-old women will now be able to go to almost any pharmacy, clinic or hospital and, after showing proof of age, buy Plan B without a prescription. Men 17 and older may also buy Plan B for a partner.*

So females of 17 are now "women" and 17-year-old males are now "men." This is made necessary by the logic of the paper's worldview. They argue that these young people are old enough to make this decision alone, without parental oversight or medical advice.

The paper further explained:

*Contraception advocates have pushed for easy access to Plan B for girls and women of all ages because the longer a woman delays in taking the medicine after unprotected sex, the more likely she will become pregnant. Eliminating doctors from the transactions, it was hoped, would lead to far fewer pregnancies and abortions.*

Again, note the "of all ages" reference. In the March 24 editorial, the paper included this sentence: "The harder question is whether to remove all age and other restrictions, potentially allowing children as young as 11 or 12 to take the drug without medical supervision." As young as 11 or 12?

Following this logic, 11-year-old girls will now be 11-year-old women, able to purchase Plan B from the pharmacy without a prescription (and long before they can legally drive themselves to the pharmacy).

Today, the paper began its editorial with this:

*In a further break from the Bush administration's ideologically driven policies on birth control, the Food and Drug Administration has agreed to let 17-year-olds get the morning-after emergency contraceptive pills without a doctor’s prescription. It is a wise move that complies with a recent order by a federal judge, based on voluminous evidence in F.D.A. files that girls that young can use the pills safely.*

Here is a clue - whenever anyone (including this writer) claims that a policy reversal means a break from someone else's "ideologically driven policies," it simply means that one ideology is replacing or modifying another. The New York Times is the central media organ of the secular left. It is as ideologically driven as any other sector of this society. Furthermore, the idea that any serious policy discussion can be free from ideology is a farce. The editors of The New York Times merely prefer their own ideology to that of the Bush administration, yet they write this editorial as if they have come from their own private planet of ideological purity.

One key insight into the paper's ideology: Note the references in both editorials and news reports to the claim that evidence proves that young girls "can use the pills safely." Clearly, the paper means to speak of medical safety. But what about other aspects of these girls' lives? Is it morally safe? Spiritually safe? Safe to a tender heart?

No, the main issue in the FDA policy is this - safe from parental supervision. The morning after pill is now a potent symbol of the end of parenthood as we know it.

R. Albert Mohler, Jr.


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Plan B: A Grave Threat to Women’s Health

On July 31, 2006, the U.S. Food and Drug Administration (FDA) announced that it was working with the manufacturer of the Plan B® “Morning after Pill,” Duramed Research, Inc., to resolve the remaining policy issues preventing Plan B from being sold over-the-counter (OTC)—rather than by prescription (Rx). The Family Research Council opposes making Plan B available OTC for the following reasons related to women’s health and matters of law:

Plan B Threatens the Health of Women:

• **Birth control pills, which are essentially a lower dose regimen of Plan B, require a prescription.** They are not available OTC. They require an appointment with a licensed clinician to determine contraindications, obtain a prescription, and provide for medical oversight throughout the usage period.

  “Birth control pills are available by prescription only for sound medical reasons: They can cause significant or life-threatening conditions such as blood clots and heart attacks. Birth control pills are contraindicated for women with diabetes, liver problems, heart disease, breast cancer, deep vein thrombosis, and for women who smoke and are over 35. A medical exam is necessary to ensure that none of these contraindications exists. For example, according to the Centers for Disease Control, approximately 1.85 million women of reproductive age (18-44) have diabetes; approximately 500,000 do not know that they have the disease.”

The OTC status would increase access to Plan B to larger populations of women, including women who have not been screened for contraindications.

• **Lack of scientific studies examining risks.** There is a clear lack of scientific studies on the long-term-effects of Plan B with respect to high dosage and repeated use in both women and adolescents. While the patient package directions on Plan B state it is not to be used more than twice a month, the directions and promotions of Plan B state it is also to be used in emergencies.

  These emergencies include unprotected sex and the failure of other birth control devices—factors that may arise more than twice a month.
• **STD rates have skyrocketed** in countries where Plan B has been deregulated. Since becoming available in the United Kingdom in 2001, Plan B usage among teenage girls has more than doubled. STDs with sharp increases include chlamydia and gonorrhea, with the highest increases in 16 to 19 year olds. Because STD’s such as chlamydia can cause infertility in women, the impact that increased access to and usage of Plan B has on STD rates could have a direct causal relationship to increased future infertility rates of U.S. women.

