

File No. 110899

Committee Item No. 2

Board Item No. 23

COMMITTEE/BOARD OF SUPERVISORS

AGENDA PACKET CONTENTS LIST

Committee CITY OPERATIONS AND NEIGHBORHOOD SERVICES

Date 9/26/11

Board of Supervisors Meeting

Date 10/4/11

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Completed by: Gail Johnson

Date 9/22/11

Completed by: L.W.

Date 9/28/11

An asterisked item represents the cover sheet to a document that exceeds 25 pages. The complete document is in the file.

1 [Administrative Code - False Advertising by Limited Services Pregnancy Centers]

2
3 Ordinance amending the San Francisco Administrative Code by adding Chapter 93,
4 Sections 93.1 through 93.5, to prohibit limited services pregnancy centers from making
5 false or misleading statements to the public about pregnancy-related services the
6 centers offer or perform.

7 NOTE: Additions are *single-underline italics Times New Roman*;
8 deletions are *strike-through italics Times New Roman*.
9 Board amendment additions are double-underlined;
Board amendment deletions are ~~strikethrough normal~~.

10 Be it ordained by the People of the City and County of San Francisco:

11 Section 1. The San Francisco Administrative Code is hereby amended by adding
12 Chapter 93, Sections 93.1 through 93.5, to read as follows:

13 SEC. 93.1. TITLE.

14 The Chapter shall be known as the Pregnancy Information Disclosure and Protection
15 Ordinance.

16 SEC. 93.2. FINDINGS.

17 1. San Francisco serves as the medical provider of last resort for indigent individuals who need
18 medical care. These individuals include women facing unexpected pregnancies.

19 2. A woman's right to choose whether to terminate a pregnancy is protected by both the federal
20 and state Constitutions, and is protected from interference by third parties and the government.

21 3. Many people have deeply held religious and moral beliefs both supporting and opposing
22 abortion, and the City respects the right of individuals to express and promote such beliefs.

23 4. When a woman considers termination of a pregnancy, time is a critical factor. Delays in
24 deciding to terminate a pregnancy may mean that a less invasive option is no longer available or that
25 the option to terminate a pregnancy is no longer available.

1 5. In recent years, clinics that seek to counsel clients against abortion have become common
2 throughout California. These clinics are often referred to as crisis pregnancy centers ("CPCs").
3 Although some CPCs are licensed to provide various medical services to pregnant women, most CPCs
4 are not licensed medical clinics.

5 6. Some CPCs openly acknowledge, in their advertising and their facilities, that they do not
6 provide abortions or emergency contraception or refer clients to other providers of such services.
7 Some of these same CPCs also openly acknowledge that they believe abortion is morally wrong. Many
8 CPCs, however, seek to mislead women contemplating abortion into believing that their facilities offer
9 abortion services and unbiased counseling.

10 7. CPCs often purchase "pay per click" ads on online search services such as Google for terms
11 such as "abortion", so that persons searching for abortion services will see a link and advertisement
12 for the CPC at the top of the results page. In addition, many CPCs advertise on billboards, mass-
13 transit facilities, and through websites.

14 8. Most clients do not come to CPCs as a result of a referral from a medical professional.
15 Clients seeking information regarding options to terminate a pregnancy commonly are experiencing
16 emotional and physical stress and are therefore especially susceptible to false or misleading elements
17 in advertising by CPCs. These circumstances raise the need for regulation that is more protective of
18 potential consumers of pregnancy center services.

19 9. Because of the time-sensitive and constitutionally protected nature of the decision to
20 terminate a pregnancy, false and misleading advertising by clinics that do not offer or refer clients for
21 abortion or emergency contraception is of special concern to the City. When a woman is misled into
22 believing that a clinic offers services that it does not in fact offer, she loses time crucial to the decision
23 whether to terminate a pregnancy. Under these same circumstances a client may also lose the option
24 to choose a particular procedure, or to terminate the pregnancy at all.
25

1 10. The City respects the right of limited services pregnancy centers to counsel against
2 abortions, if the centers are otherwise operating in compliance with this Chapter, and the City does not
3 intend by this Chapter to regulate, limit or curtail such advocacy.

4 11. However, if women who have chosen to terminate a pregnancy are misled and delayed by
5 the false advertising of CPCs, the cost of providing more invasive and expensive options may fall upon
6 City health facilities, which provide the medical services of last resort for the City's indigent
7 population.

8 12. After carefully balancing the constitutionally protected right of a woman to choose to
9 terminate her pregnancy, the right of individuals to express their religious and ethical beliefs about
10 abortion, the harm to women worked by even slight delays that can be caused by false advertising for
11 pregnancy and/or abortion services, and the cost to the City that can accrue from such delay, the City
12 has determined that there exists a need to regulate false and misleading advertising by pregnancy
13 clinics offering limited services.

14 **SEC. 93.3. DEFINITIONS.**

15 For the purposes of this Chapter, the following terms shall have the following meanings:

16 (a) "Abortion" shall mean the termination of a pregnancy for purposes other than producing a
17 live birth. "Abortion" includes, but is not limited to, a termination using pharmacological agents.

18 (b) "Client" shall mean an individual who is inquiring about or seeking services at a pregnancy
19 services center.

20 (c) "Emergency contraception" shall mean one or more prescription drugs (1) used separately
21 or in combination, to prevent pregnancy, when administered to or self-administered by a patient, within
22 a medically-recommended amount of time after sexual intercourse, (2) dispensed for that purpose in
23 accordance with professional standards of practice, and (3) determined by the United States Food and
24 Drug Administration to be safe for that purpose.

1 (d) "Health information" shall mean any oral or written information in any form or medium
2 that relates to health insurance and/or the past, present or future physical or mental health or condition
3 of a client.

4 (e) "Licensed medical provider" shall mean a person licensed or otherwise authorized under
5 the provisions of federal, state, or local law to provide medical services.

6 (f) "Limited services pregnancy center" shall mean a pregnancy services center, as defined in
7 subsection (g), that does not directly provide or provide referrals to clients for the following services:
8 (1) abortions; or (2) emergency contraception.

9 (g) "Pregnancy services center" shall mean a facility, licensed or otherwise, and including
10 mobile facilities, the primary purpose of which is to provide services to women who are or may be
11 pregnant, that either (1) offers obstetric ultrasounds, obstetric sonograms or prenatal care to pregnant
12 women, or (2) has the appearance of a medical facility. A pregnancy service center has the
3 appearance of a medical facility if two or more of the following factors are present:

14 (A) The facility offers pregnancy testing and/or pregnancy diagnosis;

15 (B) The facility has staff or volunteers who wear medical attire or uniforms;

16 (C) The facility contains one or more examination tables;

17 (D) The facility contains a private or semi-private room or area containing medical
18 supplies and/or medical instruments;

19 (E) The facility has staff or volunteers who collect health information from clients; or

20 (F) The facility is located on the same premises as a state-licensed medical facility or
21 provider or shares facility space with a state-licensed medical provider.

22 It shall be prima facie evidence that a facility has the appearance of a medical facility if it has
23 two or more of the characteristics listed above.

24 (h) "Premises" shall mean land and improvements or appurtenances or any part thereof.
25

1 (i) "Prenatal care" shall mean services consisting of physical examination, pelvic examination
2 or clinical laboratory services provided to a woman during pregnancy. Clinical laboratory services
3 refers to the microbiological, serological, chemical, hematological, biophysical, cytological or
4 pathological examination of materials derived from the human body, for purposes of obtaining
5 information, for the diagnosis, prevention, or treatment of disease or the assessment of health
6 condition.

7 **SEC. 93.4. VIOLATION.**

8 (a) It is unlawful for any limited services pregnancy center, with intent directly or indirectly to
9 perform pregnancy-related services (professional or otherwise), to make or disseminate or cause to be
10 made or disseminated before the public in the City, or to make or disseminate or cause to be made or
11 disseminated from the City before the public anywhere, in any newspaper or other publication, or any
12 advertising device or in any other manner or means whatever, including over the Internet, any
13 statement, concerning those services, professional or otherwise, or concerning any circumstance or
14 matter of fact connected with the proposed performance or disposition thereof, which is untrue or
15 misleading, whether by statement or omission, that the limited services pregnancy center knows or
16 which by the exercise of reasonable care should know to be untrue or misleading.

17 (b) It is unlawful for any limited services pregnancy center, with intent directly or indirectly to
18 perform pregnancy-related services (professional or otherwise), to make or disseminate or cause to be
19 so made or disseminated any such statement identified in subsection (a) as part of a plan or scheme
20 with the intent not to perform the services expressly or impliedly offered, as advertised.

21 **SEC. 93.5. ENFORCEMENT.**

22 (a) The City Attorney may enforce the provisions of this Chapter through a civil action in any
23 court of competent jurisdiction. Before filing an action under this Chapter, the City Attorney shall give
24 written notice of the violation to the limited services pregnancy center. The written notice shall
25 indicate that the limited services pregnancy center has ten (10) days in which to cure the false,

1 misleading, or deceptive advertising. If the limited services pregnancy center has not responded to the
2 written notice within ten (10) days, or refuses to cure the false, misleading, or deceptive advertising
3 within that period, the City Attorney may file a civil action.

4 (b) The City Attorney may apply to any court of competent jurisdiction for injunctive relief
5 compelling compliance with any provision of this Chapter and correcting the effects of the false,
6 misleading, or deceptive advertising. Such an injunction may require a limited services pregnancy
7 center to:

8 (1) Pay for and disseminate appropriate corrective advertising in the same for as the
9 false, misleading, or deceptive advertising.

10 (2) Post a notice on its premises, in a location clearly noticeable from the waiting area,
11 examination area, or both, stating:

12 (A) Whether there is a licensed medical doctor, registered nurse, or other
13 licensed medical practitioner on staff at the center; and

14 (B) Whether abortion, emergency contraception, or referrals for abortion or
15 emergency contraception are available at the center.

16 (3) Such other narrowly tailored relief as the court deems necessary to remedy the
17 adverse effects of the false, misleading, or deceptive advertising on women seeking pregnancy-related
18 services.

19 (c) Upon a finding by a court of competent jurisdiction that a limited services pregnancy center
20 has violated Section 93.4 of this Chapter, the City shall be entitled to recover civil penalties from each
21 and every party responsible for the violation of not less than fifty dollars (\$50) and not more than five
22 hundred dollars (\$500) per violation. In addition, if the City prevails it shall be entitled to reasonable
23 attorney's fees and costs pursuant to order of the court.

1 (e) Nothing in this Chapter shall be interpreted as restricting or otherwise limiting the
2 enforcement authority that state law or the Charter or Municipal Code vest in the City, its agencies,
3 officers or employees or any state agency.

4 (f) Nothing in this Chapter shall be interpreted as creating a right of action for any party other
5 than the City.

6 (g) Nothing in this Chapter shall be interpreted as restricting, precluding or otherwise limiting
7 a separate or concurrent criminal prosecution under the Municipal Code or state law. Jeopardy shall
8 not attach as a result of any court action to enforce the provisions of this Chapter.

9 **Section 2. General Provisions.**

10 **(a) Severability.** If any section, subsection, sentence, clause, or phrase of this
11 ordinance is for any reason held to be invalid or unconstitutional by a decision of any court of
12 competent jurisdiction, such decision shall not affect the validity of the remaining portions of
13 the ordinance. The Board of Supervisors hereby declares that it would have passed this
14 ordinance and each and every section, subsection, sentence, clause, or phrase not declared
15 invalid or unconstitutional without regard to whether any portion of this ordinance would be
16 subsequently declared invalid or unconstitutional.

17 **(b) No Conflict with State or Federal Law.** Nothing in this ordinance shall be
18 interpreted or applied so as to create any requirement, power, or duty in conflict with any
19 federal or state law.

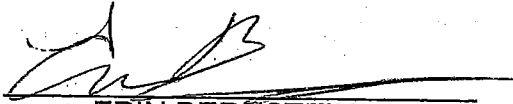
20 **(c) Undertaking for the General Welfare.** In adopting and implementing this
21 ordinance, the City and County of San Francisco is assuming an undertaking only to promote
22 the general welfare. It is not assuming, nor is it imposing in its officers and employees, an
23 obligation for breach of which it is liable in money damages to any person who claims that
24 such breach proximately caused injury.

25 //

1 Section 3. **Effective Date.** This ordinance shall become effective 30 days from the
2 date of passage.

3 APPROVED AS TO FORM:
4 DENNIS J. HERRERA, City Attorney

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6 By:



7 ERIN BERNSTEIN
8 Deputy City Attorney
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LEGISLATIVE DIGEST

[Administrative Code – Pregnancy Information Disclosure and Protection]

Ordinance amending the San Francisco Administrative Code by adding Chapter 93, Sections 93.1 through 93.5, to prohibit false advertising by limited services pregnancy centers.

Existing Law

San Francisco does not currently have any laws regulating the advertising of limited services pregnancy centers.

Amendments to Current Law

The proposed ordinance would amend the San Francisco Administrative Code by adding Chapter 93, Sections 93.1 through 93.5 to prohibit false, misleading, or deceptive advertising by limited services pregnancy centers. The ordinance defines "limited services pregnancy center" as a pregnancy services center that does not directly provide, or provide referrals to clients for, abortions or emergency contraception.

The proposal would authorize the City Attorney to enforce the ordinance by filing a lawsuit against any limited services pregnancy center violating the prohibition on false advertising. Before filing suit, the City Attorney would be required to give a limited services pregnancy center a minimum of 10-days notice and an opportunity to change its advertising.

The intent of this proposed ordinance is to protect consumers of pregnancy-related services in San Francisco by preventing centers that offer only limited pregnancy services from advertising in a manner that misleads consumers as to the type or scope of the services provided.

Background Information

The ordinance would enable consumers seeking pregnancy-related services, including abortion, to choose a center that provides the time-sensitive services they are seeking without being delayed by deceptive advertising.

September 26, 2011

Received in Committee
9/26/11
jw

Alpha Pregnancy Center is a family resource center that provides free pregnancy tests, and information on all of a persons choices when faced with an unplanned pregnancy. But we do not stop with that. We work to improve the quality of life for all people in San Francisco. We have a positive impact on families by helping them raise their children in the city.

Any parent is welcome to receive an abundance of free supplies that are needed for raising children, attend any of our eight free classes, and benefit from the case management and mentoring we provide. These services are offered to all families, not limited by them having their pregnancy test at our center, and regardless of their choice to carry a pregnancy to term, or terminate the pregnancy.

The proposed ordinance will limit our opportunities to inform families about our free and confidential help.

The ordinance also limits on our first amendment rights. All people and groups have the freedom to determine, where, when, and how to speak on issues important to them.

Section 93.4 of the ordinance claims that an omission of information could be considered misleading or false. Who determines what information is required to be included or may be excluded from an organizations attempts of out reach? Our center tells potential clients that we offer an extensive list of free supplies to help meet their needs as they raise children, but toys are not on that list. People have come to our center asking for free toys. Who is to determine if toys are needed to raise children? Some parents might tell you they are; I would tell you it is possible to lovingly raise healthy, creative, and intelligent children with out toys. Have we been misleading by not directly stating on our list of services that toys are not regularly provided? If a person asks if we provide toys we answer them directly.

There are other services our center does not provide. If a person asks about specific services, we are upfront and honest. But, like most corporations, we prefer to inform people about what we do provide.

Section 93.5 item 2 indicates that this kind of omission could cause a pregnancy center to be forced to post signs on their premises stating what services are not available. Similar ordinances in three other cities (of the four who have passed them) have been found unconstitutional by the courts. I would be sad to see our city become embroiled in similar legal battles, wasting limited city resources in defense of an ordinance that would probably be found unconstitutional.

Additionally, pushing this ordinance forward makes it more difficult for people to learn about the helpful services of Alpha Pregnancy Center.

It keeps a woman who is picking soda cans from the neighborhood trash from hearing about our free food pantry, baby food, and formula that could help her care for her newborn.

It closes a young father's career pathway because he won't hear that we can help him write a resume, prepare for interviews, and secure a job.

Young pregnant girls will be left sleeping on the bus, rather than knowing we can help them find safe housing.

New parents will be prevented from attending our free parenting classes. They won't know they can turn to us to get free diapers and nice clothing for children of any age.

Moms will be kept from having a mentor when her teenager deals with unexpected challenges.

The ordinance makes it harder for people learn creative, budget friendly ways to care for a family in classes taught by trained money management counselors, and receive private consultations from them after completing the class.

In her video on the San Francisco Government website, Ms. Cohen says that she wants to educate people on a healthy diet, exercise, handling stress, and a healthy lifestyle. All of those things are taught in our Life Skills Class.

She says she doesn't want the city's families to have to defend themselves. Alpha Pregnancy Center is defending families residing in not only her district but also the districts of each of our supervisors.

Ms. Cohen also said she wants to deal with facts, not politics. We have common goals. Supervisors, I hope you will not be drawn into the politics of this ordinance. Rather than working against us, I ask you to work with us to offer families a future and a hope.

Thank you for allowing me to share my concerns with you.

Respectfully Submitted,



Chastidy Ronan
Alpha Pregnancy Center
Executive Director

**Proposed "False Advertising by Limited Services Pregnancy Centers" Ordinance
Unconstitutional On Its Face and As Applied
September 26, 2011**

*Received
in Committee
9/26/11
[Signature]*

To the Honorable Members of the City Operations and Neighborhood Services Committee:

First Resort, Inc. respectfully submits the following statement regarding the clear unconstitutionality of the proposed ordinance entitled "False Advertising by Limited Services Pregnancy Centers" (amending the San Francisco Administrative Code by adding Chapter 93, Sections 93.1 through 93.5). For the reasons stated below, among others, the Proposed Ordinance is unconstitutional on its face and, based on public statements recently made by City officials regarding the way the Proposed Ordinance is likely to be used, we expect it will also be unconstitutional as applied.

First, while the Proposed Ordinance purports to protect women "seeking information regarding options to terminate a pregnancy" from receiving "untrue or misleading" information from providers of medical or counseling services, the Proposed Ordinance expressly *excludes* from its liability and enforcement provisions all pregnancy centers, including the City itself, that "provide or provide referrals to clients for . . . abortions." Thus, the Proposed Ordinance regulates and restricts speech only by persons and organizations the City regards as having "anti-abortion" or pro-life views, exempting the rest. This viewpoint and speaker discrimination is a blatant violation of the First Amendment to the Constitution of the United States of America.