• **Contrary to predictions, abortions have not decreased with Plan B deregulation.** In Scotland, where Plan B has been available for over 15 years, abortion rates showed an increase between 1990 and 1999. In Glasgow, where Plan B prescriptions increased 300 percent from 1992 to 1999, abortions did not decrease. In the United Kingdom, where deregulation to “pharmacy” status took place in 2001, abortions have not decreased. Planned Parenthood clinics in the United States have experienced a simultaneous sharp increase in Plan B prescriptions and abortions performed in centers they operate.

• **Masking of sexual abuse.** The potential for Plan B to be given to women, especially sexually abused women and minors, without their consent or knowledge is a clear and present danger. Interaction with medical professionals is a major detection and prevention mechanism for victims of sexual abuse. The elimination of routine examination of sexually active girls and women could cover up both sexual abuse and exploitation.

• **Link of Plan B to ectopic pregnancy.** Statements from the World Health Organization and leading medical officials taken together provide a warning that increased risk of ectopic pregnancy exists with Plan B usage. Additionally, common physical side-effects a woman experiences following Plan B usage often mimic ectopic pregnancy symptoms, including cramping and severe pain. Consequently, there is valid concern for Plan B usage to actually mask ectopic pregnancy, an acute, life-threatening condition.

• **Violation of Informed Consent.** If the fact that Plan B can act as an abortifacient by one of its three operating mechanisms (by inhibiting implantation of a fertilized egg in a women’s uterus) is not clearly communicated to women who use the drug, it is a direct abuse of informed consent. Any efforts to communicate to women that Plan B physiologically acts strictly to prevent pregnancy infringes upon individually-held beliefs that pregnancy/life begins at conception. The literacy study results listed below indicating the high percentage of women miscomprehending Plan B’s OTC label amplify concerns about possible violation of informed consent, particularly in low literacy-level women who believe life begins at conception. A clear example of this violation regarding human subjects has been in studies marketing Plan B as “emergency contraception” or “EC” to populations of low-income Hispanic women.
**Patient Literacy.** The fundamental question FDA must address when assessing a drug company’s application to sell its product OTC is this: Can this drug be safely and effectively self-administered without the supervision of a physician? We believe that Plan B will not be safely self-administered.

- Duramed’s comprehension tests of its proposed Plan B OTC label found that only 75 percent of respondents answered that Plan B should not be taken in the presence of unexplained vaginal bleeding. Among the low-level literacy group that figure declined to 69 percent.

- Many survey respondents did not understand that Plan B is not a substitute for oral contraceptives. In the same label study, only 67 percent of all respondents answered correctly that Plan B is designed to serve as a backup for regular contraception methods—not as a replacement for them. Among those of low-literacy this figure dropped to 46 percent.

The deregulation of Plan B is without doubt, a women’s health disaster waiting to happen.

**In addition, the deregulation of Plan B raises a number of Legal Concerns:***

- **OTC Plan B is legally unprecedented.** There is no precedent for the granting of dual status approval for the same drug to different age groups. The FDA does not have the legal authority to grant simultaneous OTC and Rx for a drug. Also, FDA does not have the enforcement authority to ensure that store clerks are checking age ID for dual status drugs.

*Moira Gaul and Chris Gacek are policy analysts in the Center for Marriage and Family Studies at the Family Research Council.*
ENDNOTES


3 Compiled Testimony at 11.


5 Compiled Testimony at 16-17.

6 Compiled Testimony at 17-18.

7 Compiled Testimony at 6, 10.

Intimate Partner Violence and Women's Contraceptive Use
Corrine M. Williams, Ulla Larsen and Laura A. McCloskey
*Violence Against Women* 2008 14: 1382 originally published online 9 October 2008

**Introduction**

In 2001, 49% of pregnancies in the United States were unintended; this figure has remained constant over the past decade (Finer & Henshaw, 2006; Henshaw, 1998). Unintended pregnancies are more likely to occur among women who are younger, unmarried, and less educated (Brown & Eisenberg, 1995; Chandra, Martinez, Mosher, Abma, & Jones, 2005). Women living in poverty are also more likely to experience an unintended pregnancy (Finer & Henshaw, 2006). Physical violence has been shown to be significantly associated with unintended pregnancies. In one study, women with an unwanted pregnancy were 4 times more likely to have experienced physical violence by a partner compared with those with intended pregnancies (Gazmararian et al., 1995). Another study found that women with an unintended pregnancy had 2.5 times the risk of experiencing physical abuse around the time of pregnancy (Goodwin, Gazmararian, Johnson, Gilbert, & Saltzman, 2000). In a study examining differences between mistimed and unwanted pregnancies among women with a live birth, physical abuse during pregnancy was associated both with an increased risk of an unwanted pregnancy compared with a mistimed pregnancy and of a mistimed pregnancy compared with an intended pregnancy (D’Angelo, Gilbert, Rochat, Santelli, & Herold, 2004).

Women seeking abortions show elevated rates of intimate partner violence (IPV) compared with the general population (Keeling, Birch, & Green, 2004; Lumsden, 1997; Woo, Fine, & Goetzl, 2005). In one study, researchers found that 39.5% of women seeking an abortion reported a history of physical or sexual abuse (Glander, Moore, Michielutte, & Parsons, 1998). In this same study, women with an abuse history were significantly less likely to inform the partner of the pregnancy, to have partner support for the abortion decision, and less likely to have involved the partner in the abortion decision; they were also more likely to report relationship issues as the primary reason for obtaining the abortion. Women experiencing recent physical abuse were also less likely to disclose an induced abortion to their partners, with a significant subset of abused women reporting fear of personal harm as the primary reason for nondisclosure (Woo et al., 2005). In a study of women obtaining abortions, 46.3% were not using any form of birth control in the month they conceived; nonusers were more likely to be separated or previously married and to have a high school education or less, and were less likely to be white (Jones, Darroch, & Henshaw, 2002). Reasons for contraceptive nonuse include the perception that pregnancy was unlikely; past problems with a contraceptive method; fear of side effects; unexpected sex, including unwanted sex; financial barriers; and partner’s preferences, including refusal to use contraception. A history of physical abuse by a male partner and a history of sexual abuse or sexual violence were found to be associated with repeat abortion among Canadian women (Fisher et al., 2005).

Unplanned pregnancies are associated with failing to use any contraception, using less effective contraceptive methods, or noncompliance with effective contraceptive methods, and may result from a lack of control over fertility. Most women in the United States use some form of contraception. Data from the 2002 National Survey of Family Growth indicate that 62% of women had used contraception in the month prior to their interview, and 98% of women who had ever had intercourse had used some method of contraception (Mosher, Martinez, Chandra, Abma, & Willson, 2004). Given the large proportion of unplanned pregnancies in the United States, contraceptive compliance is an important area of research. A review of compliance with oral contraceptives found that younger age was associated with increased missed doses and increased likelihood of becoming pregnant (Cramer, 1996).
Discontinuation of oral contraceptives has been found to be associated with negative side effects, lack of information about the method, and lack of a routine around pill taking (Dardano & Burkman, 2000).

Despite high rates of contraceptive use in the United States, 7.4% of sexually active women without the intention or desire to become pregnant reported using no form of contraception; these women represent the group most likely to experience an unplanned pregnancy (Mosher et al., 2004). IPV has also been hypothesized as a factor that may be associated with contraceptive noncompliance. Heise (1993) points out that women’s use of contraception may be limited because of fears about partner response: Women may either use no contraception or rely on methods that can be hidden from their partner (Heise, 1993). Coercion and lack of negotiating power may also contribute to nonuse of contraception (Heise, Moore, & Toubia, 1995). Women in abusive relationships may also lack control over the timing of sexual intercourse, which would limit the effectiveness of some methods, particularly barrier methods (Heise et al., 1995; Morewitz, 2004). In another review, the authors hypothesize that abusive partners prevent women from using contraception as prescribed or refuse to pay for contraception (Branden, 1998).

A direct link between contraceptive use and IPV in the United States has not been established (Gazmararian et al., 2000), yet it could explain the association between unintended pregnancy and IPV. In a study of women ages 14 to 26 seen in a family planning clinic, those who used neither a condom nor a hormonal contraceptive at their last intercourse were more likely to be in a violent relationship (Rickert, Wiemann, Harrykissoon, Berenson, & Kolb, 2002). In another study of IPV and pregnancy intention, researchers found that abusive partners made primary decisions about contraceptive use, either by refusing to use condoms or in some cases by throwing out birth control pills or diaphragms (Campbell, Pugh, Campbell, & Visscher, 1995). Another small qualitative study of women experiencing IPV found that 34% reported that their partners restricted their ability to choose whether to have children (Hathaway, Willis, Zimmer, & Silverman, 2005). Men engaged in behaviors that forced women to have children (such as forced sex, refusing to use birth control themselves or to allow their partners to do so, and preventing women from having abortions) and preventing them from having children (in the form of pressure to have an abortion). Women also described not having children when they wanted to because they were unwilling to bring new children into an abusive relationship.