Second, the Proposed Ordinance purports to regulate and restrict speech but its "violation" provisions are vague and incomprehensible. For example, the Proposed Ordinance apparently states a prohibition against "untrue and misleading" speech of any kind whatsoever, including speech that is true and straightforward but contains some trivial incorrect component, and makes such speech subject to a mandatory Draconian "civil penalties" (i.e., fines). Another provision of the Proposed Ordinance applies to speech that is "part of a plan or scheme with the intent not to perform the services expressly or impliedly offered, as advertised." This latter provision of the Proposed Ordinance is simply incomprehensible. Impermissibly vague restrictions on free speech such as these are violations of the First Amendment.

Third, the combination of the Proposed Ordinance's vague requirements and its intimidating enforcement provisions creates an impermissible chilling effect on free speech, in violation of the First Amendment. Under the Proposed Ordinance, the City Attorney is authorized unilaterally to determine what speech, or even what failure to speak, is "untrue or misleading," and then (1) issue an extremely short fuse (i.e. 10 days) cease and desist letter; (2) file a lawsuit for injunctive relief; (3) seek possibly Draconian fines and penalties; and (4) collect attorney's fees and costs no matter how trivial the alleged violations may have been. The obvious purpose of these provisions is to allow the City to intimidate small organizations or groups of citizens into speaking only in ways "approved" by the City. In light of public pronouncements by the City Attorney's office, it is clear the risk of bias and discrimination in enforcement is very high.

Fourth, the Proposed Ordinance contains a fines and penalties provision that bears no relationship whatsoever to the nature of the offense. The provision contains a minimum \$50 "per violation" fine no matter what the alleged offending speech, or failure to speak, might be. The provision nowhere defines what "per violation" means. Further, according the Proposed

**Proposed "False Advertising by Limited Services Pregnancy Centers" Ordinance
Unconstitutional On Its Face and As Applied
September 26, 2011**

Ordinance, the fine can be imposed by the City on "each and every party responsible for the violation," without specifying how that group of targeted individuals will be determined. The Proposed Ordinance is not clear on the role of the judiciary in restricting the City's power to impose these fines. These provisions will work together to violate the targeted pregnancy center's rights to substantive and procedural due process under the Fourteenth Amendment to the Constitution of the United States of America.

Fifth, the Proposed Ordinance is the result of a private political organization using the power of government to attack another organization based on that organization's ideas and speech. National Abortion Rights Action League ("NARAL") has long attacked First Resort in NARAL's publications and "investigations." Not satisfied with the results of those efforts, NARAL has, according to multiple press reports, worked closely with the San Francisco City Attorney's Office and directly with Supervisor Melia Cohen to develop the Proposed Ordinance. Furthermore, it is First Resort's understanding that *it and perhaps only one other organization are the only organizations that would be subject to the ordinance*. It is an abuse of governmental power and the legislative process to draft legislation to target one organization for the benefit of a political ally. The abuse is particularly egregious when that attack is based on the target organization's ideas and speech.

The Proposed Ordinance is deeply flawed. It is not just another law prohibiting "untrue and misleading" speech. If it were, it would be unnecessary because those laws already exist. It is instead a thinly-veiled unconstitutional restriction of speech by one or two organizations with whom the proponents of the ordinance disagree. In addition, supporters of the Proposed Ordinance can provide no real-world justification for its adoption – they provide only speculation and hyperbole. For the reasons stated above, the Committee should reject the Proposed Ordinance and put an end to the unnecessary costs and distractions it has and otherwise will continue to create.



*Referred to the
Committee
9/22/11
JW*

In Brief

Facts on Induced Abortion In the United States

INCIDENCE OF ABORTION

- Nearly half of pregnancies among American women are unintended, and about four in 10 of these are terminated by abortion. Twenty-two percent of all pregnancies (excluding miscarriages) end in abortion.
- Forty percent of pregnancies among white women, 67% among blacks and 53% among Hispanics are unintended.
- In 2008, 1.21 million abortions were performed, down from 1.31 million in 2000. However, between 2005 and 2008, the long-term decline in abortions stalled. From 1973 through 2008, nearly 50 million legal abortions occurred.
- Each year, two percent of women aged 15–44 have an abortions. Half have had at least one previous abortion.
- At least half of American women will experience an unintended pregnancy by age 45, and, at current rates, one in 10 women will have an abortion by age 20, one in four by age 30 and three in 10 by age 45.

WHO HAS ABORTIONS?

- Eighteen percent of U.S. women obtaining abortions are teenagers; those aged 15–17 obtain 6% of all abortions, teens aged 18–19 obtain 11%, and teens younger than age 15 obtain 0.4%.
- Women in their 20s account for more than half of all abortions; women aged 20–24 obtain 33% of all abortions, and women aged 25–29 obtain 24%.
- Non-Hispanic white women account for 36% of abortions, non-Hispanic black women for 30%, Hispanic women for 25% and women of other races for 9%.
- Thirty-seven percent of women obtaining abortions identify as Protestant and 28% as Catholic.
- Women who have never married and are not cohabiting account for 45% of all abortions.
- About 61% of abortions are obtained by women who have one or more children.
- Forty-two percent of women obtaining abortions have incomes below 100% of the federal poverty level (\$10,830 for a

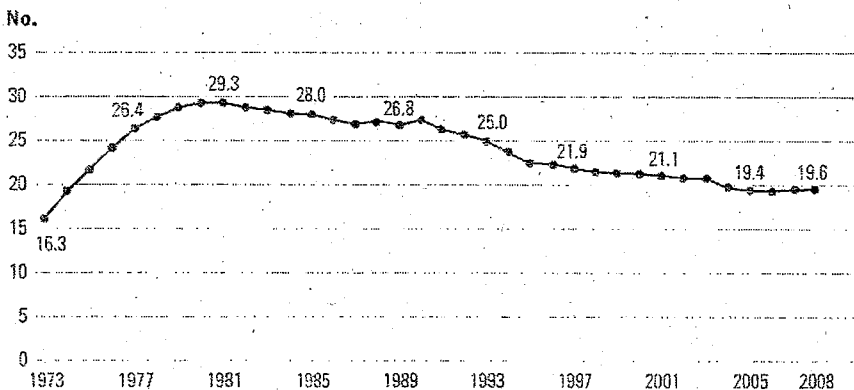
single woman with no children). Twenty-seven percent of women obtaining abortions have incomes between 100–199% of the federal poverty level.*

- The reasons women give for having an abortion underscore their understanding of the responsibilities of parenthood and family life. Three-fourths of women cite concern for or responsibility to other individuals; three-fourths say they cannot afford a child; three-fourths say that having a baby would interfere with work, school or the ability to care for dependents; and half say they do not want to be a single parent or are having problems with their husband or partner.

CONTRACEPTIVE USE

- Fifty-four percent of women who have abortions had used a contraceptive method (usually the condom or the pill) during the month they became pregnant. Among those women, 76% of pill users and 49% of condom users report having used their method inconsistently, while 13% of pill users and 14% of condom users report correct use.
- Forty-six percent of women who have abortions had not used a contraceptive method during the month they became pregnant. Of these women, 33% had perceived themselves to be at low risk for pregnancy, 32% had had concerns about contraceptive methods, 26% had had unexpected sex and 1% had been forced to have sex.
- Eight percent of women who have abortions have never used a method of birth control; nonuse is greatest among

Number of abortions per 1,000 women aged 15–44, by year



*Poverty guidelines are updated periodically in the Federal Register by the U.S. Department of Health and Human Services under the authority of 42 USC 9902(2).

those who are young, poor, black, Hispanic or less educated.

- About half of unintended pregnancies occur among the 11% of women who are at risk but are not using contraceptives. Most of these women have practiced contraception in the past.

PROVIDERS AND SERVICES

- The number of U.S. abortion providers remained stable between 2005 (1,787) and 2008 (1,793). Eighty-seven percent of all U.S. counties lacked an abortion provider in 2008; 35% of women live in those counties.
- Forty-two percent of providers offer very early abortions (before the first missed period) and 95% offer abortion at eight weeks from the last menstrual period. Sixty-four percent offer at least some second-trimester abortion services (13 weeks or later), and 23% offer abortion after 20 weeks. Only 11% of all abortion providers offer abortions at 24 weeks.
- In 2009, the average amount paid for a nonhospital abortion with local anesthesia at 10 weeks' gestation was \$451.

EARLY MEDICATION ABORTION

- In September 2000, the U.S. Food and Drug Administration approved mifepristone to be

marketed in the U.S. as an alternative to surgical abortion.

- In 2008, 59% of abortion providers, or 1,066 facilities, provided one or more medication abortions. At least 9% of providers offer only early medication abortion services.
- Medication abortion accounted for 17% of all nonhospital abortions, and about one-quarter of abortions before nine weeks' gestation, in 2008.

SAFETY OF ABORTION

- The risk of abortion complications is minimal: Fewer than 0.3% of abortion patients experience a complication that requires hospitalization.
- Abortions performed in the first trimester pose virtually no long-term risk of such problems as infertility, ectopic pregnancy, spontaneous abortion (miscarriage) or birth defect, and little or no risk of preterm or low-birth-weight deliveries.
- Exhaustive reviews by panels convened by the U.S. and British governments have concluded that there is no association between abortion and breast cancer. There is also no indication that abortion is a risk factor for other cancers.
- In repeated studies since the early 1980s, leading experts have concluded that abortion does not pose a hazard to

women's mental health.

- The risk of death associated with abortion increases with the length of pregnancy, from one death for every one million abortions at or before eight weeks to one per 29,000 at 16–20 weeks—and one per 11,000 at 21 or more weeks.
- Fifty-eight percent of abortion patients say they would have liked to have had their abortion earlier. Nearly 60% of women who experienced a delay in obtaining an abortion cite the time it took to make arrangements and raise money.
- Teens are more likely than older women to delay having an abortion until after 15 weeks of pregnancy, when the medical risks associated with abortion are significantly higher.

LAW AND POLICY

- In the 1973 *Roe v. Wade* decision, the Supreme Court ruled that women, in consultation with their physician, have a constitutionally protected right to have an abortion in the early stages of pregnancy—that is, before viability—free from government interference.
- In 1992, the Court reaffirmed the right to abortion in *Planned Parenthood v. Casey*. However, the ruling significantly weakened the legal protections previously afforded women and physicians by giving states the right to enact restrictions that do not create an "undue burden" for women seeking abortion.

- Thirty-five states currently enforce parental consent or notification laws for minors seeking an abortion. The Supreme Court ruled that minors must have an alternative to parental involvement, such as the ability to seek a court order authorizing the procedure.

- Even without specific

parental involvement laws, six in 10 minors who have an abortion report that at least one parent knew about it.

- Congress has barred the use of federal Medicaid funds to pay for abortions, except when the woman's life would be endangered by a full-term pregnancy or in cases of rape or incest.
- Seventeen states use public funds to pay for abortions for some poor women, but only four do so voluntarily; the rest do so under a court order. About 20% of abortion patients report using Medicaid to pay for abortions (virtually all in states where abortion services are paid for with state dollars).
- In 2006, publicly funded family planning services helped women avoid 1.94 million unintended pregnancies, which would likely have resulted in about 860,000 unintended births and 810,000 abortions.

These data are the most current available. References are available in the HTML version: http://www.guttmacher.org/pubs/fb_induced_abortion.html.



Advancing sexual and reproductive health worldwide through research, policy analysis and public education

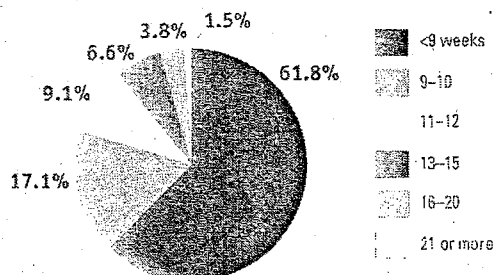
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When women have abortions*

Eighty-eight percent of abortions occur in the first 12 weeks of pregnancy, 2006.



*In weeks from the last menstrual period.



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Timing of steps and reasons for delays in obtaining abortions in the United States

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Abstract

Objective: We studied the steps in the process of obtaining abortions and women's reported delays in order to help understand difficulties in accessing abortion services.

Methods: In 2004, a structured survey was completed by 1209 abortion patients at 11 large providers, and in-depth interviews were conducted with 38 women at four sites.

Results: The median time from the last menstrual period to suspecting pregnancy was 33 days; the median time from suspecting pregnancy to confirming the pregnancy was 4 days; the median time from confirming the pregnancy to deciding to have an abortion was 0 day; the median time from deciding to have an abortion to first attempting to obtain abortion services was 2 days; and the median time from first attempting to obtain abortion services to obtaining the abortion was 7 days. Minors took a week longer to suspect pregnancy than adults did. Fifty-eight percent of women reported that they would have liked to have had the abortion earlier. The most common reasons for delay were that it took a long time to make arrangements (59%), to decide (39%) and to find out about the pregnancy (36%). Poor women were about twice as likely to be delayed by difficulties in making arrangements.

Conclusions: Financial limitations and lack of knowledge about pregnancy may make it more difficult for some women to obtain early abortion.

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Keywords: Delay; Abortion; United States; Timing; Process

1. Introduction

Over the past decade, the timing of abortion in the United States has been shifting to early in pregnancy. Due, in part, to access to medical abortion, which can be used during the first 9 weeks of pregnancy, and improved techniques for early surgical abortion, the proportion of abortions that were performed in the first 8 weeks' gestation increased from 52% to 59% between 1991 and 2001 [1]. Even so, about 11% of abortions took place at 13 weeks' gestation or later in 2001 [2]. Abortion, while in general a very safe procedure, has a higher medical risk when undergone later in pregnancy; compared to an abortion at 8 weeks' gestation or earlier, the relative risk increases exponentially at higher gestations [3]. In addition, earlier abortions are less of a financial burden for a woman (in

2001, the median charge for an abortion was US\$370 at 10 weeks' gestation, US\$650 at 14 weeks' gestation and US\$1042 at 20 weeks' gestation) [4]. An earlier abortion is also less stigmatized both socially and legally. Public opinion polls indicate a lower level of approval of second-trimester abortions [5], and the Supreme Court declared in 2000 that the legislation intended to prohibit so-called "partial-birth" abortions could be interpreted to cover a range of second-trimester abortion procedures [6]. The impact of such a prohibition contrasts with that of laws that are in place in 23 states requiring women to wait for a specified amount of time between receiving counseling and obtaining an abortion [7]; such laws have been shown to lead to a shift towards the performance of abortions later in pregnancy [8]. In addition, the later is a woman's gestation, the fewer are the providers to perform the procedure [4], which can lead to additional delays.

The gestational age at which women typically have abortions varies by several demographic characteristics, and there is some evidence that these variations are due to

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Table 1

The percentage of women (who would have preferred to have had their abortion earlier) reporting specific reasons for the delay in obtaining an abortion, 2004

Reason	All women	First-trimester patients	Second-trimester patients
It took a long time to make arrangements	59	56	67*
I needed time to raise money to have the abortion	26	23	36*
I couldn't get an earlier appointment	18	19	13
I didn't know where to get an abortion	12	10	16
I couldn't find a place to have an abortion near where I live, so I had to arrange for transportation to get here	7	6	9
I needed time to notify or to get consent from my parents	1	1	1
There is a legally required waiting period where I live	2	2	1
I needed time to go to court to get permission to have an abortion	0	0	0
Some other difficulty in making arrangements delayed me	14	13	18
It took a long time to decide	39	35	50
It was a difficult decision to make	27	25	33
I was worried about the cost	12	10	18*
It took time to talk to my husband/partner	11	10	15
I had religious or moral concerns	10	8	15
It took time to talk to my parents	4	3	7*
Some other difficulty in deciding delayed me	4	2	7
It took some time before I knew I was pregnant or how far along I was	36	36	36
I was waiting for my relationship with my husband/partner to change	7	5	9
I was afraid to tell my husband/partner or my parents that I was pregnant	7	6	9
Someone I am close to put pressure on me not to have an abortion	5	5	5
The clinic/doctor made me wait to have an abortion	5	6	1
Something in my life changed since I became pregnant	4	4	5
I didn't know that I could get an abortion	2	2	3
I didn't think that it was important to have it earlier	2	2	2
I found out late in the pregnancy that the fetus has a defect or is not normal	0.2	0	1
I was delayed for some other reason	6	5	11
<i>n</i>	615	441	145

* Significant difference compared to first-trimester women ($p < .05$).

differential access to services. Compared to adults, for example, adolescent women are more likely to have later abortions, and black women are slightly more likely than women of other racial and ethnic groups to have later abortions [9]. Lower-income women are also more likely to have later abortions [10]. Documenting inequities in women's ability to obtain an abortion without delay and understanding reasons for delays and which women are more likely to obtain abortions later than they would have liked is a way to assess why these disparities exist and to determine how and for whom improved access to abortion may reduce them.

One way to assess such delays is to examine the length of time taken in each of the stages in the process of obtaining an abortion — from the woman's last menstrual period to the time she suspects she is pregnant, from suspecting pregnancy to confirming her suspicion via a positive pregnancy test, from confirming the pregnancy to deciding to have an abortion, from deciding to have an abortion to beginning to seek abortion services and from beginning to seek abortion services to actually obtaining an abortion. One 1984 study of 197 women examined the various stages in the process of obtaining an abortion and found that, among abortion patients, the mean number of days between a woman's last menstrual period and the

time she suspected pregnancy was 33 days; the mean time from suspecting pregnancy to confirming it via a test was 20–25 days; the mean time from a positive test to deciding to have an abortion was negligible; and the time from the abortion decision to the procedure was 17–21 days. However, this study is 20 years old, and these findings were based on a small sample of women at one clinic [11]. While there is literature on women's decision-making process when faced with an unwanted pregnancy [12–16], there is less information on both women's satisfaction with the timing of their procedures and the reasons some women delay, or are delayed in, obtaining services. A recent study of patients at one abortion clinic in California addressed timing and delays in the context of second-trimester abortion and found that problems in suspecting or confirming pregnancy and difficulty in getting referrals or public insurance were key factors leading to delays in obtaining abortions until the second trimester [17]. Our study complements and expands on this work in several ways: by examining delays experienced by women of all gestational ages, by utilizing a larger and broadly representative sample from multiple sites and by including both quantitative and qualitative components, which together provide a more complete picture of women's experiences.