Given the associations between violence, unwanted pregnancy, and abortion, the links between IPV and contraceptive behavior deserve further investigation. IPV is a significant problem in the United States. One national survey found that 25% of women had ever been physically assaulted and/or raped by a current or former intimate partner, and 1.5% of women were assaulted and/or raped by a current or former intimate partner in the past year (Tjaden & Thoennes, 1998). This article explores the association between contraceptive use and recent IPV, including the methods of reversible contraception used and any discrepancy between preferred and actual contraceptive method. The aims of this study are to ascertain whether (a) abused women rely on different types of contraception than nonabused women, (b) abused women are more likely than nonabused women to not use any form of contraception, and (c) abused women are more likely to not use their preferred method of contraception. Although no information on pregnancy intention was available, the hypothesis is that the dynamics of abusive relationships may prevent women from using the contraceptive methods that they would prefer to use because of lack of partner cooperation or experiences with forced sexual intercourse, resulting in different patterns of contraceptive use.
IPV = Intimate Partner Violence

These data are interpreted from the Bureau of Justice Statistics Crime Data Brief, from the University of Iowa’s collections of Theses and Dissertations, and from the Journal of Interpersonal Violence.
Dear Editor,

I read in horror about the shooting in a Seal Beach hair salon where an estranged husband murdered his ex-wife and seven co-workers in an unspeakable act of domestic violence. This followed by less than two months the fatal stabbing in Santa Monica of Christina Talley, a woman killed by her estranged husband while she worked as a checkout clerk in a local grocery store. These shocking public acts of violence are an assault against all of us! Though more common outside of the workplace, domestic violence makes far too many family homes places of fear for women who are battered by male partners, and for children who witness or experience such abuse. Even when children in an abusive household are not directly injured, exposure to violence in the home can contribute to behavioral, social, and emotional problems that play out in forms such as dating violence and gang violence. It can spill over beyond the home into senseless beatings on Santa Monica neighborhood streets or racial bullying in our high school.

How can we as a community combat this threat? In recognition of Domestic Violence Awareness Month, I’d like to invite you to learn more about one important effort initiated to combat violence in Santa Monica households and among our youth. In February 2010, Santa Monica Police Chief Timothy Jackman, the Westside Domestic Violence Network, Sojourn and the Santa Monica Commission on the Status of Women hosted a forum where community leaders came together to discuss what we could do to systemically challenge the root causes that foster violence. Inspired by Dr. Jackson Katz, a national expert on male violence prevention, members of the Santa Monica police and fire departments, school administrators, religious leaders, local social service agencies and youth activity organizations, and the City’s Human Services Division launched an ambitious collaboration to try to change the social norms that traditionally have led to male perpetrated violence, and to promote positive roles for men and boys in our community. The outcome of these efforts is the Male Violence Prevention Project.

What is the Mission of the MVPP?

To galvanize our community, and particularly male leaders, to challenge aspects of traditional masculinity that are harmful to women, children and to men themselves, and to promote positive, nonviolent definitions of male strength, power, respect and trust.
Why focus on male violence? Isn’t the issue violence in general?

The reality is that the vast majority of domestic violence and violence in general is perpetrated by men and boys, and both men and women suffer as a result. In fact, while men and boys are violent toward a deplorable number of women and girls, the largest numbers of victims of male violence are other men and boys. It is important that men speak out against the idea that aggressive or violent behavior is “manly”, and promote healthy masculinity.

How does MVPP work?

The MVPP utilizes a unique methodology, combining Jackson Katz’s “bystander approach” with discussions among adult men and women who have influence in the lives of youth. The bystander approach views women and girls not as potential victims, and men and boys not as potential perpetrators, but instead as allies who can take action against behaviors that can lead to violence. The focus on adults stems from the belief that youth are influenced most by the adult role models in their lives. In order to change social norms among youth, we must change social norms among the adults who influence them, particularly men.

MVPP uses a “top down” approach, engaging leaders and heads of community organizations to commit four hours of time and staff to join the community-wide process of taking a stand against male violence, discussion and dialogue about what it really means to “be a man,” and how to influence friends, families, coworkers and others to take action to prevent violence. A curriculum for a facilitated discussion has been developed that challenges traditional and stereotyped ideas about masculinity and what it means to be a man in our culture(s), and to stimulate thinking about alternative, respectful ways to be a man.

How can I get involved?