2. Methods

2.1. Quantitative component

2.1.1. Survey design

The study was carried out via a self-administered paper-and-pencil questionnaire. A major portion of the questionnaire was dedicated to questions about the timing of steps in the process of obtaining an abortion. With the help of a calendar, the respondent was asked to report the first day of her last menstrual period and how many weeks pregnant she was, as well as the dates she first suspected she was pregnant, had a test that showed she was indeed pregnant, decided to have an abortion and first tried to get an appointment for the procedure. The date of the survey, which was usually equivalent to the date of the abortion and no more than 1 day before or after, was also recorded.

Women were also asked who, if anyone, helped them decide whether to have an abortion, including partners, relatives, friends and relevant professionals. The respondent could indicate as many people as applied and was further asked which of those people was most important in her decision.

The respondent was then asked if she would have preferred to have had the abortion earlier than she did; this was our primary measure of delay. If she said yes, she was asked:

- “Is one reason you are having an abortion now instead of earlier because it took you a long time to decide to have an abortion?”
- “Is one reason you are having an abortion now instead of earlier because it took time to make arrangements for an abortion?”

If the woman answered affirmatively to either of these reasons, she was prompted to indicate whether any of a series of specific subreasons (Table 1) was applicable. Multiple responses and write-in answers were allowed. The questionnaire also listed nine additional possible reasons for delay that a respondent could check off; these are also listed in Table 1. Multiple responses were again allowed. A final space was provided for the woman to write in additional reasons that did not fit into any of the categories provided. We also asked the woman if she first attempted to obtain an abortion at some other facility and, if so, why she did not. Additionally, the questionnaire collected information on demographic and social characteristics.

2.1.2. Survey fielding

A detailed description of our choice of facilities and selection of participants is presented elsewhere [10]. In summary, we surveyed a broadly representative sample of patients by selecting 11 large abortion providers, including one from each of the nine major US geographic regions. The providers also varied by patient demographics and state abortion restrictions. Each woman arriving for a termination

of pregnancy was asked to complete the questionnaire. Participation was voluntary, and responses were anonymous. The fielding protocol, survey instrument and in-depth interview (IDI) guide were approved by our organization's Institutional Review Board. The fielding period ran from December 2003 to March 2004; at each facility, fielding ran until we reached the goal of approximately 100 patients per facility (the actual range was 91–132). A total of 1209 women completed the questionnaire, and the response rate among all abortion patients seen at participating facilities during the fielding period was 58%. The reasons women did not complete the questionnaire included: failure of the clinic to distribute questionnaires on every procedure day, refusal to participate and lack of time to complete the survey. The cover page of the survey indicated that it covered “the reasons women have abortions and how they obtain abortion services.” Because of this general wording, we suspect that nonresponse did not introduce significant bias regarding responses to our key outcome variables. However, we are not able to confirm this due to lack of information about nonresponders. Of the respondents, 171 (15%) were in their second trimester, a percentage slightly higher than the 12% of abortion patients nationwide [9]. While this allows us to perform tests for significant differences between first-trimester and second-trimester patients, the majority of respondents were in their first trimester, and this should be borne in mind when considering our results.

2.2. Qualitative component

We also conducted IDIs with 38 women at four clinics. A detailed description of our choice of facilities and selection of participants is presented elsewhere [10]. Briefly, English-speaking women obtaining abortions or having an abortion follow-up visit at the four sites (three that participated in the survey and one that did not) were recruited for participation in the interviews by the clinic staff and compensated with US\$25 for their participation. No personally identifying information was collected. The interviews were conducted during the end of the survey fielding period and for 2 months afterwards.

Because qualitative participants were selected for their willingness to be interviewed and not on demographic characteristics, this sample was neither comparable to quantitative respondents nor comparable to the national demographic breakdown of abortion patients. Therefore, qualitative information is not presented in this paper as representative of the experiences of a larger sample of women, but is presented to provide a more detailed understanding of the process of obtaining an abortion and to illuminate the nuances of quantitative findings.

2.3. Data analysis

2.3.1. Structured survey

We used chi-square tests to determine significant differences across the proportions of women in each subgroup

giving various responses. To enhance our understanding of the variables related to delay and to reasons for delay, we used multivariate logistic regression models. Individual cases were not weighted; however, significance tests were conducted using techniques that accounted for the clustered sample design in order to calculate accurate standard errors. All analyses were conducted using Stata, version 8.2. Unless otherwise indicated, all associations mentioned were significant at $p < .05$.

To establish gestational duration, we asked women to report the date of their last menstrual period and/or how many weeks pregnant they were at the time of their abortion; 87% of respondents who answered both questions reported dates within 3 weeks of each other for these two measures. Ideally, all women would have received ultrasound confirmation of their gestational age before completing the survey. We were not able to determine the percentage of women who had received this information, but most clinics found it easiest to integrate the survey into their patient flow by administering it during the interval after a patient's ultrasound and before her procedure. As a result, many respondents had likely received ultrasound confirmation before they completed the survey. Among IDI respondents, no woman expressed uncertainty about her gestational duration.

Of the 1209 respondents, 10% did not indicate whether they would have liked to have had the abortion earlier. These women were significantly more likely to be Hispanic and to be earlier in gestation. In addition, many quantitative survey respondents had difficulty completing the section on dates. For each of the five questions in this section, the date was missing for 15–18% of respondents. Hispanic women, low-income women and women later in gestation were more likely to have missing data on date variables. Other respondents reported dates that were logically inconsistent (e.g., trying to get an abortion before suspecting one was pregnant). In many cases, we were able to resolve these inconsistencies based on other survey information. As a result, in our final analysis file, between 11% and 20% of the values for each date differed from what the respondent originally reported. Therefore, the findings relating to timing of events must be considered exploratory, and we show only bivariate tabulations; no multivariate models were fitted using these data.

Nonresponse on demographic variables was 12–14% for age, parity, marital/living status, race and employment and was 26% for poverty level, causing the number of respondents for multivariate models to be lower than those for univariate and bivariate tabulations. We include a category of "missing" under poverty to partly compensate for these missing data.

2.3.2. IDIs

Audiocassettes of IDIs were professionally transcribed, and then the research team edited them for accuracy and stripped them of any information that could potentially

identify the respondents. We used the qualitative data analysis software package N6 to systematically code the data by using categories based on the project focus and other themes that emerged from the data [10].

3. Results

3.1. Respondents' sociodemographic characteristics

As reported elsewhere [10], univariate analysis of the demographic characteristics of structured survey respondents indicated that they were not substantially different from a nationally representative sample of abortion patients surveyed in 2000 in terms of age, marital status, parity, poverty, race, education or religion (not shown) [18]. Twenty percent of respondents were 19 years or younger, and 57% were in their 20s. Seventy-two percent had never been married, and 59% had had at least one child. Some 60% of respondents were below 200% of the federal poverty line, including 30% who were living in poverty. More than half had attended college or had received a college degree. Thirty-one percent of respondents were black, and 19% were Hispanic. (Four percent completed the questionnaire in Spanish.) Forty-nine percent of surveyed women had had a previous abortion, and overall gestational age ranged from 4¹ to 23 weeks. Eighty-five percent of respondents were in their first trimester (defined as <13.0 weeks' gestation), and 15% of respondents were second-trimester patients (13.0 weeks or more).

The IDI respondents were slightly older than the structured survey respondents and were more likely to be living below 200% of the federal poverty level. More than half of these women (53%) had had previous abortions, and nearly three quarters (74%) had children. Almost half of the interview respondents were in their second trimester; a possible explanation for this overrepresentation is that these women were usually in the clinic on two consecutive days for their abortion procedures and, therefore, were more likely to be available to participate in the interviews.

3.2. Timing of steps to obtain an abortion

Fig. 1 provides information on the sequence and timing of the various steps in the decision to have an abortion and in efforts to obtain one. The mean gestation at the time of abortion in the quantitative sample was 9.0 weeks, and the median was 8.0 weeks; the 25th and 75th percentiles were 6.0 and 10.3 weeks, respectively. For the typical woman, a little over a month (just a few days more than one menstrual cycle) passed between her last menstrual period and the date she first suspected she was pregnant: the median time was 33 days, and the mean was 36. The next three steps (confirming the pregnancy, deciding to have an abortion and first trying to get an appointment) generally spanned a much

¹ Of the 1209 respondents, four women reported gestations of 3 weeks and 6 days, and one woman reported her gestation as 3 weeks.

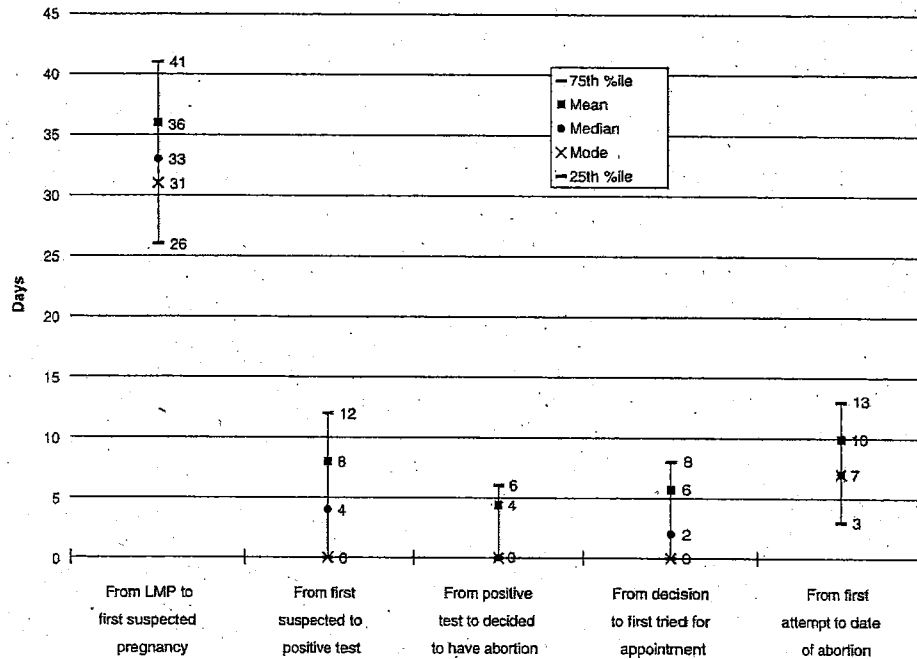


Fig. 1. Timing of steps in the abortion process: median, 25th and 75th percentiles, mean and mode, 2004.

shorter period of time: the median times for these intervals were 4, 0 and 2 days, respectively, and the most common response for each interval was 0 day. The median interval for these three steps combined was 14 days, and the mean was 18 days (not shown). Finally, the median interval between first trying to obtain an appointment and the date of abortion was 7 days, and the mean was 10 days.

The IDIs revealed the difficulty women had in accurately recalling and recording the amount of time that passed between the steps in obtaining an abortion. In about one third of the interviews, one or more approximate dates could not be determined, even with probing and with the aid of a calendar. However, these areas of ambiguity reveal both the intensity and the diversity of the logistical process women go through to abort an unwanted pregnancy.

In the following sections, we examine each step of the process in further detail.

3.2.1. Time from last menstrual period to suspecting pregnancy

Structured survey results show that minors (those <18 years old) took a week longer than all other age groups to suspect they were pregnant (Fig. 2). The experience of one young IDI respondent provides insight into the longer intervals seen in this age group in the survey data; she did not seem to understand that missing a period could be a sign of pregnancy:

When I missed the first one I was just happy, like, "Yes!" Then I missed the second one, then I was just doubting a little bit, like. Then I missed the third one; then it cut right through my head, like, "Oh my god!" Then I started getting scared and stuff. (16 years old, poverty status

unknown, no children, 17 weeks pregnant at the time of abortion)

Almost half of the IDI respondents who did not suspect that they were pregnant until relatively late stated that their periods had been irregular before this pregnancy due to having had a baby or a miscarriage within the last 6 months and/or the use of injectable contraception.

3.2.2. Time from suspecting pregnancy to confirming pregnancy by testing

More-educated women took less time between suspecting pregnancy and confirming it (Fig. 3). The same was true for higher-income women, who had a shorter interval by nearly a week when compared to women below 100% of the poverty level. Black women had a slightly, but significantly, longer interval. Also taking a longer average time to confirm their pregnancies with a test were teens, both minors and older teens. Additionally, women with two or more children reported a significantly longer interval. In general, these differences, while statistically significant, were small (2–3 days).

Many IDI respondents described a process of confirming the pregnancy at a doctor's office or clinic, rather than (or in addition to) at home; obtaining this confirmation was a source of delay for some of the IDI respondents because of lack of time.

3.2.3. Time from positive pregnancy test to deciding to have an abortion

Married women and women with two or more children reported taking less time to decide than their demographic counterparts. In addition, if a woman took 7 weeks or longer

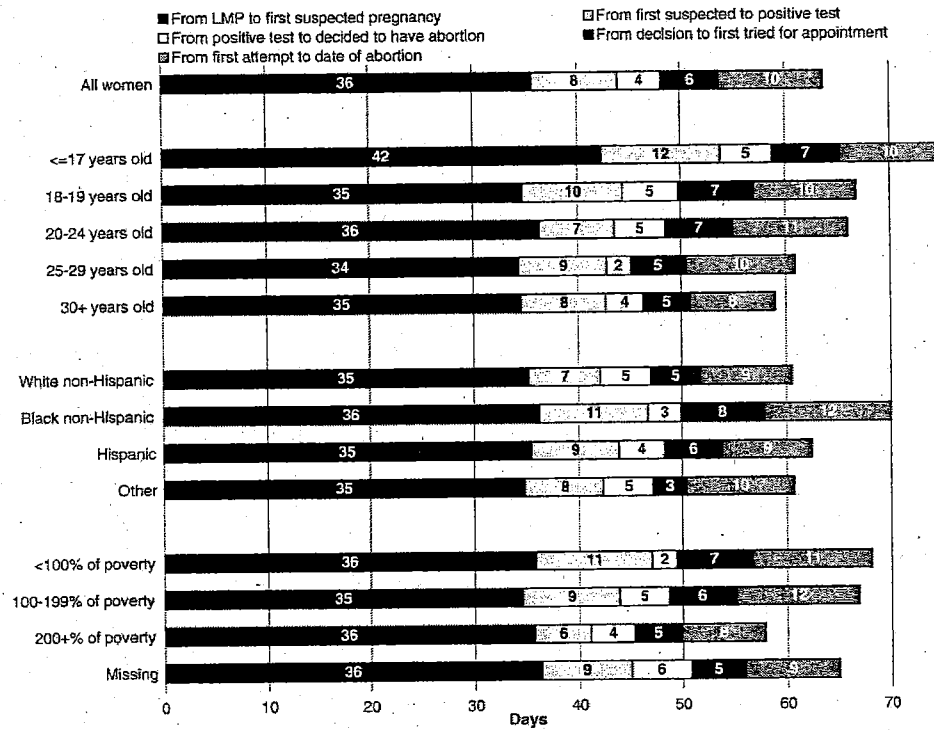


Fig. 2. Mean length of stages in the abortion process, by age, race and poverty level, 2004.

to confirm the pregnancy, her decision-making period was shorter (not shown). In addition, women who talked to a parent about her decision took a significantly longer time to decide to have an abortion (not shown). On the other hand, black women took less time to decide. Again, these

differences were small, reflecting short intervals overall at this stage.

Most women in the IDIs who reported no interval between confirming their pregnancies and deciding on abortion voiced a unified theme: from the time they

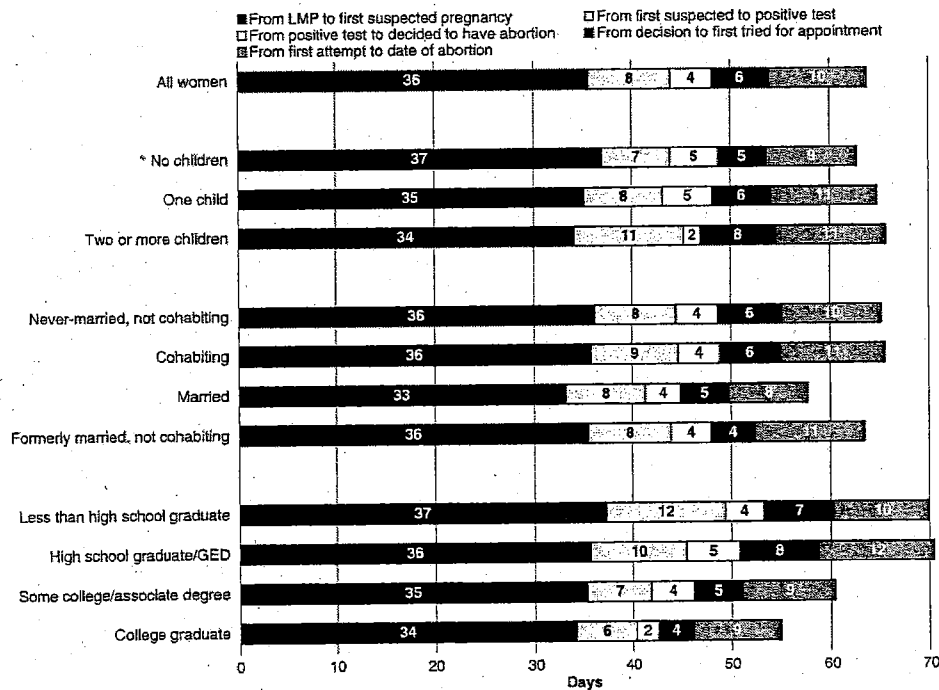


Fig. 3. Mean length of stages in the abortion process, by number of children, relationship status and education, 2004.

confirmed their pregnancy, they knew it would end in abortion, and that the positive pregnancy test was the moment that the decision crystallized:

I pretty much made the decision right away. I found out and took the pregnancy test and I was like, I just saw like my whole life flash in front of me and I was like, what would happen if I had the kid and you know, what would be affected in my life and other people's lives, and that is the first thing that came to my mind was that I need to get an abortion. (19 years old, above the poverty line, no children, 6 weeks pregnant at the time of abortion)

The experiences of other IDI respondents may illuminate what happens when women take a longer time at this interval; some interviewees described this decision-making period as ongoing up to the day of their abortion. Most women in the IDIs who took a long time during this interval said that it was a hard decision and that they wanted to think about it and talk to other people so that they were sure. The following woman described the back-and-forth process she went through with her partner after she confirmed her pregnancy:

So we decided that it was too soon [to have a child together]. It just wasn't the right time for neither one of us [...] It was like ... sometimes [my partner] would say yes and I would say no. I would convince him where I would think it's a bad decision and he'll say yes or no. Then [he'd] try to convince me [...] So, it was confusing at first, but we knew that it was going to be a decision that we would have to make. (27 years old, at or below the poverty line, one child, 15 weeks pregnant at the time of abortion)

In the structured survey, 60% of women indicated that someone else helped them with the decision to abort. As might be expected, husbands or partners were the individuals most commonly named; nearly half of the women (45%) cited their husband or partner (not shown). Nearly a quarter (23%) named a friend, and 14% of all women (and 40% of minors) cited a parent. Similarly, about half of the women indicated that their husband was the "most important" other person who helped with the decision. About 1 in 10 women indicated that a parent was the most important person; this response was three times as common among those 19 years and younger (21%) than among those 20 years and older (7%). Notably, even though the question asked of women ("Which of those people was most important in your decision?") implied that the woman was to choose from the list in the previous question (which did not include "me"), 28% of those who responded to this question wrote in "me" or "myself."