The goal of MVPP is to engage 1000 Santa Monica leaders in this important work for our community. If you are interested in getting involved or learning more, please email the MVPP program at mvpp@opcc.net.

Sarah Stegemoeller
Chairperson

Santa Monica Commission on the Status of Women
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Trends in Levonorgestrel Emergency Contraception Use, Births, and Abortions: The Utah Experience

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Disclosure: David K. Turok, MD, MPH, has disclosed no relevant financial relationships in addition to his employment.
Disclosure: Sara E. Simonsen, RN, MS, has disclosed no relevant financial relationships in addition to her employment.
Disclosure: Nicole Marshall, MD, has disclosed no relevant financial relationships in addition to her employment.

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Abstract

Context
Published reports to date have failed to demonstrate a decrease in abortion rates with increased dispersal of levonorgestrel emergency contraception (LNG EC).

Objective
To evaluate whether there is an association between statewide increases in LNG EC use and birth, fertility, and abortion rates.

Design
Ecological study. The number of LNG EC doses dispensed at all Planned Parenthood Association of Utah (PPAU) sites (n = 6) were obtained for 2000–2006. For this time period, birth and abortion data were obtained from the Utah Department of Health.

Setting
State of Utah.

Patients
Women of childbearing age.

Main Outcome Measures
Birth rates were calculated as the number of live births per 1000 population; general fertility rates, abortion rates, and LNG EC rates were calculated per 1000 women of childbearing age (15–44 years).

Results
Between 2000 and 2006, yearly distribution of LNG EC increased from 11,263 to 52,083 doses. Over this period, the rate of Plan B use per 1000 women age 15–44 years increased from 21.30 doses/1000 to 87.82 doses/1000, an increase of 312%.
During the same period, there were corresponding changes in the statewide birth rate (−2.94%), general fertility rate (0.73%), and abortion rate (−6.36%). Pearson correlation coefficients were statistically significant for the association between the LNG EC rate and the birth rate (−0.9053; P = .0050) and the abortion rate (−0.8749; P < .001), but not between the Plan B rate and the general fertility rate (0.2446; P = .5970).

Conclusion
This ecological study represents, to the authors' knowledge, the first statistically significant association between increasing rates of LNG EC distribution and decreasing abortion rates.
Background and Introduction

Unintended pregnancy accounts for approximately half of all US pregnancies.[1] Emergency contraception is one way women who have unprotected intercourse can decrease their risk for unintended pregnancy. Several formulations of emergency contraception (EC) have been studied in large, well-conducted randomized trials.[2–4] All these trials support the use of emergency contraception to decrease the risk for pregnancy after unprotected intercourse. Low pregnancy rates (1% to 2%) in women participating in EC trials fueled optimistic predictions about the potential of EC to reduce abortion rates. A frequently cited model anticipated that US abortion rates would be cut in half with widespread use of EC.[5] However, a systematic review of increased access to EC was unable to document a reduction in community abortion rates.[6]

Soon after being introduced, the dedicated levonorgestrel (LNG) EC product (Plan B®; Duramed Pharmaceuticals) became the most popular method of EC in the United States. Planned Parenthood Association of Utah (PPAU) has observed a steady increase in distribution of LNG EC from 2000 to 2006. Over this time, the number of doses dispensed per year has increased from 11,263 to 52,083. This study used ecological data to assess whether there is a relationship between increased use of Plan B by women in Utah and birth, fertility, and abortion rates.

Methods

For each year from 2000 to 2006, rates for LNG EC use were calculated by dividing the number of doses of LNG EC dispensed by the 6 PPAU clinics by the yearly population of Utah women of reproductive age (15–44 years old). All rates are reported per 1000 women age 15–44 years. LNG EC doses dispensed are prospectively tallied by PPAU. This is accomplished by using practice management software system at PPAU. PPAU endorsed the study and fully cooperated with supplying the researchers with the necessary data. LNG EC was first available at PPAU in 2000 and has been offered to any woman desiring it since then. The vast majority of patients presenting for EC have recently had unprotected intercourse and take the medication immediately. Women may have the medication dispensed for future use but this is uncommon. A consultation is not required. Data were available on LNG EC distribution for 2000–2006; these data were broken down by age from 2003 to 2006. Data on the annual Utah population from 2000 through 2006 were obtained from the Utah Department of Health's Indicator-Based Information System for Public Health (IBIS-PH). This information is publicly available on their Website: http://ibis.health.utah.gov/

Birth[7] and abortion[8,9] data were obtained from the Utah Department of Health. Crude birth rates were calculated by dividing the number of live births to Utah residents by the Utah population, general fertility rates were calculated by dividing the number of live births to Utah residents by the population of women age 15–44 years, and abortion rates were calculated by dividing the number of abortions to Utah residents by the population of women age 15–44 years. Population estimates were obtained from IBIS-PHand used data from the Governor's Office of Planning and Budget. They are estimated as of July 1 of each year. Rates and percentage changes were calculated by age category for births, abortions, and Plan B use. Pearson correlation coefficients were calculated to evaluate the association between trends in Plan B use and birth, fertility, and abortion rates, overall and by age. Linear regression was also used to estimate the change in the birth and abortion rates associated with LNG EC distribution on an ecological level.

The study protocol was submitted to the University of Utah Institutional Review Board (IRB). The Board determined that the study was exempt from IRB approval. The study was not considered human subjects research because only de-identified data were used, no patient charts were reviewed, and no patients were contacted. Data were analyzed using Stata 9.0 (Stata Corporation, College Station, Texas).

Results

Between 2000 and 2006, PPAU increased its distribution of LNG EC from 11,263 to 52,083 doses. Over this period, the number of LNG EC doses dispensed increased 362% and the rate of Plan B use per 1000 women age 15–44 years increased from 21.30 doses per 1000 to 87.82 doses per 1000, an increase of 312%. During the same period, corresponding changes occurred in the statewide birth rate (−2.94%), general fertility rate (0.73%), and the abortion rate (−6.36%) (Table 1 and Table 2 and the Figure).

Across all years, the highest rates of LNG EC distribution were among women age 18–19 years; rates were also high among women age 15–17 and 20–24 years. However, the largest increases in LNG EC distribution occurred among women age 40–44, 30–34, and 25–29 years, with increases between 2003 and 2006 of 89%, 81%, and 79%, respectively. The smallest increases in LNG EC distribution between 2003 and 2006 (11%) occurred among women age 15–17 years (Table 3 and Table 4).
Between 2003 and 2006, the fertility rate changed by <5% for all age groups except women age 20–24 years (10% decline) and 25–29 years (5% increase). Abortion rates decreased in all age groups with the exception of women age 18–19 (6% increase), 25–29 (2% increase), and 45–49 (25% increase) years (Table 4).

Pearson correlation coefficients were calculated to evaluate the correlation between the LNG EC rate and Utah births and abortions. Overall, between 2000 and 2006, Pearson correlation coefficients were statistically significant for the association between the LNG EC rate and the birth rate (−0.9053; P = .0050) and abortion rate (−0.8749; P < 0.001), but not between the LNG EC rate and the general fertility rate (0.2446; P = .5970) (data not shown). The absolute changes in birth rate, fertility rate, abortion rate, and LNG EC rate were −0.62, 0.65, −0.36, and 66.52 per 1000 women, respectively (data not shown). Linear regression revealed a decrease in the abortion rate between 2000 and 2006 of 0.0074/1000 women of childbearing age for every 1 unit increase in the rate of LNG EC distribution per 1000 women of childbearing age (95% confidence interval [CI], −0.0121 to −0.0027; P = .01) and a decrease of 0.0103 births/1000 population for every 1 unit increase in the rate of LNG EC distribution per 1000 women of childbearing age (95% CI, −0.0158 to −0.0047; P = .005). When examined by age for 2003–2006, no correlation coefficients were significant for LNG EC and fertility or LNG EC and abortion in any group except for Plan B and fertility in women age 20–24 years (−0.9675; P = .0325) (Table 5).

**Discussion**

This ecological study highlights the rapid increase in distribution of LNG EC by PPAU clinics and associated decreases in the Utah abortion rate and birth rate, but not general fertility rate, between 2000 and 2006. The decrease in the Utah average annual percent change in the abortion rate of −1.05% between 2000 and 2006 reflects the annual average percent change of −1.20% in the United States between 1993 and 2006 as reported by Sedgh.[10] While this study reports ecological data, which limits our ability to make conclusions about causal relationships, it has unique strengths. First, the study sample represents a large population of EC users. The 250,318 doses reported here are more than 18 times the 13,564 women included in the systematic review on increased EC access.[6] Second, the medication was dispensed by use of the same protocol in all locations over a 6-year period.