More than half of the IDI respondents said that they themselves were the most important and influential person in the decision. Their reasons were that this had to be their own decision because it really was up to them and them alone. Many respondents acknowledged the importance of their partners' opinions, but nonetheless emphasized the importance of "controlling their own destiny."

3.2.4. Time from deciding to have an abortion to first trying to obtain an abortion

Women aged 25 years and older had a shorter time period between making the decision to have an abortion and first attempting to make an appointment for the procedure (Fig. 2). Black women took a significantly longer time than white women with this interval. In addition, women who did not talk to anyone in their decision making took longer between deciding to have the abortion and first trying to obtain the abortion (not shown).

As in the quantitative survey, most IDI respondents began trying to obtain an abortion quickly after deciding, sometimes even before they had firmly decided to have an abortion (e.g., locating clinics and finding out prices, gestational limits and appointment availability before mentally committing themselves to having an abortion). However, the interviews also revealed the porousness of the boundaries of these intervals; the idea that a "decision" was a definite moment in time that could be marked on a calendar was not borne out in many of the interviews. Although some IDI respondents had the experience of a discrete moment of decision, many others experienced decision making as a protracted process.

3.2.5. Time from first trying to obtain an abortion to obtaining the abortion

In the structured survey, poor women took a significantly longer time from first trying to obtain the abortion to actually having it. When compared to white and Hispanic women, black women reported significantly longer time periods.

We also examined the last two stages together (i.e., the time from deciding to have an abortion to obtaining it) in order to be able to make summary statements about the full period following the decision to have an abortion. Women with two or more children took more time across these two stages, while higher-income women and women 30 years and over reported less time between deciding to have an abortion and obtaining it.

In the structured survey, we asked a question focusing specifically on women's experiences with other clinics. Eleven percent of women reported that they attempted to go to another clinic or doctor's office before going to the clinic where they actually obtained the abortion. Of these, 32% (or 3% of all women) said that they did not get an abortion at the first facility because they were too far along in pregnancy (not shown). An essentially equal percentage indicated that the clinic was too expensive or that they were unable to receive insurance coverage at the time of their visit. Additional reasons for not having the abortion at the first clinic included abortions not being performed there and not being able to get an appointment at the first location, each reported by 1% of all women. Notably, women who went to another clinic took over twice as long, on average, between initially attempting to make an appointment and obtaining the abortion.

The most common reason that IDI respondents gave for visiting other service sites before having their abortion was to confirm their pregnancy. Some women reported that the clinic where they obtained an abortion required proof of pregnancy from another clinic, and other women said that they wanted to get proof for themselves after getting a positive result from a home pregnancy test before moving forward with their decision-making process. The next most common reason given for visiting another medical site, including hospital emergency rooms, was that the woman did so before she knew she was pregnant (e.g., she was feeling ill and sought medical care and found out she was pregnant at that time). Of the women who sought an abortion at a site other than the one where they actually obtained an abortion, all were found by ultrasound exam to be past the first clinic's gestational limits.

3.2.6. Timing of steps in the abortion process for first-trimester versus second-trimester patients

Fig. 4 shows that the additional time spent by women who obtain second-trimester abortions is not concentrated in any particular stage in the process. Instead, each stage is longer overall for women at later gestations than those at earlier ones.

3.3. Delays in obtaining abortions and reasons for delays

Nearly three fifths (58%) of women in the structured survey reported that they would have preferred to have had the abortion earlier than they did (not shown). As might be anticipated, this response was more common among women later in gestation: 91% of women in their second trimester said so, compared to 52% of first-trimester patients. However, even among women at 6 weeks or earlier, 32%

said this. Poor women (67%) were also more likely to say that they would have preferred to have had the abortion earlier than women above 200% of poverty (50%). In addition, women who said they wanted to have their abortion earlier reported taking more time at almost every stage of the process.

The IDI respondents were not specifically prompted to explain why they would have preferred to have had their abortions earlier than they did, but they often volunteered this information:

I do [wish I had had the abortion earlier], because when I came here last Friday and they told me, like, "You're in your second trimester," and I'm like [...] "Goodness, now what am I going to do?" Because I didn't want to go into my second trimester, because it's like, basically, really becoming a baby, you know I just really didn't want to do it that late. (21 years old, at or below the poverty line, one child, 16 weeks pregnant at the time of abortion)

Of the women in the structured survey who indicated that they would have preferred to have had the abortion earlier than they did, three fifths said that this was because it took them a long time to make arrangements (Table 1). The most common arrangement was raising money; 26% of women said they needed time to do this. As expected, due to their later gestations and lower incomes, the IDI respondents commonly said that a reason for their delay in obtaining an abortion was the need to raise the money for the abortion or to get insurance to cover the abortion:

I mean, when I first found out [that I was pregnant], I had it in my head anyway to have [the abortion], but I did not have the money. It was the money; I did not have no money to come down here and the money to do it [...] It

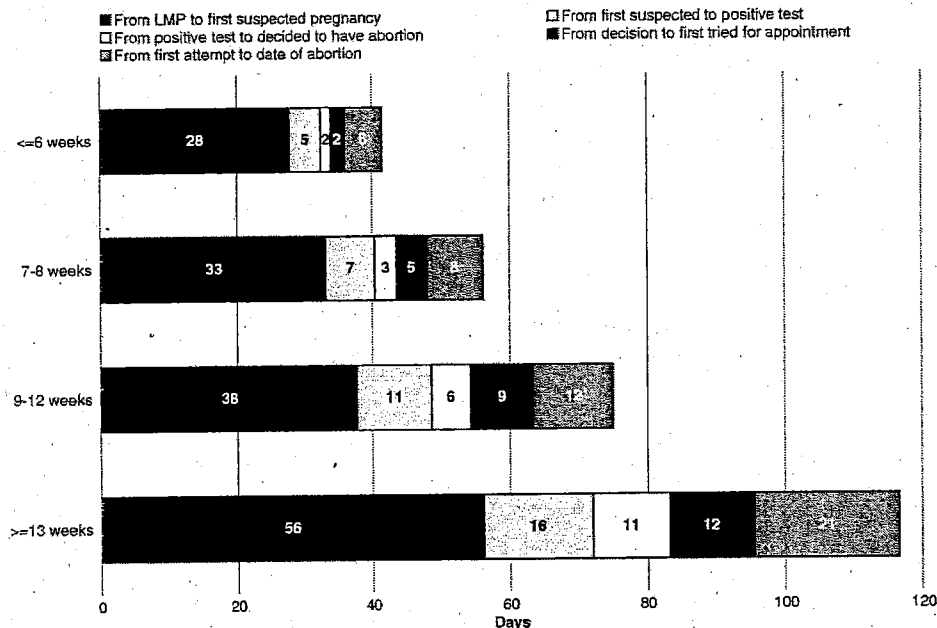


Fig. 4. Mean length of stages in the abortion process, by weeks of gestation, 2004.

is hard to take off work, you know, but it was really the money, because if I were to have it sooner, I would have come sooner, but I did not have it. And everybody was against [me having the abortion] so, there was nobody to help me, you know. (22 years old, below the poverty line, three children, 13 weeks pregnant at the time of abortion)

A few women said that they had made and cancelled multiple appointments because they did not have enough money to cover the procedure, and one woman said that she had waited an entire month for her Medicaid coverage to become active in order to use it to pay for the procedure. They typically described a process of finding a clinic that performed later abortions and accepted Medicaid for payment or was willing to work out a payment plan.

About 4 in 10 women in the quantitative survey cited "it took a long time to decide" and 27% cited "it was a difficult decision to make" as reasons for delay in deciding. Many IDI respondents who wanted their abortion earlier also said that it took them a long time to decide to have an abortion.

Thirty-six percent of women said that it took some time before they knew they were pregnant or how far along they were. Much smaller percentages of women cited partner relationships, fear of disclosure, pressure or clinic-enforced

delays, among other reasons. A few women in the qualitative sample also said that their delay was due, in part, to constraints of their own schedule. They mentioned school or work commitments, combined with raising their children, as contributing factors to their delay in obtaining an abortion.

The previous findings include women at all gestations, including those in the first trimester who, from some perspectives, would not necessarily be considered "delayed." (A small number of women in the qualitative sample said that they had tried to obtain an abortion earlier, but were told to come back later because they were too early in their pregnancies for a surgical abortion, but this information was not obtainable from the survey data.) For this reason, we looked separately at delays experienced by women who obtained abortions in their second trimester. These women were significantly more likely to say that it took them a long time to make arrangements to have the abortion; two thirds of second-trimester patients said so, compared to 56% of first-trimester patients (Table 1). In addition, second-trimester patients were significantly more likely to indicate that they were delayed because they needed time to raise money for the abortion. Half of second-trimester patients reported that it took them a long time to

Table 2

The percentage of women (who would have preferred to have had their abortion earlier) reporting the most common reasons for delay, and odds ratios from multivariate logistic regressions predicting reasons for delay, 2004

Characteristic	It took a long time to make arrangements		It took a long time to decide		It took some time before I knew I was pregnant or how far along I was	
	Bivariate percentage	Multivariate odds ratio	Bivariate percentage	Multivariate odds ratio	Bivariate percentage	Multivariate odds ratio
Total % reporting reason	59		39		36	
Age (years)						
≤ 17	53	1.00	27	1.00	57	1.00
18–19	58	1.21	44	2.52	26	0.22**
20–24	62	1.34	40	2.21	35	0.32*
25–29	56	1.01	42	2.19	33	0.32*
30+	60	1.33	32	1.67	37	0.34
Relationship status						
Never married and not cohabiting	59	1.00	38	1.00	38	1.00
Cohabiting	53	0.76	37	0.99	35	0.95
Married	63	1.33	39	1.09	33	0.77
Formerly married and not cohabiting	58	1.18	38	1.29	29	0.51*
Race						
White	58	1.00	30***	1.00	42*	1.00
Black	62	1.16	44	1.73***	28	0.47**
Hispanic	55	0.83	47	1.86*	31	0.55*
Other	65	1.54	52	2.33*	48	1.27
Poverty level						
<100%	65	1.00	41*	1.00	38	1.00
100–199%	57	0.77	36	0.86	31	0.61*
200+%	53	0.55**	32	0.79	38	0.82
Missing	63	0.84	47	1.39	36	0.73
n	567	530	585	516	458	433

* Statistical significance at $p < .05$.

** Statistical significance at $p < .01$.

*** Statistical significance at $p < .001$.

decide, while only 35% of first-trimester patients said so; this finding was of borderline statistical significance ($p=.06$). However, second-trimester patients were more likely to cite worries about cost as a reason for delay in deciding. Finally, second-trimester patients were more likely to have indicated that they were delayed because it took time to talk to their parents.

Table 2 includes women of all gestations and shows bivariate percentages and multivariate odds ratios predicting whether women gave any of the three most common reasons for delay. Income is associated with difficulty making arrangements: in the multivariate context, women above 200% of the federal poverty level were only about half as likely to give this as a reason for delay. Being nonwhite was associated with giving "It took a long time to decide" as a reason for delay. Women 17 years and younger were more than three times as likely as older women to indicate that they did not know they were pregnant or how far along they were even after controlling for other characteristics, echoing the finding that this group took more time from the last menstrual period to suspecting pregnancy. White women were more likely than black and Hispanic women to say they did not know they were pregnant, and there is some evidence that both formerly married (and not cohabiting) and lower-income women were more likely to give this reason.

4. Discussion

Our findings suggest that once women suspect pregnancy, most of them who seek an abortion act fairly quickly and are able to obtain an abortion in the first trimester. Most suspect that they are pregnant just a few days after missing their period. They quickly confirm their suspected pregnancies; the average time to do so was about a week. Women typically are able to get an appointment within a week, and the average time from a positive test to an abortion procedure was 3 weeks. A large majority of women report taking little time or no time between suspecting pregnancy and confirming it, between confirming the pregnancy and deciding to have an abortion and between deciding to have an abortion and beginning to seek services.

However, the IDIs indicate that these stages are not so easily quantified, perhaps because women find it difficult to look back and determine specifically when various events occurred. Our data on dates were somewhat incomplete, but in many cases, women who had characteristics associated with delay also had more missing data, suggesting that the results may in fact be conservative. Even so, confirmatory research in this area is needed, and improved methods of data collection, such as computer-assisted survey techniques that can check for inconsistencies, might improve the quality of such data.

We found that minor teens' interval from the last menstrual period to suspecting pregnancy was significantly longer than adult women's and that minors were much more likely to report that they were delayed because it took some

time before they knew they were pregnant. Taken together, these findings indicate a clear lack of knowledge among some younger teens about the basic aspects of pregnancy and the specific signs of pregnancy, and imply that increased instruction on such information would be an important addition to sexuality education programs. It is possible that the longer interval among teens reflects greater denial of pregnancy rather than lack of knowledge, but many IDI respondents, particularly those with irregular periods, were also unaware of their pregnancies, suggesting that education about pregnancy awareness would be valuable to women of all ages.

As might be expected, women report that their husbands or partners are heavily involved in the decision to abort. Half of women described their partner as the most important other person they talked to, far more than any other group consulted. Yet the extent to which women independently emphasized their own decision-making autonomy was notable. In both quantitative and qualitative findings, many women described the decision as their own and emphasized the primary role they played. Among minor teens, however, 40% indicated that their parents helped them decide.

The study findings indicate that most women would have preferred to have had their abortions earlier than they did; this was understandably more common for women later in pregnancy. Women with more children take more time to obtain an abortion once they have decided to do so, which, as the IDIs indicate, may be due to the difficulty of scheduling and keeping appointments in light of familial demands.

A variety of measures in our study suggest that women who are financially disadvantaged also have difficulty obtaining early abortions. Lower-income women typically take more time to confirm a suspected pregnancy, which could relate to the cost of a home pregnancy test and the difficulty in getting a test from a clinic or a doctor. They also typically take several more days between deciding to have an abortion and actually doing so than their higher-income counterparts. In addition, the need to take time to make arrangements is the most common reason for delay for the sample as a whole, and low-income women are more likely to have this problem. Similarly, women who had second-trimester abortions were more likely to have concerns about cost or about raising money.

Many of our findings broadly echo those of a recent study in this area [17]. Although our study defined delay in a somewhat different way, in both studies, second-trimester patients reported longer intervals at each stage of the process; in particular, problems in suspecting pregnancy were an important cause of delay. In addition, several logistical and personal factors were reported by a similar proportion of second-trimester patients, and reasons for delay among second-trimester patients were found to differ from those mentioned by first-trimester patients. On the other hand, our study found additional evidence of the connection between financial constraints and difficulties in accessing abortion.

The difficulties that low-income women face when making arrangements underscore the importance of financial support for such women when they seek abortion. Yet, under the Hyde Amendment, which was enacted in 1977, the use of federal funding is prohibited for most abortions, and only 17 states use state funds to cover all or most medically necessary abortions (only four do so voluntarily, while the other 13 do so pursuant to a court order) [19]. Moreover, the clinical and financial implications of second-trimester abortion are greater than those for first-trimester patients. Our findings suggest that gestational age at abortion in the United States could be further reduced if financial barriers faced by disadvantaged groups were removed and if women, especially young women, were better educated about how to recognize pregnancy. However, making these structural changes would require systematic and comprehensive efforts. At the same time, it is important to note that the discovery of fetal anomalies or maternal health problems accounts for some of the abortions that occur in the United States, and the limitations of available technology or access to this technology may not permit earlier identification. Because of these factors, efforts to ensure that abortions happen earlier in pregnancy must be balanced by efforts to maintain the accessibility of second-trimester abortion services.

Acknowledgments

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Partner Organizations:

- ACRJ
- AMSA
- CPHA-N
- Catholics for Choice
- Center for Reproductive Rights
- CLPP
- EMILY's List
- EngenderHealth
- EQUAL Health Network
- Feminist Majority Foundation
- IGNITE
- Ipas
- ISIS
- Joint Action Committee
- Latina Sexual and Reproductive Justice Coalition
- LSRJ
- Medical Students for Choice
- NARAL Pro-Choice New York
- NAPAWF
- National Institute for Reproductive Health
- NLIRH
- NOW
- NWHN
- OWL-SF
- Our Bodies, Ourselves
- Pathfinder International
- People For the American Way
- PRCH
- PPAC
- PPMM
- PPSP
- RCRC
- RHTP
- RH Realitycheck
- Scarleteen
- SisterSong
- Trust Women Foundation
- Women Donors Network
- Women's Media Center
- Women's Voice
- Women's Vote

<http://oursilverribbon.org>

TESTIMONY TO SAN FRANCISCO BOARD OF SUPERVISORS

Re: Pregnancy Information Disclosure and Protection Ordinance

Ellen R. Shaffer, PhD MPH

Co-Director, Trust Women/Silver Ribbon Campaign

September 26, 2011

I am Ellen Shaffer, Co-Director of the Trust Women/Silver Ribbon Campaign, which aims to increase the voice, visibility and unity of the pro-choice majority.

We appreciate Supervisor Malia Cohen's leadership as a champion of the Pregnancy Information Disclosure and Protection Ordinance. We also thank our colleagues who are here today to support reproductive justice, including many Silver Ribbon partners, by mobilizing public opposition to the deceptive practices of crisis pregnancy centers such as First Resort.

If enacted, this measure would explicitly prohibit limited services pregnancy centers in San Francisco from making false or misleading statements to the public about pregnancy-related services that the centers offer.

Supervisors, First Resort is an organization dedicated to an abortion-free world that falsely advertises itself as offering abortions.

OurSilverBlog did a First Resort Google search on 9-24-11, and also looked at their website. The search for "abortion San Francisco" found a paid ad by First Resort, and several search results also listed this organization there.