The number of doses of Plan B used is imprecise but is a good estimate because PPAU is by far the state's largest supplier of EC. These data were collected before EC was available in pharmacies without a prescription, and PPAU had a much lower price for EC than Utah pharmacies. This favored use of PPAU as a supplier. A review of statewide Medicaid prescriptions for EC revealed that Utah Medicaid filled 235 Plan B claims among 68,684 unique female patients age 18–45 years enrolled in Medicaid at any point during 2006.[11] This represents 0.45% of all doses distributed by PPAU for that year. In August 2006, the US Food and Drug Administration approved LNG EC for over-the-counter use by women 18 years and older. A prescription is still required for women under 18. After oral levonorgestrel became available without a prescription, PPAU dispensed 38,921 doses in 2007. Despite availability at numerous pharmacies throughout the state, PPAU remains the largest statewide resource for women seeking EC. Other formulations of EC may have been dispensed during the study period, and other medical providers may have distributed doses or prescriptions that are not captured in our data. However, these probably represent a miniscule portion of total EC use and would have a small effect on the total rate of EC use. Some of the doses of LNG EC may have been distributed to women who live outside of Utah, and this would not be addressed in the statewide pregnancy outcome rates we calculated. As a result, the EC use by Utah residents may be overestimated. There is no reason to suspect that the proportion of doses used by non-Utah residents compared with Utah residents would have changed over time. These data cannot distinguish what proportion of pregnant women actually took EC. It also does not reveal how many women used multiple doses or how soon after unprotected intercourse women took the medication.

Rates of contraception use and the efficacy of chosen methods are important determinants for the abortion rate.[12,13] Data regarding these factors for the population studied are not available but could have affected abortion rates. Although we are not able to adequately assess the influence of contraception on our results, it is known that over the study period, PPAU, the State's largest supplier of contraception, did not change the number of clients served for hormonal contraceptives, IUDs, or vasectomies.

One distinguishing factor of this study is that it is likely that all the EC doses distributed were consumed. For example, in Glasier and colleagues' 2004 study,[14] 8,000 women received advance provision of up to 5 doses of EC but only an estimated 8,081 doses were used. Even though fewer doses were dispensed to women in Utah, the use rate is probably much greater because women sought out the medication and paid for it. This greatly increases the likelihood that the medication will be used immediately. It is possible that women purchased EC ahead of need for use, but that is unlikely.

Despite the enormous number of EC doses used in Utah from 2000 to 2006 and the statistically significant decrease in abortion and birth rates identified, our ecological study design does not allow us to conclude that these changes are due to
increased LNG EC use. However, our findings demonstrate a decrease in abortion rates with increasing LNG EC use and contrast the negative findings of several other studies incorporating more robust designs. These differences may be due to the unique nature of reproductive outcomes in the Utah population, the general decrease in abortion rates seen nationwide in recent years, increased general use of contraceptives, or differences in study design. However, not reporting this information could lead to publication bias and a misperception of, at least, the potential value of EC in reducing unintended pregnancy and abortion.

**Footnotes**

**Reader Comments on: Trends in Levonorgestrel Emergency Contraception Use, Births, and Abortions: The Utah Experience** See reader comments on this article and provide your own.

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Nicole Marshall, Oregon Health Sciences University, Department of Obstetrics and Gynecology, Oregon.

**References**


Figures and Tables

Figure

Utah General Fertility Rate, Abortion Rate, and Plan B Rate, 2000-2006.

Medscape

Utah birth rate/1000, fertility rate/1000, abortion rate/10,000, and Plan B rate/1000, 1999–2006.

Table 1


<table>
<thead>
<tr>
<th>Year</th>
<th>Utah Population</th>
<th>Utah Female Residents, Age 15–44 Years</th>
<th>Number of Live Births to Utah Residents</th>
<th>Number of Abortions to Utah Residents</th>
<th>Number of Plan B Doses Given at Planned Parenthood Clinics</th>
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<td>2,246,553</td>
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<td>2006</td>
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Table 2
Utah Birth Rate, Fertility Rate, Abortion Rate, and Plan B Rate, 1999–2006

<table>
<thead>
<tr>
<th>Year</th>
<th>Crude Birth Rate (Live Births Per 1000 Population)</th>
<th>General Fertility Rate (Live Births Per 1000 Women Age 15–44 Years)</th>
<th>Abortion Rate (Abortions Per 1000 Women Age 15–44 Years)</th>
<th>Plan B Rate (Doses Per 1000 Women Age 15–44 Years)</th>
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<td>1999</td>
<td>21.09</td>
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<td>2006</td>
<td>20.45</td>
<td>90.17</td>
<td>5.81</td>
<td>87.82</td>
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Table 3
Utah Fertility, Abortion, and Plan B Rates per 1000, 2003–2006, by Age

<table>
<thead>
<tr>
<th>Year</th>
<th>Fertility Rate/1000</th>
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<tr>
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<td>15–17 Years</td>
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<tr>
<td>2004</td>
<td>14.340</td>
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<tr>
<td>2005</td>
<td>15.079</td>
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<td>2006</td>
<td>15.950</td>
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<table>
<thead>
<tr>
<th>Abortion Rate/1000</th>
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<tbody>
<tr>
<td>2003</td>
</tr>
<tr>
<td>2004</td>
</tr>
<tr>
<td>2005</td>
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<tr>
<td>2006</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Plan B Rate/1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
</tr>
<tr>
<td>2004</td>
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<tr>
<td>2005</td>
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Table 4

Percentage Change in Utah Fertility, Abortion, and Plan B Rates, 2003–2006, by Age

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Fertility Rate/1000 (%)</th>
<th>Abortion Rate/1000 (%)</th>
<th>Plan B Rate/1000 (%)</th>
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<tbody>
<tr>
<td>15–17</td>
<td>2.32</td>
<td>−8.53</td>
<td>10.96</td>
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<td>18–19</td>
<td>1.44</td>
<td>5.78</td>
<td>33.64</td>
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<tr>
<td>20–24</td>
<td>−9.98</td>
<td>−5.44</td>
<td>58.45</td>
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<tr>
<td>25–29</td>
<td>5.46</td>
<td>2.39</td>
<td>79.22</td>
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<td>30–34</td>
<td>3.07</td>
<td>−11.77</td>
<td>80.65</td>
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<td>35–39</td>
<td>3.35</td>
<td>−9.19</td>
<td>43.57%</td>
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<td>40–44</td>
<td>−2.58</td>
<td>−5.29</td>
<td>88.63</td>
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<td>45–49</td>
<td>−3.70</td>
<td>25.19</td>
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<td>Total</td>
<td>0.83</td>
<td>−3.05</td>
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Table 5


<table>
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<tr>
<th>Age (years)</th>
<th>Correlation Coefficient for Plan B and Fertility</th>
<th>PValue</th>
<th>Correlation Coefficient for Plan B and Abortion</th>
<th>PValue</th>
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<tr>
<td>15–17</td>
<td>−0.1182,</td>
<td>.8818</td>
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<td>18–19</td>
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<td>.8443</td>
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<td>.7277</td>
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<td>20–24</td>
<td>−0.9675</td>
<td>.0325*</td>
<td>−0.5214</td>
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<td>25–29</td>
<td>0.9292</td>
<td>.0607</td>
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<td>.5577</td>
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<td>30–34</td>
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<td>35–39</td>
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<tr>
<td>40–44</td>
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<td>.7149</td>
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<td>45–49</td>
<td>−0.8492</td>
<td>.1508</td>
<td>−0.5238</td>
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</tbody>
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Performance Task Assessment
Morning After Pill

This assessment is itself an assignment. Please take it quite seriously and answer all the questions thoughtfully, using clear, articulated sentence or paragraph responses.

Assignment Assessment

1. What did you like about this assignment?

2. What did you dislike about this assignment?

3. For which students do you believe this assignment would be most appropriate?

4. For which students do you believe this assignment would be intimidating or overwhelming?

5. If you had actually been assigned a task like this, describe how you would have completed the task (assume you have no more than a week to complete the assignment).

6. Comment on the in-class portion of the assignment. What value did you get from having an opportunity to consider the assignment with a few other people? How much time do you believe is appropriate for this portion of the task?

Documentation Assessment

1. What were the most important facts in your determination of your report?

2. What facts were lacking that you wanted?

3. Can you provide example facts that, if you had had them, you would or could have altered your conclusion or recommendation?

4. Order the documents in terms of most valuable to least valuable (in completing the report). Where any of the documents misleading? How so?

5. Comment (at least briefly) on each of the documents.

6. Suppose one more document were provided (it is attached). How would this document have affected your response?
Performance Task Design Document

Your course:

Topic/subject/content

Essential Question

Learning outcomes – 2 - 3

Authentic, real-world situation

Role the student will play

Prior knowledge and misconceptions:
- Students who struggle
- Typical students
- Student who easily master

Based on the work of Mark Chun (2010)
Based on the work of Mark Chun (2010)

Task Library (pieces of evidence)  
Up to 8

<table>
<thead>
<tr>
<th>Document</th>
<th>Relevant Information</th>
<th>Higher order thinking skills used</th>
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How process replicates real life process

Decisions to be made

Authentic product to be created