The first quote on their webpage reads:

Abortion *"I really thank you for all your help and support. The decision I made isn't a pleasant one but I received good advice so that I wouldn't have to go through this again."* - Client who chose to terminate her pregnancy

We have posted a video clip that shows similar fake "clinics" baldy lying to women, for example claiming that abortion increases their risk for breast cancer by 100% (the real number is zero):

<http://www.youtube.com/watch?v=7jvzJ35zhvQ>

First Resort is not alone. On Sept. 24, 2011, the New York Times editorial page reported:

"Thirty-eight years after Roe v. Wade recognized a woman's right to make her own childbearing decisions and legalized abortion nationwide, a newly intensified drive by anti-abortion forces who refuse to accept the law of the land has seriously imperiled women's ability to exercise that right. Opponents of abortion rights know they cannot achieve their ultimate goal of an outright ban, at least in the near future. So they are concentrating on ... making abortion more difficult to obtain."

These deceptive practices are most likely to victimize the most vulnerable. In 2006, poor women had an unintended pregnancy rate five times that of higher-income women, and an unintended birth rate six times as high. With improvements in coverage for contraception and its effectiveness, the rate of unintended pregnancies declined among middle and upper-income women by 29%, from 34 per 1,000 women aged 15- 44 in 1994, to 24 per thousand in 2006. At the same time, the unintended pregnancy rate among women with incomes below the federal poverty line increased from 88 per 1,000 in 1994 to 132 in 2006—a 50% rise over the period. Poor women's high rate of unintended pregnancy results in their also having high—and increasing—rates of both abortions (52 per 1,000) and unplanned births (66 per 1,000). <http://oursilverribbon.org/blog/?p=287>

The Trust Women/Silver Ribbon Campaign is confident that women will make the right choices for themselves if they are can find accurate information. San Francisco's groundbreaking legislation will help to see that they get it.

Letter from First Resort Founder Shari Plunkett

Dated: 4/14/2012

*Received by
in Committee
9/26/11
Jm*

Urgent Prayers Needed!

- a thought from Shari Plunkett-

With the closing of five abortion clinics in the Bay Area in March, our call volume has never been higher. Women are calling in survival mode, with utter panic in their voices. They are clinging to abortion because it's the only "help" they know. "Planned Parenthood has closed", they tell us, "I need an abortion, can you help me?" It's like they're a skydiver in free-fall having just found out their parachute isn't working.

We've prayed and prayed and we see no difference. We've brainstormed different responses. Our latest is, "We help women like you everyday. To start with we can provide you with a free ultrasound to confirm your pregnancy and determine how far along you are. We don't do abortions, or provide referrals, but come in

anyway. We can help." We are seeing little difference. All day long women are hanging up too quickly, without taking the time to hear about the real help they can get, and without knowing the other options available to them!

We feel powerless, but "prayer is the conduit through which power from heaven is

brought to earth!" (O.Hallesby) Please pray that God will speak that still small voice to them saying, "They will help you. Make an appointment."

So many of you have taken the time to tell us how thrilled you are at these abortion clinics closing. And yes, this is one of the most amazing opportunities we've ever had to serve abortion minded women. But with each click

of the phone this golden opportunity is slipping away. Please help us and pray! Almighty God, the women who call First Resort are women you know and love. The babies they carry, created in your image, are tiny and so vulnerable. You have willed them into being, and you desire for each one to know you and to grow into

your likeness in the years ahead. By your power and through your grace, open the minds and hearts of each woman who calls First Resort. Touch her heart with

a spark of warmth which speaks help and hope. Lighten her darkness, defend her from danger, and allow nothing to get in her way of making it to First Resort.

Amen!

Shari

"The Clinic makes me feel good about myself
in a way I never thought health care could."

— Women's Community Clinic Client



womens
community
clinic

September 26, 2011

Received
in Committee
9/26/11
JFW

Dear San Francisco Board of Supervisors City Operations & Neighborhood Services Committee:

I am here today on behalf of the staff, volunteers, and clients of the Women's Community Clinic. For the past 12 years the Clinic has been a place where uninsured women can come to receive sexual and reproductive health care services. We believe preventive, educational care is essential to lifelong health and that all women deserve excellent health care, regardless of their ability to pay. We work hard to ensure that each client feels comfortable and safe using her voice to direct the care she receives.

It is this dedication to health education that leads us to our support of Supervisor Cohen's Pregnancy Information Disclosure and Protection Ordinance. The ordinance will give the San Francisco City Attorney the authority to protect women from being manipulated by fake clinics, or "crisis pregnancy centers" (CPCs), which target women using deceitful marketing practices and withhold the full range of pregnancy options – namely, unbiased information on abortion.

Crisis Pregnancy Centers are incredibly misleading. Many give medically inaccurate information about contraception and pregnancy options. Some even refuse to refer for birth control. First Report, a Bay Area based CPC wrote in a Chronicle Op/Ed on Friday, September 23rd that their communications are "clear, honest, and appropriate" to women about not providing abortion services or referring for those services – but if you Google "abortion" one of the top advertisements is First Resort, a CPC, with "Abortion Info – Women's Pregnancy Options" listed above the link.

Women deserve to know exactly what they are getting from their health care professional. If any health care information is going to be shared through a filter – either political or religious – women should know that up front. Lawmakers can and should hold these "clinics" accountable to these deceptive practices.

Passing this bill represents a commitment to providing women seeking contraceptives or facing unintended pregnancies with the unbiased, medically accurate information that no one should be denied.

Sincerely yours,

Diana Taylor, NP
Advisory Board Chair

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Risk Factors Associated With Presenting for Abortion in the Second Trimester

Eleanor A. Drey, MD, EdM, Diana G. Foster, PhD, Rebecca A. Jackson, MD, Susan J. Lee, JD, Lilia H. Cardenas, and Philip D. Darney, MD, MSc

OBJECTIVE: To determine factors associated with delay of induced abortion into the second trimester of pregnancy.

METHODS: Using audio computer-assisted self-interviewing, 398 women from 5 to 23 weeks of gestation at an urban hospital described steps and reasons that could have led to a delayed abortion. Multivariable logistic regression identified independent contributors to delay.

RESULTS: Half of the 70-day difference between the average gestational durations in first- and second-trimester abortions is due to later suspicion of pregnancy and administration of a pregnancy test. Delays in suspecting and testing for pregnancy cumulatively caused 58% of second-trimester patients to miss the opportunity to have a first-trimester abortion. Women presenting in the second trimester experienced more delaying factors (3.2 versus 2.0, $P < .001$), with logistical delays occurring more frequently for these women (63.3% versus 30.4%, $P < .001$). Factors associated with second-trimester abortion in logistic regression were prior second-trimester abortion, delay in obtaining state insurance, difficulty locating a provider, initial referral elsewhere, and uncertainty about last menstrual period. Factors associated with decreased likelihood of second-trimester abortion were

presence of nausea or vomiting, prior abortion, and contraception use.

CONCLUSION: Abortion delay results from myriad factors, many of them logistical, such as inappropriate or delayed referrals and delays in obtaining public insurance. Public health interventions could promote earlier recognition of pregnancy, more timely referrals, more easily obtainable public funding, and improved abortion access for indigent women. However, accessible second-trimester abortion services will remain necessary for the women who present late due to delayed recognition of and testing for pregnancy.

(*Obstet Gynecol* 2006;107:128-35)

LEVEL OF EVIDENCE: II-2

Second-trimester abortion has received considerable political attention recently with the enactment of state¹ and federal legislation banning so-called "partial-birth" abortion.² Second-trimester procedures account for approximately 12% of abortions performed in the United States.³ Procedures performed after 12 weeks of gestation may be costlier for women in many respects—financially,⁴ emotionally,⁵ and medically—posing greater risks of medical complications and mortality than abortions performed earlier.⁶ Second-trimester procedures are also more difficult to obtain because fewer providers offer them, limiting access.⁴ Understanding reasons for abortion delay may encourage the improvement of referral networks and facilitate the development of health education programs that reduce the need for second-trimester abortions. Such education may help women recognize unwanted pregnancy earlier, thus increasing a woman's options for pregnancy termination by rapid referrals to clinics and by enabling a woman to choose abortion by medication.

The literature on the causes of abortion delay in the United States is outdated; many articles are more than two decades old. Most of these studies primarily analyzed demographic factors correlated with overall

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The authors thank Nancy E. Adler, PhD (Departments of Psychiatry and Pediatrics, University of California, San Francisco) and Lee N. Robins, PhD (Sociology in Psychiatry, Washington University) for their assistance developing the survey instrument.

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delay and found that younger, unmarried women with less education and no previous pregnancies tended to seek abortions later.⁷⁻¹¹ A few studies examined reasons for delay at key points in the process of obtaining an abortion, such as when pregnancy was suspected, when it was confirmed, and when the woman first attempted to schedule an abortion.¹¹⁻¹³ These studies came to differing conclusions about which step in the process contributed most to delay, an important determination for prioritizing policy-based solutions. One study found that the longest delay occurred between the last menstrual period and the first suspicion of pregnancy,¹² whereas two other studies found that the most substantial delay occurred between the first suspicion of pregnancy and seeing a doctor.^{11,13} The most recent comprehensive study of delay in the United States was based on data collected in 1987, but this study did not analyze delay by steps leading to abortion.¹⁴ In the last two decades, US studies of abortion delay have focused more narrowly on race¹⁵ and delayed abortions among teens.^{16,17}

Using audio computer-assisted self-interviewing, we assessed a cohort of women obtaining abortions from 5 to 23 weeks of gestation. We sought to identify factors associated with abortion delay overall and during six time intervals, beginning with suspicion of pregnancy and ending with the abortion appointment. We evaluated a comprehensive list of demographic, reproductive, logistic, relationship, and emotional factors. We asked participants to prioritize which factors caused the most delay. We hypothesized that unknown date of last menstrual period and difficulty in getting an appropriate referral would be associated with abortion delay.

MATERIALS AND METHODS

We conducted a cross-sectional analysis to determine which demographic, medical, reproductive, and other factors were associated with abortion delay. We recruited consecutive English- and Spanish-speaking patients presenting for abortion from 5 to 23 weeks of gestation at the Women's Options Center, an urban, hospital-based abortion clinic from September, 2001, through March, 2002. The Women's Options Center serves a local community of primarily Latina and African-American women and accepts referrals from throughout Northern California. Women who are referred are typically in the second trimester, are low income, and/or have medical complications. Women were excluded from the study if they were obtaining an abortion because of fetal anomalies or demise or if they were unable to learn to use audio computer-assisted self-interviewing. The study was approved by

the institutional review board of the University of California, San Francisco. To keep the numbers of first- and second-trimester patients roughly equivalent throughout the enrollment period, if either group outnumbered the other by more than ten, recruitment for the larger group was suspended until numbers equalized. Because gestational duration was determined after enrollment, four women were found to be beyond the clinic's 23-week limit, could not terminate their pregnancies, and were excluded from analysis. Four were excluded because the gestational duration was not available.

Subjects were enrolled before obtaining an abortion but after receiving counseling from trained pregnancy advisors and signing a consent. We used audio computer-assisted self-interviewing (Sensus Q&A 2.0; Sawtooth Technologies, Evanston, IL, 1998) to administer the questionnaire to improve the accuracy of responses for sensitive topics.¹⁸ The questionnaire was developed in consultation with psychologists expert in instrument design and included characteristics identified in previous studies to be associated with abortion delay, including demographic, reproductive, socioeconomic, and insurance factors. In addition, we added questions about the timing of menses, pregnancy symptoms, relationship factors, social support, attitudes about abortion, and number of prior providers consulted regarding this pregnancy. We also included closed- and open-ended questions about reasons for delay. Finally, we asked participants to identify seven dates leading to the abortion appointment: 1) first day of last menstrual period, 2) suspicion of pregnancy, 3) positive pregnancy test, 4) decision to abort, 5) first telephone call to an abortion clinic, 6) first call to our clinic, and 7) abortion date. These timing questions were completed with the help of a research assistant using a calendar. All other questions were completed in a private room with the subjects encouraged to request help as needed. We assumed the first missed menstrual period would have occurred 28 days after the last menstrual period.

The instrument was pretested for clarity with 10 English-speaking and 10 Spanish-speaking patients. Subjects were trained in audio computer-assisted self-interviewing and computer use as necessary with sample questions. The median time to complete the survey was 18 minutes. Research assistants abstracted additional demographic and medical data from each subject's medical record. Subjects received \$15 for their participation.

The primary outcome variable was gestational duration at the time of abortion as determined by ultrasonography, which was dichotomized to second (≥ 13

weeks) versus first trimester for the logistic regression. Secondary outcomes included elapsed days for each of the six intervals between the consecutive steps defined above and proportion of women who were in the second trimester at the end of that step. We used multivariable logistic regression to examine factors associated with delay in the overall time to abortion. The model was constructed using a set of fixed covariates describing demographic characteristics: race/ethnicity, foreign-born status, marital status, age, education, income, previous abortions, and previous births. In addition, we included variables expected to be associated with abortion delay based on our clinical practice, available literature, and those found to be significant at a .05 level in bivariate analysis. All analyses were conducted using STATA 8.2 (College Station, TX). A Cox multivariable hazard analysis was also performed with the primary outcome of time to abortion (results not shown). Similar results were obtained; therefore, for simplicity, we present the results of the multivariable logistic regression.

Sample size calculations originally were based on guidelines for the sample size needed for multiple linear regression, which suggest enrolling twenty subjects per independent variable.¹⁹ Based on previous studies, an estimated 15 variables were expected to require analysis. Thus at least 300 subjects were deemed necessary. In addition, because of anticipated colinearity between many of the variables, we estimated we would need an additional 30% for a total of 390.

RESULTS

According to study design, subjects were divided evenly between the first and second trimesters. Subjects in the second trimester were more likely to have been referred from other clinics and to have had difficulty finding an abortion provider (Table 1). They were also more likely to be less educated, to live farther from the clinic, and to have had difficulty arranging transportation. Although both first- and second-trimester patients predominantly relied on state funding (Medi-Cal) for their abortions, second-trimester patients had more difficulty obtaining Medi-Cal. Second-trimester subjects were also more likely to have had a previous second-trimester abortion, to be unsure of their last menstrual period, to experience fewer pregnancy symptoms, and to have used drugs and/or alcohol. More than 80% of first-trimester subjects were local residents and consistent with the demographics of the clinic's neighborhood, and they were more likely to have a household income of less than \$20,000 and to be foreign-born and Latina. More than two thirds

of all women having abortions were using contraception at the time of conception (Table 1).

Women having second-trimester abortions presented an average of 70 days (10 weeks) later than women having first-trimester abortions (Table 2). Compared with women having first-trimester abortions, among women having a second-trimester abortion, each of the six steps leading to abortion was significantly longer ($P < .001$ at all steps). The largest delay occurred in the first step—delay in suspecting pregnancy after missing a period was responsible for nearly a third (22 days) of the total difference between the two groups. Another 19% of the difference was due to difficulty locating an abortion provider. More than half (58%) the women were already in the second trimester by the time they obtained a pregnancy test.

All subjects were asked to identify from a list of 21 factors which ones, if any, had caused delay in obtaining an abortion and which of these had caused the most delay (Table 3). On average, first-trimester subjects reported that two factors had delayed their abortions whereas those in the second trimester reported more than 3 delaying factors ($P < .001$). One third (36%) of first-trimester subjects and 14% of second-trimester subjects reported that nothing had slowed them down ($P < .001$). Comparing broad categories of reasons for abortion delay, women with second-trimester abortions reported more logistical delays (63%), such as difficulty locating a provider, initially being referred elsewhere, or difficulty arranging transportation, compared with 30% in the first-trimester group ($P < .001$). An initial referral elsewhere was the single most frequently reported delay-causing factor by second-trimester patients (47%). Second-trimester patients were also more likely to be delayed because they did not suspect they were pregnant (34% versus 20%, $P < .001$). Emotional factors such as fear, depression, uncertainty, and a sense that abortion is "wrong" were cited by 51% in the second trimester and 42% in first trimester ($P = .06$). Similar portions of both groups attributed delay to interpersonal and financial factors overall, although more second-trimester patients reported difficulty obtaining Medi-Cal (7.3% versus 1.6%, $P < .01$).

When asked which single factor caused the greatest delay in getting an abortion, the 3 most common factors cited by both groups were the same: 1) initial referral elsewhere (17% in the second trimester versus 8% in the first trimester, $P = .004$); 2) difficulty deciding (10% versus 7%, $P = .4$), and 3) fear (8% versus 6%, $P = .6$). Overall, logistical factors caused the greatest delay for more second- than first-trimester patients (30% versus 19%, $P = .02$), as did factors associated with not suspecting pregnancy (16% versus 7%, $P = .005$).

Table 1. Baseline Characteristics of Women Seeking Abortion (%)

Characteristic	1st Trimester (n = 191)	2nd Trimester* (n = 207)	P
Age (y)			.8
15-19	25.1	25.6	
20-29	49.7	51.7	
30-46	25.1	22.7	
Race/Ethnicity			< .001
Black	40.8	40.6	
Latina	33.0	18.4	
Non-Latina white	8.4	22.2	
Asian	13.1	9.7	
Other	4.7	8.7	
Foreign born	31.9	10.1	< .001
Residence			< .001
San Francisco (traveled < 1 h)	80.1	53.6	
Bay area (traveled 1-2 h)	16.8	32.4	
Other Northern California (traveled > 2 h)	3.1	14.0	
Household income < \$20,000	40.3	27.5	< .01
Education			< .05
Less than high school	33.7	28.0	
High school diploma	42.1	55.1	
Beyond high school	24.2	16.9	
Insurance			.4
None	15.6	16.1	
State-funded (Medi-Cal)	61.1	54.8	
Health maintenance organization/private	23.4	29.0	
Difficulty obtaining insurance	8.4	10.6	.4
Difficulty obtaining state funding (Medi-Cal)	4.7	13.0	< .01
Difficulty obtaining money for abortion	15.2	20.8	.15
Marital status			.5
Single	61.8	67.6	
Married	11.0	8.7	
Cohabiting	27.2	23.7	
Children	66.0	68.6	.6
Prior abortions	60.2	57.5	.6
Prior second-trimester abortion*	14.7	31.4	< .001
Menstrual characteristics			< .01
Unsure of last menstrual period	23.0	37.2	.2
Irregular periods	19.9	25.1	.8
Did not track periods	15.7	16.4	.5
Thought herself to be infertile	10.0	8.2	.5
Spotting/bleeding during pregnancy	26.7	23.7	.3
Using contraception at time of pregnancy	72.3	67.6	
Condoms	47.1	44.4	
Depot medroxyprogesterone acetate	6.8	5.8	
Oral contraception	11.0	14.0	
Other	13.1	8.2	
Pregnancy symptoms			< .01
Nausea/vomiting	81.2	67.6	< .05
Tiredness	80.6	69.6	< .05
Other pregnancy symptoms	97.9	93.7	
Medical factors			< .05
Regular use of drugs/alcohol	16.2	24.6	.4
Obese or overweight	34.0	30.0	
Logistical factors			< .001
Referred from other clinic(s)	58.1	86.0	< .001
Difficulty finding an abortion provider	25.7	44.9	< .01
Difficulty arranging transportation	11.5	22.2	.5
Difficulty getting time off work	27.8	24.6	
Emotional factors			.6
Difficulty deciding	54.5	57.0	.2
In denial that pregnant	48.2	54.1	.7
Feeling sad or depressed	64.9	66.7	< .05
Afraid to have the abortion	69.6	79.2	.6
Felt abortion was morally wrong	48.7	46.1	< .05
Moderately/very religious	68.1	57.5	
Interpersonal factors			.7
Conflict with partner	15.7	16.9	.1
Conflict with friends and/or family	35.6	27.1	

* Second trimester defined as \geq 13 weeks of gestation.

Table 2. Time for Each Step Among Women Obtaining Abortions in the First and Second Trimesters

Step	Mean Time for This Step (d)			In 2nd Trimester at End of This Step (%)†
	1st Trimester	2nd Trimester	Difference (% of Total Difference)*	
1) Missed period‡ to suspecting pregnancy	6.0	27.7	21.7 (31)	22
2) Suspecting to pregnancy testing	14.7	27.8	13.1 (19)	58
3) Pregnancy testing to deciding to abort	4.6	16.0	11.4 (16)	65
4) Deciding to abort to making 1st call	5.3	11.7	6.4 (9)	71
5) Making first call to calling our clinic	2.8	15.8	13.0 (19)	88
6) Calling our clinic to abortion	9.9	13.6	3.7 (5)	100
Total time: missed period to abortion	35.1	105.1	70.0 (100)	...

* This value is the difference in mean time between the two groups in days. Numbers in parentheses are percent of the total time difference (70.0 days) between the two groups. Sum of individual steps does not add to total time due to missing values for some of the steps. *P* value for first versus second trimester at each step was < .001.

† Of 207 women who had a second-trimester abortion, percentage of those who were in the second trimester by the end of this step.

‡ Time of missed period assumed to be 28 days after last menstrual period.

Table 3. Reasons Cited for Abortion Delay: Women Were Asked Which (If Any) Factors Caused Delay and Which Single Factor Caused the Most Delay

	Factor Cited as a Cause of Delay		Single Factor That Caused Most Delay	
	1st Trimester (n = 191)	2nd Trimester (n = 207)	1st Trimester (n = 191)	2nd Trimester (n = 207)
None	36.1	14.0*	37.2	14.0*
Did not suspect pregnancy	19.9	34.3*	7.3	16.4†
In denial	11.0	21.3†	1.6	7.3†
Bleeding/Spotting thought to be menses	6.8	9.7	3.1	5.8
Using contraception	6.8	8.7	2.6	2.9
Breastfeeding	0.5	0.5	0.0	0.0
Thought herself to be infertile	1.1	2.4	0.0	0.5
Logistical factors	30.4	63.3*	19.4	30.0‡
Difficulty finding an abortion provider	6.8	19.8*	2.1	5.3
Referred to other clinic(s)	12.6	47.3*	7.9	17.4†
Distance from clinic	3.1	8.7‡	1.6	1.9
Difficulty with transportation	3.7	9.7‡	1.1	1.0
Difficulty getting time off from work	8.4	13.0	1.6	1.5
Difficulty with childcare	11.0	10.6	5.2	2.9
Emotional factors	41.9	51.2	25.1	25.6
Difficulty deciding	19.9	30.4‡	7.3	9.7
Something happened to change her mind	7.9	12.6	2.6	2.4
Feeling sad or depressed	21.5	28.0	3.7	3.4
Afraid to have the abortion	26.2	34.8	6.3	7.7
Felt abortion morally wrong	10.5	6.3	5.2	2.4
Financial factors	15.2	20.3	5.8	7.3
Difficulty with state funding (Medi-Cal)	1.6	7.3†	1.1	2.4
Difficulty with insurance	4.7	5.3	1.1	1.9
Difficulty paying for abortion	11.0	11.6	3.7	2.9
Interpersonal factors	16.8	21.7	4.7	6.8
Unsupportive partner	13.6	19.3	4.7	5.8
Unsupportive family/friends	4.7	3.9	0.0	1.0
Total number factors cited (mean ± SD)	2.0 ± 2.5	3.16 ± 2.7		

SD, standard deviation.

Data presented as % or mean ± SD, as indicated.

* *P* < .001.

† *P* < .01.

‡ *P* < .05.



Using multivariable logistic regression, we examined the covariates associated with second-trimester abortion after adjusting for demographic factors (Fig. 1). Factors independently associated with second-trimester abortion were prior second-trimester abortion (odds ratio [OR] 5.9), delay in obtaining Medical (OR 4.4), difficulty locating a provider (OR 4.1), initial referral elsewhere (OR 2.3), and unsure last menstrual period (OR 2.3). Factors associated with decreased likelihood of second-trimester abortion were presence of nausea/vomiting (OR 0.5), prior abortion (OR 0.4), and use of contraception (OR 0.4). Emotional and interpersonal factors were not associated with second-trimester abortion in the multivariable model.

DISCUSSION

Similar to other studies, women who have second-trimester abortions typically discover relatively late

that they are pregnant.^{12,14} In our study, more than half (58%) the patients having second-trimester abortions had already delayed beyond the first trimester by the time they obtained a pregnancy test. Half of the 70-day difference between the average gestational durations in first-trimester and second-trimester abortions was due to later suspicion of pregnancy and administration of a pregnancy test. Earlier studies also found that the most significant delays occurred early in the process, with later suspicion of and testing for pregnancy.^{11,12,14} Second-trimester patients were less certain about their last menstrual periods and had fewer pregnancy symptoms, which if present, may have prompted these women to test sooner. In contrast to previous studies that found oral contraception to be associated with abortion delay,^{9,11} hormonal contraception was actually associated with less delay in our sample.

This initial delay preceded further delays once a

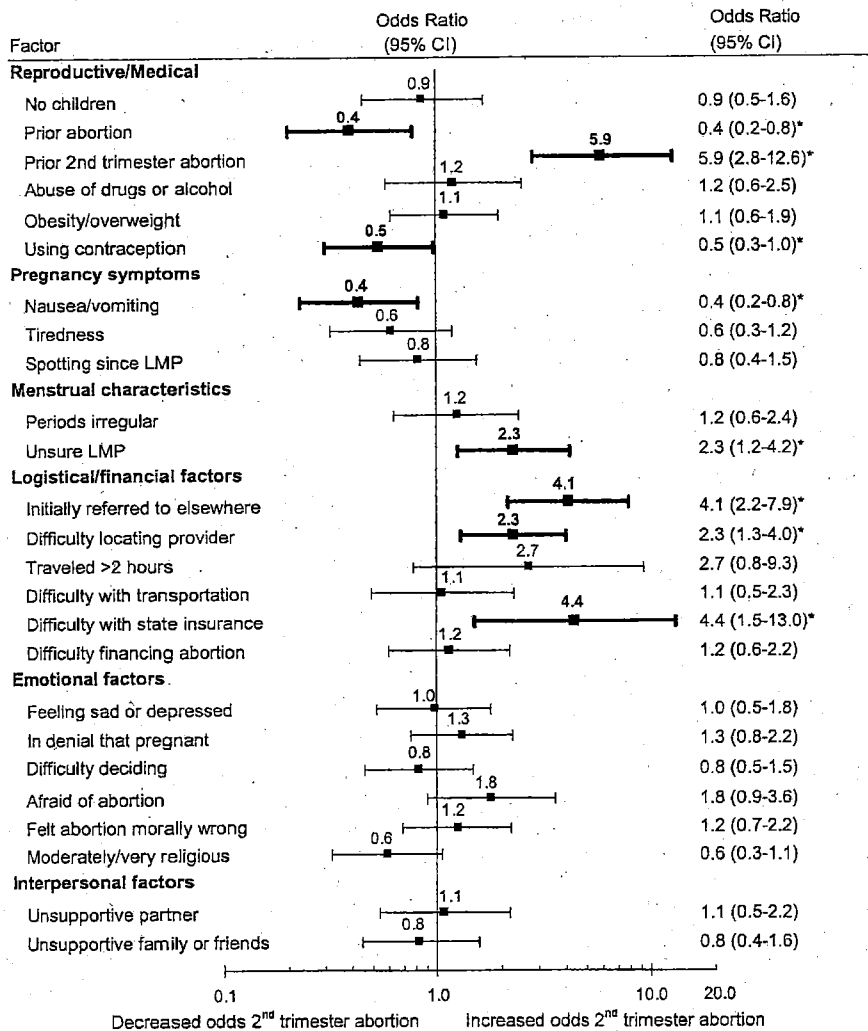


Figure 1. Factors associated with second-trimester abortion by multivariable logistic regression. Model adjusted for all variables shown plus demographic variables (age, ethnicity, income, education, marital status, parity, and insurance). *Bolded lines indicate $P < .05$.

Drey. Factors in Abortion Delay Into 2nd Trimester. *Obstet Gynecol* 2005.

woman decided to obtain an abortion. In fact, women obtaining second-trimester abortions took significantly longer to complete each step of the process. By the time an abortion provider was contacted for the first time, 71% of the second-trimester group was already in the second trimester. Thereafter, an additional 15 days elapsed before contacting our clinic. Delay in this last step was associated with being referred to other clinics before ours. Referrals were associated with a 4-fold increased risk of second-trimester abortion and were the most important delaying factor cited by second-trimester subjects. Delays due to referrals and other trouble locating a provider suggest a link between the scarcity of second-trimester providers and increased delay. Trouble with Medi-Cal was more often cited by second-trimester patients as a delaying factor and was associated with a 4-fold increased risk of second-trimester abortion. These financial barriers may have been more onerous for second-trimester patients, given the increased cost of second- versus first-trimester procedures.⁴ Fewer providers are available for women seeking second-trimester abortions, especially those with public funding. For example, in Northern California, ours is virtually the only clinic to accept patients with Medi-Cal for late second-trimester abortions.

One strength of our study is the extensive list of potential delaying factors that we examined. The audio computer-assisted self-interviewing design allowed us to collect and assess numerous factors that might have caused delay and then to represent them to subjects to assess whether they experienced that factor as having caused delay. For example, subjects were initially asked if they experienced a factor, such as fear. If they said yes, they were later asked if fear was a delaying factor. In this way, we were better able to prompt women to obtain a more complete list of delaying factors. In addition, we asked open-ended questions about delay to ensure there were no major causes of delay that we had omitted from the list.

Due to our clinic's population, we were unable to draw solid conclusions about how delay may be associated with certain demographic factors. In our clinic, women who obtain second-trimester abortions are often referred from a larger geographic region and are therefore more heterogeneous with respect to ethnicity, education and other demographic features. Conversely, women who obtain first-trimester abortions live nearby and are disproportionately Latina or African-American, foreign born and low income (Table 1). Our study also may have been limited by biases associated with observational studies, such as

volunteer bias and recall bias. Despite using audio computer-assisted self-interviewing, subjects may have difficulty disclosing sensitive information. Our study's findings necessarily reflect the circumstances affecting a very particular population (that of a referral clinic located in an ethnically diverse population). To increase external validity, the study ideally should be repeated with a larger, truly random population.

Legal and accessible second-trimester abortion services will remain necessary to provide safe medical care. Our study shows that many women seeking second-trimester abortions simply lacked pregnancy symptoms or were unaware of their last menstrual period and therefore took a long time to recognize and test for pregnancy. Legislative measures that may further reduce the availability of abortion services will likely increase delays by making it even more difficult to find a provider, with delay further increasing medical risks. Several public health measures might decrease the frequency of second-trimester abortion. In addition to improving their access to effective contraceptive methods, patients could be educated about the importance of maintaining menstrual records. Facilitating earlier pregnancy testing by providing women with low-cost home pregnancy tests before they suspect pregnancy may also decrease delays. Health care professionals should be encouraged to provide patients with information about options before they become pregnant, as well as facilitating timely referrals and decision-making after pregnancy has been diagnosed. Despite these measures, because of the individual nature of many of the reasons for delay, it is unlikely that public health measures alone can eliminate or substantially decrease the need for access to elective second-trimester abortion.

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Stop Deceptive Advertising by Fake Clinics

Petition Sponsored by Bacorr (Bay Area Coalition for Our Reproductive Rights) and Change.org

Dear San Francisco City Supervisor,

I am outraged at the false advertising and manipulative tactics used by fake clinics - or Crisis Pregnancy Centers (CPCs) - in San Francisco.

CPCs are deceiving women into visiting these limited service centers only to deny them information or misinform them about abortion and birth control. Women deserve accurate, comprehensive medical care from a knowledgeable, honest professional.

According to a Congressional study, 87% of these fake clinics provide inaccurate and misleading information by claiming that abortion increases the risk of breast cancer, infertility, drug addiction and mental illnesses - including suicide.

Truth-in-advertising bills have been passed in Baltimore, MD and Austin, TX, requiring limited service centers to post signs stating they do not offer birth control information, provide abortions or referrals.

Supervisor Malia Cohen has introduced the Pregnancy Information Disclosure and Protection Ordinance that requires limited service centers to accurately say what services they provide. This bill protects women from false advertising and potential delays in receiving essential medical care.

This measure is about consumer protection and truthful advertising. I ask for your public support and vote for this necessary bill.

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Bradley Buck	San Francisco	CA	94102 USA
Erik Schneider	San Francisco	CA	94110 USA
William Doherty	San Francisco	CA	94110 USA
Elisabeth Clobucker	San Francisco	CA	94133 USA
Kelly Lloyd	San Francisco	CA	94109 USA
Maria Cora	San Francisco	CA	94132 USA
Carl Jech	San Francisco	CA	94131 USA
Kristen Lee	San Francisco	CA	94117 USA
jazzie collins	san francisco	CA	94103 USA
Robert Hyman	San Francisco	CA	94131 USA
Rick Kitagawa	San Francisco	CA	94115 USA
Ryan Mattson	San Francisco	CA	94118 USA
Cynthia Armour	San Francisco	CA	94111 USA
S Steuer	San Francisco	CA	94110-5845 USA
Basil Shelton	San Francisco	CA	94131-2006 USA
Steven Hiatt	San Francisco	CA	94121 USA
Dennis Wininger	San Francisco	CA	94117 USA
Peter Menchini	San Francisco	CA	94114 USA
Nadine May	San Francisco	CA	94118 USA
Mark Sulzman	San Francisco	CA	94110 USA
Carolyn Kernberger	San Francisco	CA	94131 USA
Alex Dingle	San Francisco	CA	94112 USA
dorit grunberger	san francisco	CA	94112 USA
Kathryn Ryan	San Francisco	CA	94103 USA
Eleanor Rosenthal	San Francisco	CA	94115 USA

Paul Schreiber	San Francisco	CA	94107 USA
Maria Arabolos	San Francisco	CA 94r14	USA
Coral Brent	San Francisco	CA	94117 USA
Anne Randolph	San Francisco	CA	94117-3603 USA
Sister Bernie Galvin	San Francisco	CA	94112 USA
James Ferrigno	San Francisco	CA	94112 USA
Beth Gregory	San Francisco	CA	94122 USA
Joan Breiding	San Francisco	CA	94117 USA
Robert Mansfield	San Francisco	CA	94107 USA
Steve Vender	San Francisco	CA	94112 USA
Douglas Estes	San Francisco	CA	94118 USA
Maya Kevin	San Francisco	CA	94109 USA
morgan reed	san francisco	CA	94114 USA
Gay Chung	San Francisco	CA	94117 USA
Carlos Rodriguez	San Francisco	CA	94115 USA
Thomas Ehlenfeldt	San Francisco	CA	94109 USA
Heather Little	San Francisco	CA	94109 USA
tehmina khan	san francisco	CA	94110 USA
Francesca Rosa	San Francisco	CA	94103 USA
Helen Hui	San Francisco	CA	94104 USA
Leslie Veen	San Francisco	CA	94117 USA
Susie Coliver	San Francisco	CA	94103 USA
valarie elise stengle	san francisco	CA	94127 USA
Ananda Destefano	San Francisco	CA	94122 USA
Herschell Larrick	San Francisco	CA	94114 USA
Shruti Swamy	san francisco	CA	94110 USA
Jorge Castillo	San Francisco	CA	94109 USA
Jeff Pena	San Francisco	CA	94127 USA
Gregory Coyle	San Francisco	CA	94114 USA
james prichason	san francisco	CA	94117 USA
Stephanie Andrews	San Francisco	CA	94102 USA
Catherine Rauschuber	San Francisco	CA	94102 USA
Cary Friedman	San francisco	CA	94114 USA
Michele Bouvier	San Francisco	CA	94121 USA
Elin Horwedel	San Francisco	CA	94118 USA
Stacey Mangni	San Francisco	CA	94121 USA
Brad Vanderbilt	San Francisco	CA	94110 USA
Catherine Fox	San Francisco	CA	94118 USA
William Fobert	San Francisco	CA	94131 USA
Francisco Hulse	San Francisco	CA	94110 USA
Kelsey McLaughlin	San Francisco	CA	94118 USA
Lisa San Gabriel	San Francisco	CA	94122 USA
Jason Villalobos	San Francisco	CA	94114 USA
Jack Mou	San Francisco	CA	94131 USA
shirin ardakani	san francisco	CA	94117 USA
Rosie Hanna	San Francisco	CA	94114 USA
Sean Coady	San Francisco	CA	94131 USA

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Ellen Curry	San Francisco	CA	94117 USA
maria forde	san francisco	CA	94110 USA
Debra Goldberg	San Francisco	CA	94109 USA
Jeff Kline	San Francisco	CA	94130 USA
jacqueline bolles	San Francisco	CA	94116 USA
Francis Kintz	San Francisco	CA	94103 USA
Daren Garshelis	San Francisco	CA	94114 USA
Gary Boren	San Francisco	CA	94110 USA
Bryce Neuman	San Francisco	CA	94117 USA
Sharon Camhi	San Francisco	CA	94121 USA
Rebecca Wetherbee	San Francisco	CA	94110 USA
Jennifer Kisselstein	San Francisco	CA	94109 USA
Indra Lowenstein	San Francisco	CA	94114 USA
MJ Pramik	San Francisco	CA	94115 USA
shawn phillips	san francisco	CA	94131 USA
PHILIP STOVER	SAN FRANCISCO	CA	94114 USA
Matthew Siegel	San Francisco	CA	94114 USA
Christy Rodgers	San Francisco	CA	94117 USA
Anne Ryan	San Francisco	CA	94121 USA
PINKY Hurd	San Francisco	CA	94117-2909 USA
Roger Levin	San Francisco	CA	94110 USA
Maggie Kuo	San Francisco	CA	94115 USA
Andrea Pereira	San Francisco	CA	94117 USA
Drew Stevens	San Francisco	CA	94103 USA
Todd Snyder	San Francisco	CA	94115 USA
Anna Bonderenko	SAn Francisco	CA	94110 USA
Rebecca Johnson	San Francisco	CA	94122 USA
Ari Gluck	San Francisco	CA	94110 USA
Kay Weidig	San Francisco	CA	94108 USA
Ernest Ely	San Francisco	CA	94115 USA
Connie Combs	San Francisco	CA	94109 USA
ruby rieke	San Francisco	CA	94110 USA
Eliot Miranda	San Francisco	CA	94110 USA
Ken Schneider	San Francisco	CA	94118 USA
Andrea Wachter	San Francisco	CA	94117 USA
Claudia Jimenez	San Francisco	CA	94122 USA
Luis Pine	San Francisco	CA	94122 USA
Ellen Cohan	San Francisco	CA	94117 USA
Victoria Hibbard	San Francisco	CA	94110 USA
Marina Musielak	San Francisco	CA	94110 USA
Melissa Ambrose	San Francisco	CA	94110 USA
Ray Staar	San Francisco	CA	94109 USA
A. Alberto Abello	San Francisco	CA	94115 USA
Maya T	San Francisco	CA	94109 USA
Jane Jue	San Francisco	CA	94587 USA
ROBERT MORGAN	SAN FRANCISCO	CA	94114-3131 USA
Alyssa Linares	San Francisco	CA	94121 USA

Paul Manangan	San Francisco	CA	94121 USA
Brooke Hollister	San Francisco	CA	94115 USA
Alexander King	San Francisco	CA	94114 USA
Patricia Taber	san francisco	CA	94114 USA
James Muszalski	San Francisco	CA	94115-3118 USA
Kelly Crumrin	San Francisco	CA	94114 USA
Chiara Ogan	San Francisco	CA	94122 USA
Paul Platt	San Francisco	CA	94112 USA
Lisa Wice	San Francisco	CA	94115 USA
Roberto Vargas, MPH	San Francisco	CA	94124 USA
John Krieter	San Francisco	CA	94117-3325 USA
Jeffrey Seegers	San Francisco	CA	94117 USA
Jade Kiran	San Francisco	CA	94121 USA
fred rinne	san francisco	CA	94112 USA
larisa pedroncelli	san francisco	CA	94103 USA
Adrienne Fong	San Francisco	CA	94115 USA
Edna Cao	San Francisco	CA	94131 USA
Abby Caplin	San Francisco	CA	94107 USA
seth katzman	San Francisco	CA	94103 USA
Randall Leeds	San Francisco	CA	94110 USA
uda olabarria walker	San Francisco	CA	94110 USA
Megan Taylor	San Francisco	CA	94131 USA
Tibet Sprague	San Francisco	CA	94117 USA
Whitney Ivie	San Francisco	CA	94109 USA
Kyle McCarthy	San Francisco	CA	94118 USA
Deanne Myers	San francisco	CA	94122 USA
Greer Hauptman	San Francisco	CA	94110 USA
Joseph Holmes	San Francisco	CA	94115 USA
Dorothy L. Davieas	San Francisco	CA	94114 USA
James Collins	San Francisco	CA	94131 USA
Yvonne Chang	San Francisco	CA	94124 USA
Rachel Wirth	San Francisco	CA	94118 USA
Martin Horwitz	San Francisco	CA	94122 USA
ian griffith	San Francisco	CA	94115 USA
Brian Kuester	San Francisco	CA	94117 USA
Eva Fromm	San Francisco	CA	94103 USA
Joshua Gray	San Francisco	CA	94131 USA
john burke	san francisco	CA	94127 USA
lina ariana	San Francisco	CA	94117 USA
Julia Kite	San Francisco	CA	decline USA
Marty Roberts	San Francisco	CA	94110 USA
Jason Marmor	San Francisco	CA	94115 USA
Susan Champion	San Francisco	CA	94118 USA
Roland fParis	San Francisco	CA	94117 USA
Karl Keener	San Francisco	CA	94109 USA
Brian Rogers	San Francisco	CA	94118 USA
Linda Howard	San Francisco	CA	94117 USA

Elfrieda Shukert	San Francisco	CA	94127 USA
JAMES SHOWALTER	SAN FRANCISCO	CA	94127 USA
Richard Ditzler	San Francisco	CA	94127 USA
Teresa Scherzer	San Francisco	CA	94110 USA
deborah garfinkle	san francisco	CA	94115 USA
Larry Lipkind, DDS	San Francisco	CA	94133 USA
Lynne Eggers	San Francisco	CA	94110 USA
Shahzad Moez	San Francisco	CA	94109 USA
Soon Shil Cho	San Francisco	CA	94132 USA
Deborah Kwan	San Francisco	CA	94112 USA
Akinyele Sadiq	San Francisco	CA	94124 USA
Michael Wallin	San Francisco	CA	94114 USA
Krystle Chandler	San Francisco	CA	92405 USA
Samuel Roland	San Francisco	CA	94131 USA
Timothy Gemmill	San Francisco	CA	94109 USA
Cristal G	San francisco	CA	94122 USA
Kelsi Boyle	San Francisco	CA	94103 USA
Matthew Janes	San Francisco	CA	94107 USA
Venus Wu	San Francisco	CA	94114 USA
Lynn Guest	San Francisco	CA	94108 USA
James Lovette-Black	San Francisco	CA	94114 USA
Griffin Fariello	San Francisco	CA	94123 USA
Liane Collins	San Francisco	CA	94114 USA
Lynne Howe	San Francisco	CA	94109-5350 USA
Rebecca Hartog	San Francisco	CA	94118 USA
Margaret Tedesco	San Francisco	CA	94110 USA
marcus perry	san francisco	CA	94117 USA
Nancy deutsch	san Francisco	CA	94110 USA
Mitchel McAllister	san francisco	CA	94117 USA
Martin Bigos	San Francisco	CA	94131 USA
tei gundolfi	san francisco	CA	94109 USA
Jeffrey Lilly	San Francisco	CA	94131 USA
Krist Kennedy	San Francisco	CA	94131 USA
Michael Moss	San Francisco	CA	94121 USA
Duncan Dow	San Francisco	CA	94121 USA
Timothy Quinn	San Francisco	CA	94134 USA
Donald Clark	San Francisco	CA	94114 USA
Heather Lewis	San Francisco	CA	94127 USA
Windy Borman	San Francisco	CA	94142 USA
Amanda Maystead	San Francisco	CA	94107-3245 USA
Michele Baer	San Francisco	CA	94110 USA
Edward Colbeth	SAN FRANCISCO	CA	94110 USA
Christopher Decker	San Francisco	CA	94118 USA
Rosamaria Martinez	San Francisco	CA	94105 USA
Deborah Holmes	San Francisco	CA	94107 USA
Paoli Lacy	San Francisco	CA	94134 USA
Sally Bentz	san francisco	CA	94102 USA

Alex Fraser	San Francisco	CA	94109 USA
katherine Roberts	San Francisco	CA	94117 USA
BeLinda Nichols	San Francisco	CA	94112 USA
Sandra Miller	San Francisco	CA	94133 USA
Sasha Meretzky	san francisco	CA	94107 USA
Aurora Meneghello	San Francisco	CA	94121 USA
Ron Kelley	San Francisco	CA	94109 USA
Leslee Cotlow	San Francisco	CA	94110 USA
Emily Nash	San Francisco	CA	94107 USA
Amelia Kaitlyn	San Francisco	CA	94112 USA
Iris Garcia	San Francisco	CA	94117 USA
Lauren Graham	San Francisco	CA	94142-0121 USA
Robin Graham	San Francisco	CA	94121 USA
Devlin Donnelly	San Francisco	CA	94107 USA
Larah Sifuentes-Winter	San Francisco	CA	94131 USA
Maggie Galvin	San Francisco	CA	94121 USA
Kirk Prine	San Francisco	CA	94115 USA
Jose Ricardo Bondoc	San Francisco	CA	94132 USA
Revel Paul	San Francisco	CA	94116 USA
Thomas Koester	San Francisco	CA	94122 USA
Emanuel Schongut	San Francisco	CA	94115 USA
oda john	san francisco	CA	94115 USA
Christopher Barnett	San Francisco	CA	94134 USA
karleen eberle	san francisco	CA	94122 USA
Jon Starbuck	San Francisco	CA	94110-4033 USA
Jo Vee	San Francisco	CA	94103 USA
Natalya DeRobertis-Theye	San Francisco	CA	94109 USA
Amy Vlacich	San Francisco	CA	94110 USA
Timothy Dobbins	San Francisco	CA	94117 USA
Conard Mondfrans	San Francisco	CA	94114 USA
Jennifer Shaw	San Francisco	CA	94115 USA
Harriet Ingram	San Francisco	CA	94131-1800 USA
Rebecca Marshall	San Francisco	CA	94110 USA
Matthew Lindner	San Francisco	CA	94107 USA
robyn Greenberg	San Francisco	CA	94121 USA
Claire Fry	San Francisco	CA	94117 USA
Burton Cazden	San Francisco	CA	94112 USA
sarah mehl	san francisco	CA	94110 USA
Kenwyn Derby	San Francisco	CA	94110 USA
Bethany Decof	San Francisco	CA	94121 USA
Dina Wilson	San Francisco	CA	94114 USA
Susie Barr-Wilson	San Francisco	CA	94132 USA
Samantha Hennessey	San Francisco	CA	94110 USA
Rick St. John	San Francisco	CA	94109 USA
Larry Bittner	San Francisco	CA	94118 USA
Jennifer Friedenbach	San Francisco	CA	94102 USA
Charles Lyons	San Francisco	CA	94110 USA

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Freddi Rogers	San Francisco	CA	94110 USA
Carolyn Shuman	San Francisco	CA	94127 USA
justin Heath	San francisco	CA	94102 USA
Anna Kay	San Francisco	CA	94122 USA
Caitanya Min	San Francisco	CA	94110 USA
James Domenico	San Francisco	CA	94121 USA
Marianne Yusavage	San Francisco	CA	94118 USA
Karl Knapper	San Francisco	CA	94109 USA
Anthony Loncich	San Francisco	CA	94114 USA
Tanya Watkins	San Francisco	CA	94110 USA
Pamela Robbins	San Francisco	CA	94131 USA
Peri Beller	san francisco	CA	94103 USA
David Ginsburg	San Francisco	CA	94102 USA
Ron Avila	San Francisco	CA	94110-1245 USA
Harold Isbell	San Francisco	CA	94117 USA
cameron hendrick	san francisco	CA	94102 USA
William Mays	San Francisco	CA	94114 USA
Gail Henigman	San Francisco	CA	94117 USA
Catherine Orland	San Francisco	CA	94110 USA
Robert holgate	San Francisco	CA	94117 USA
John Hope	San Francisco	CA	94114 USA
Cheryl Czekala	San Francisco	CA	94102 USA
Victor Vuyas	San Francisco	CA	94109 USA
gail reddie	san francisco	CA	94117 USA
Kevin Coleman	San Francisco	CA	94115 USA
Meghan Nesbit	San Francisco	CA	94110 USA
Michael Lamperd	San Francisco	CA	94122-1063 USA
Stewart Gooderman	San Francisco	CA	94102 USA
Sue Walden	San Francisco	CA	94109 USA
maria morgan	san francisco	CA	94122 USA
Claudia Schumann	San Francisco	CA	94122 USA
Andrew Gentile	San Francisco	CA	94110-1676 USA
Samali Lubega	San Francisco	CA	94110 USA
Margot Dietzer	San Francisco	CA	94121 USA
Steve Crow	San Francisco	CA	94110 USA
heather nobbe	san francisco	CA	94102 USA
Suzanne Jonson	San Francisco	CA	94114 USA
Chris Marco	San Francisco	CA	94118 USA
Richard Broussard	San Francisco	CA	94110 USA
Annabelle Johnson	San Francisco	CA	94103 USA
Mike Gonzales	San Francisco	CA	94103 USA
debra netkin	san francisco	CA	94110 USA
Joel Comett	San Francisco	CA	94102 USA
Michelle Genest	San Francisco	CA	94118 USA
Gillian Ellenby	San Francisco	CA	94103 USA
Dan Spencer	San Francisco	CA	94110-2259 USA
Jane Jacobs	San Francisco	CA	94122 USA

Joel Chapman	San Francisco	CA	94103 USA
Dan Gomes	San Francisco	CA	94110 USA
Anna Chau	San Francisco	CA	94108 USA
Brian Wiles	San Francisco	CA	94107 USA
mk collingwood	san francisco	CA	94104 USA
John de Forest	San Francisco	CA	94121 USA
gus gomez	San Francisco	CA	94102 USA
Judy Countryman	San Francisco	CA	94122 USA
Birgit Hermann	San Francisco	CA	94117 USA
Caitlin Thomas	San Francisco	CA	94110 USA
Ryan Bunson	San Francisco	CA	94114 USA
Jeffrey Hurwitz	San Francisco	CA	94121 USA
Mike Bloomfield	San Francisco	CA	94118 USA
Mark Bartlett	San Francisco	CA	94110 USA
Joan Hasselgren	San Francisco	CA	94117 USA
Susan Levy	San Francisco	CA	94131 USA
Lauren Steffel	San Francisco	CA	94110 USA
Lesli Powers	san francisco	CA	94110 USA
Jennifer Montalvo	san francisco	CA	94131 USA
Andrea Parker	San Francisco	CA	94110 USA
Nicole Hai	San Francisco	CA	94109 USA
Michelle Roderick	San Francisco	CA	94134 USA
evan white	san francisco	CA	94108 USA
Cynthia Navarro	San Francisco	CA	94112 USA
Elena Pena	San Francisco	CA	94131 USA
Giselle Gibbons	San Francisco	CA	94112 USA
Jackie Pomies	San Francisco	CA	94122-1334 USA
Nina Milosevic	San Francisco	CA	94114 USA
Ian Strong	San Francisco	CA	94133 USA
Harper Smith	San Francisco	CA	94123-1410 USA
Gwen McEvoy	San Francisco	CA	94131 USA
kaylah sterling	San Francisco	CA	94107 USA
Shannon Ordaz	San Francisco	CA	94103 USA
Paula Katz	San Francisco	CA	94116 USA
sandy oxley	san francisco	CA	94109 USA
Jessica Lobl	San Francisco	CA	94131 USA
Allen Foster	San Francisco	CA	94117 USA
Rachele Huennekens	San Francisco	CA	94115 USA
Brennan Taylor	San Francisco	CA	94114 USA
Corinne Sue Wick	san francisco	CA	94114 USA
Pei-Ru Ko	San Francisco	CA	94105 USA
susan witka	san francisco	CA	94121 USA
Linda Blackstone1@gmail.com	San Francisco	CA	94117 USA
Deirdre Elmansoumi	San Francisco	CA	94134 USA
Claudia Zeiler	San Francisco	CA	94122 USA
Carol Hansen	San Francisco	CA	94131 USA
Lisa Beyer	San Francisco	CA	94117 USA

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Brooke Finley	San Francisco	CA	94122 USA
Karen Ulring	San Francisco	CA	94117 USA
Pauline Kahney	San Francisco	CA	94102 USA
Stephen Suzman	San Francisco	CA	94114 USA
Vianna Newman	San Francisco	CA	94127 USA
Mark Hall	San Francisco	CA	94118 USA
Tamsen Merrill	San Francisco	CA	94110 USA
Susan Wachob	San Francisco	CA	94114 USA
Claudia Lehan	San Francisco	CA	94110 USA
Lawrence Bernard	San Francisco	CA	94122-2066 USA
David Alt	San Francisco	CA	94115 USA
Judy Li	San Francisco	CA	94112 USA
Brigitte Davila	San Francisco	CA	94112 USA
Van Rookhuyzen	San Francisco	CA	94102 USA
Davina Chu	San Francisco	CA	94107 USA
Brian Skaggs	San Francisco	CA	94114-1546 USA
Conway Anderson	San Francisco	CA	94117 USA
Pat Tibbs	San Francisco	CA	94114 USA
Margaret Laird	San Francisco	CA	94117 USA
Esperanza Martinez	San Francisco	CA	94134 USA
Roberto Romo	San Francisco	CA	94121 USA
Marian Zaouk	San Francisco	CA	94134 USA
Jill Mistretta	San Francisco	CA	94117 USA
Juliette Delventhal	San Francisco	CA	94114 USA
Windy Holzbach	San Francisco	CA	94142 USA
Ian Cannon	San Francisco	CA	94132-1867 USA
Richard Nagy	San Francisco	CA	94124 USA
Wayne Johnson	San Francisco	CA	94114-2417 USA
Robert Lieber	San Francisco	CA	94110 USA
Michael Alexander	San Francisco	CA	94110 USA
Kirk Bonin	San Francisco	CA	94102 USA
Barrett Miller	San Francisco	CA	94115 USA
Michael Scalise	San Francisco	CA	94107 USA
mila salazar	San Francisco	CA	94117 USA
Charmian St. John	San Francisco	CA	94131 USA
Joelle Murphy	San Francisco	CA	94110 USA
Diane Rigda	San Francisco	CA	94109 USA
Martha and George Robin	San Francisco	CA	94109 USA
Kimberly Cash	San Francisco	CA	94118 USA
keith main	San Francisco	CA	94110 USA
Eleanor Gomez	San Francisco	CA	94116 USA
Mark Farrier	San Francisco	CA	94110 USA
Margaret Youngs	San Francisco	CA	94108 USA
dan lamont	San Francisco	CA	94115 USA
candace bieneman	San Francisco	CA	94123 USA
Damien Shulock	San Francisco	CA	94107 USA
Randy Oldman	San Francisco	CA	94161 USA

Lawrence Maxwell	San Francisco	CA	94109-6574	USA
Irene Smith	San Francisco	CA	94134	USA
J Thomas	San Francisco	CA	94110	USA
Helmut Kayan	San Francisco	CA	94102	USA
terry thompson	san francisco	CA	94131	USA
Stephanie Rodarte	San Francisco	CA	94129	USA
Tanya Milosevich	San Francisco	CA	94122	USA
anna williams	san francisco	CA	94131	USA
Jill Blevins	San Francisco	CA	94121	USA
Anthony Cimo	san francisco	CA	94118	USA
Amanda Herman	San Francisco	CA	94114	USA
Kristina Bennett	San Francisco	CA	94109	USA
Suzanne Ristagno	San Francisco	CA	94103	USA
James DiCarlo	San Francisco	CA	94146	USA
Melissa Mikesell	San Francisco	CA	94612	USA
Richard Crane	San Francisco	CA	94109	USA
ROBERT SHULTZ	San Francisco	CA	94114	USA
Mirka Morales	San Francisco	CA	94103	USA
Tom Cardellino	San Francisco	CA	94109	USA
George Matthews	San Francisco	CA	94102	USA
Gilbert Lopez	San Francisco	CA	94110	USA
Amanda Maystead	San Francisco	CA	94107	USA
Papagena Robbins	San Francisco	CA	94131	USA
michael mascioli	san francisco	CA	94114	USA
Phillip Ozaki	San Francisco	CA	94117	USA
Samantha Bell	san francisco	CA	94110	USA
Carol Chandler	San Francisco	CA	94114-3051	USA
Abigail Lawton	San Francisco	CA	94110	USA
melinda masi	san francisco	CA	94122	USA
Linda Weiner	San Francisco	CA	94110	USA
stacey dodd	san francisco	CA	94110	USA
Francis Collins	San Francisco	CA	94102	USA
Elena Rosenberg-Carlson	San Francisco	CA	94110	USA
fran collier	san francisco	CA	94133	USA
Joshua Shrader	San Francisco	CA	94132	USA
Esther Yassi	San Francisco	CA	94111	USA
sheila ganz	san francisco	CA	94122	USA
Ross Wilming	San Francisco	CA	94117	USA
Cory Moll	San Francisco	CA	94124	USA
Lorretta Marcel	San Francisco	CA	94131	USA
jewels stratton	san francisco	CA	94133	USA
Ming Choi	San Francisco	CA	94118	USA
Elisa Gonzalez	San Francisco	CA	94116	USA
Melinda McMurray	SAN FRANCISCO	CA	94131	USA
Cody Mitcheltree	San Francisco	CA	94102	USA
Barbara Wein	San Francisco	CA	94131	USA
Muy Muy Yam	San Francisco	CA	94121	USA

Ursula Escobar	San Francisco	CA	94103 USA
Terri Merritts	San Francisco	CA	94114 USA
Dorian Rhodes	San Francisco	CA	94114 USA
Anne morton	san Francisco	CA	94115 USA
Camille Matson	San Francisco	CA	94118 USA
Will Beatty	San Francisco	CA	94118 USA
Petrina Cooper	San Francisco	CA	94103 USA
John Bigelow	San Francisco	CA	94114 USA
Susan Schneider	San Francisco	CA	94131 USA
Linda Hegenbarth	San Francisco	CA	94115 USA
Judith Ostapik	San Francisco	CA	94127 USA
Heather Barrett	San Francisco	CA	94118 USA
Sarazeta Ragazzi	San Francisco	CA	94110 USA
Ellen Eoff	San Francisco	CA	94118 USA
William Munce	San Francisco	CA	94102 USA
Thara Jinadasa	San Francisco	CA	94108 USA
Katherine Leathers	San Francisco	CA	94121 USA
yvette kay	san francisco	CA	94110 USA
Deborah Brooks	San Francisco	CA	94110 USA
Jessica Donohue	San Francisco	CA	94110 USA
Robin Gulling	San Francisco	CA	94102 USA
Elizabeth Leaf	San Francisco	CA	94115-2048 USA
Blakeley Kim	San Francisco	CA	94122 USA
Erica Warren	San Francisco	CA	94121 USA
Nancy Evans	San Francisco	CA	94131 USA
Rem Melton	San Francisco	CA	94110 USA
Scarlett Caldwell	San Francisco	CA	94118 USA
Joann Johnson	San Francisco	CA	94110 USA
Linda Ray	San Francisco	CA	94110 USA
desirae foster	san francisco	CA	94103 USA
Barbara Mrozek	San Francisco	CA	94109 USA
Joe Zamaria	San Francisco	CA	94117 USA
Martha Stabler	San Francisco	CA	94122 USA
Larry Schlessinger	San Francisco	CA	94118 USA
Jennifer Willis	San Francisco	CA	94117 USA
Beana Wiltmen	San Francisco	CA	95110 USA
Bobbie Ogletree	San Francisco	CA	94114 USA
Robin Hansen	San Francisco	CA	94128 USA
David King	San Francisco	CA	94107 USA
ximena rendon	san francisco	CA	94105 USA
michael koch	san francisco	CA	94110 USA
Marianne Faulkner	San Francisco	CA	94133 USA
Magaly Fernandez	San Francisco	CA	94124 USA
Loren O'Hara	San Francisco	CA	94117 USA
Michelle Lesowski	San Francisco	CA	94102 USA
Vinola Stallings	San Francisco	CA	94103 USA
Gina Kim	San Francisco	CA	94127 USA

David Johnson	San Francisco	CA	94115 USA
Robert Arndt	San Francisco	CA	94121 USA
Rebecca Shuman	San Francisco	CA	94127 USA
Lindasusan Ulrich	San Francisco	CA	94112 USA
Kalle Pieper	San Francisco	CA	94102 USA
Ronnel Corre	San Francisco	CA	94132 USA
Rosie Gozali	san Francisco	CA	94117 USA
petr Tittelbach	san Francisco	CA	94117 USA
R. Zierikzee	San Francisco	CA	94118 USA
Megan Adams	San Francisco	CA	94122-3045 USA
Patrick Stelmach	San Francisco	CA	4122 USA
Teresa Guest	San Francisco	CA	94109 USA
antoine lagarde	San Francisco	CA	94103 USA
Sean Houlihan	san francisco	CA	94112 USA
ANN AUBIN	San Francisco	CA	94133 USA
Anna Maria Galbraith	San Francisco	CA	94110 USA
Ciara segura	San Francisco	CA	94110 USA
Karen Heimann	San Francisco	CA	94109 USA
Kathryn Albergate	San Francisco	CA	94107 USA
Helen Pelzman	San Francisco	CA	94123 USA
Katherine McCall	San Francisco	CA	94110 USA
Debra Wang	San Francisco	CA	94117 USA
Sandy Rechtschaffen	San Francisco	CA	94118 USA
Signy Toquinto	San Francisco	CA	94110 USA
Lacy Coniglio	san francisco	CA	94116 USA
Dave Kong	San Francisco	CA	94109 USA
holly millar	san francisco	CA	94109 USA
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Risk Factors for Legal Induced Abortion-Related Mortality in the United States

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OBJECTIVE: To assess risk factors for legal induced abortion-related deaths.

METHODS: This is a descriptive epidemiologic study of women dying of complications of induced abortions. Numerator data are from the Abortion Mortality Surveillance System. Denominator data are from the Abortion Surveillance System, which monitors the number and characteristics of women who have legal induced abortions in the United States. Risk factors examined include age of the woman, gestational length of pregnancy at the time of termination, race, and procedure. Main outcome measures include crude, adjusted, and risk factor-specific mortality rates.

RESULTS: During 1988-1997, the overall death rate for women obtaining legally induced abortions was 0.7 per 100,000 legal induced abortions. The risk of death increased exponentially by 38% for each additional week of gestation. Compared with women whose abortions were performed at or before 8 weeks of gestation, women whose abortions were performed in the second trimester were significantly more likely to die of abortion-related causes. The relative risk (unadjusted) of abortion-related mortality was 14.7 at 13-15 weeks of gestation (95% confidence interval [CI] 6.2, 34.7), 29.5 at 16-20 weeks (95% CI 12.9, 67.4), and 76.6 at or after 21 weeks (95% CI 32.5, 180.8). Up

to 87% of deaths in women who chose to terminate their pregnancies after 8 weeks of gestation may have been avoidable if these women had accessed abortion services before 8 weeks of gestation.

CONCLUSION: Although primary prevention of unintended pregnancy is optimal, among women who choose to terminate their pregnancies, increased access to surgical and nonsurgical abortion services may increase the proportion of abortions performed at lower-risk, early gestational ages and help further decrease deaths. (Obstet Gynecol 2004; 103:729-37. © 2004 by The American College of Obstetricians and Gynecologists.)

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Legal induced abortion is one of the most frequently performed surgical procedures in the United States. With approximately 1.2 million legal induced abortions performed in 1997,¹ minimizing risk for women who choose to terminate their pregnancies is of clear public health importance.

Pregnancy-related deaths are deaths that occur among women within 1 year of pregnancy from complications of the pregnancy or delivery; deaths associated with complications of induced abortion² (ie, abortion-related deaths) also are considered pregnancy related. Previous reports on abortion-related mortality for 1972-1987 have informed abortion policy and practice and improved safety for women. In addition, data on the lower risk of death with certain procedures and anesthetics have guided practice, substantially reducing the number of abortions conducted with methods found to be associated with increased risk.³⁻⁸ However, the medical practice and provision of abortion services continues to change. For example, since the mid-1990s, medical (ie, nonsurgical) regimens using abortifacients within the first 7 weeks of pregnancy have been used to terminate pregnancies.⁹ This report provides information on risk factors for abortion-related deaths among women who had abortions in recent years that will help inform and

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update policymakers and practitioners about abortion-related maternal mortality.

MATERIALS AND METHODS

Data for these analyses were derived from 2 data sets from the Centers for Disease Control and Prevention (CDC). Numerator data were obtained from the Abortion Mortality Surveillance System, now a part of the Pregnancy Mortality Surveillance System, which attempts to identify all deaths in the United States caused by pregnancy, including those ending in induced abortion. For abortion mortality rate denominators, we used data from CDC's Induced Abortion Surveillance System, compiled since 1969. From 1973 through 1997, data were received from state health departments or estimated for 52 reporting areas, including 50 states, the District of Columbia, and New York City. Legal induced abortion was defined as "a procedure, performed by a licensed physician or someone acting under the supervision of a licensed physician, that was intended to terminate a suspected or known intrauterine pregnancy and to produce a nonviable fetus at any gestational age." The total number of legal induced abortions was available or estimated from all reporting areas; however, not all of these areas collected information regarding some or all of the characteristics of women who obtained abortions.¹

The Abortion Mortality Surveillance System defines an abortion-related death is a death resulting from 1) a direct complication of an abortion, 2) an indirect complication caused by the chain of events initiated by the abortion, or 3) an aggravation of a preexisting condition by the physiologic or psychologic effects of the abortion, regardless of the amount of time between the abortion and the death.¹⁰ The inclusion of abortion-related deaths in this surveillance system, regardless of the amount of time between the abortion procedure and the death, is unique and differs from the temporal limit for other pregnancy outcomes in the Pregnancy Mortality Surveillance System. Legal induced abortion-related mortality rate is defined as the number of deaths from legal induced abortion per 100,000 legal induced abortions.

Multiple sources are used in the Abortion Mortality Surveillance System to identify potential cases of abortion-related mortality, including national and state vital records, reports from maternal mortality review committees, private citizens, health care providers, medical examiners, the media, and, more recently, a full-text newspaper database. For each suspected case identified, the Abortion Mortality Surveillance System requests death certificates, clinical records, and autopsy reports. Death certificates were obtained for all cases, but complete clinical records were not always available. Two medical

epidemiologists reviewed the available records for each case to determine the cause of death and if it was abortion-related.

Gestational age was defined as the number of completed weeks elapsed from the start of the last menstrual period and was categorized as either 1) 8 weeks or less, 9–10 weeks, 11–12 weeks, 13–15 weeks, 16–20 weeks, and 21 or more weeks or 2) first (12 weeks or less) or second trimester (13 weeks or more). Parity was defined as the number of previous live births and was categorized as 0, 1–2, and 3 or more. When calculating mortality rates specific to parity, gestational age, and marital status, we excluded cases for which the decedent's parity, gestational age, or marital status were unknown, unless specifically noted. Procedures were categorized as curettage, dilatation and evacuation (D&E), instillation, or other. Curettage includes suction or sharp curettage performed at or before 12 weeks of pregnancy. For cases in which the procedure was curettage but the gestational age was unknown, we assumed the procedure occurred at or before 12 weeks of gestation for those analyses that were stratified by trimester of gestation. For those analyses that were performed by weeks of gestation, cases with unknown gestational age were reported separately as unknown gestational age or were excluded. Similarly, when the procedure was unknown and gestational age was recorded as 12 weeks or less, we assumed that curettage was performed. D&E is a combination of suction and sharp curettage performed through a dilated cervix at or after 13 weeks; instillation involves prostaglandin or saline instillation; and "other" associated procedures include hysterectomy, hysterotomy, and use of prostaglandin vaginal suppositories. For the time period of this analysis (1988–1997), approximately 0.10% of legal induced abortions were performed with abortifacients in early pregnancy.¹¹ No deaths associated with them were identified by the Abortion Mortality Surveillance System during the study period.

Causes of abortion-related deaths included direct causes (eg, vaginal and intraabdominal hemorrhage), infection (including endometritis, septicemia, and other infections), emboli (including thrombotic, amniotic fluid, and air emboli), complications of anesthesia, and indirect causes (categorized as "other"), mainly cardiac, and cerebral vascular events. Women were divided into 2 racial categories: 1) white and 2) black or other. Women who were of black or other races (eg, Asian/Pacific Islander, American Indian) were combined into 1 category because of the difficulty in separating races in the denominator before 1990 and because only 2 cases were reported for a nonwhite, nonblack woman during 1988–1997.



The crude (unadjusted) legal induced abortion-related mortality rates were calculated for each year from 1972 through 1997. In addition to calculating the crude mortality rate, we stratified the unadjusted mortality rates by various sociodemographic and medical factors, including the type of procedure; woman's race, age, and parity; and gestational age of the pregnancy that was terminated during 1988–1997, the 10 most recent years of data available from the Abortion Mortality Surveillance System. For all rates, the relative risks (RRs) with 95% confidence intervals (CIs) were calculated by using the Taylor series method in Epi-Info 6.04c.¹²

To understand the effect of differences in gestational age distribution on the RR of death for women of different ages and race, we calculated gestational age-adjusted, race-specific, and maternal age-specific mortality rates. For the race-specific analyses, we directly standardized the mortality rates to the gestational age distributions of white women and for the maternal age-specific rates, we used the gestational age distribution of older women as the standard. In these standardized analyses, deaths for which the gestational age at the time of abortion was unknown were assigned a gestational age in proportion to the gestational age distribution of the deceased women where the gestational age was known. To determine whether the shift toward earlier gestation abortions was primarily responsible for the decrease in abortion mortality over time, we calculated and compared gestational age-specific mortality rates over 3 time periods from 1972 through 1997. Because the risk of death with increasing gestational age does not follow a linear distribution, we fit exponential models to assess the relationship between mortality and increasing gestational age.

The project resulting in this manuscript was reviewed for human subjects issues and determined to be in compliance with CDC's guidelines. The analyses used data from the Pregnancy Mortality Surveillance System and Legal Induced Abortion Surveillance System, both housed in the Division of Reproductive Health at CDC.

RESULTS

During 1972–1997, a total of 337 deaths determined to be causally related to legal induced abortions was identified by the Abortion Mortality Surveillance System for an overall legal induced abortion-related mortality rate of 1.1 deaths per 100,000 legal induced abortions (Table 1). From 1972 through 1997, the annual number of legal induced abortion-related deaths decreased from 24 to 7, and the mortality rate decreased from 4.1 to 0.6. Most of the decline occurred early in this time period, from 1972 through 1976; after the legalization of abortion in Janu-

ary of 1973, the mortality rate fell from 4.1 to 1.1 deaths per 100,000 abortions; a reduction of 73% ($P = .001$). Women in the earlier time period (1972–1979) were 3 times (RR 3.1; 95% CI 2.4, 4.1) more likely to die of complications of an abortion than women in the most recent time period (1988–1997) (Table 2 and Figure 1).

We also calculated the gestational age-specific relative risks of dying comparing the earliest (1972–1979) and most recent (1988–1997) time periods using the most recent time period as the referent group. Although the risk of death declined at all gestational ages, the greatest proportion of the decline occurred at earlier gestational ages. Women who had abortions performed in the earlier time period were significantly more likely to die at each gestational age than women who had abortions in the most recent time period; women receiving abortions during 1972–1979 had RRs of 5 (at or before 8 weeks of gestation), 8.6 (at 9–10 weeks), 6.2 (at 13–15 weeks), and 4.1 (at 16–20 weeks), and 1.9 (at or after 21 weeks). These declines are all statistically significant, with the exception of the women who died of complications of abortion at 21 weeks or more of gestation; although their mortality decreased almost 50%, the decrease was not statistically significant. To examine risk factors among women receiving abortions in the most recent time period, we analyzed deaths that occurred during 1988–1997. Gestational age at the time of abortion was the strongest risk factor for abortion-related mortality (Table 2). The lowest rates were among women who had their abortions in the first trimester of pregnancy, particularly within the first 8 weeks of pregnancy. Women whose abortions were performed in the second trimester (at or after 13 weeks of gestation) had abortion-related mortality rates greater than women whose abortions were performed in the first 8 weeks of pregnancy (RR at 13–15 weeks, 14.7 [95% CI 6.2, 34.7]; RR at 16–20 weeks, 29.5 [95% CI 12.9, 67.4]; RR at or after 21 weeks, 76.6 [95% CI 32.5, 180.8]). If women who had abortions after 8 weeks of gestation had obtained abortions during the first 8 weeks of pregnancy, when risk is lowest, 87% of deaths likely could have been prevented.

In addition, we used the data to model the association between the mortality rate and gestational age (Figure 1). We found that for the most recent time period (1988–1997), the risk of death increased exponentially with increasing gestational age. According to this model, there is a 38% increase in risk of death for each additional week of gestation. This implies that the increase in the risk of death due to delaying the procedure by 1 week is much higher at later gestational ages than at earlier gestational ages. For example, applying this model, if an abortion is performed at 9 weeks rather than at 8 weeks of gestation, the estimated absolute increase in the mortality rate is

Table 1. Legal Induced Abortion-Related Deaths, Legal Induced Abortions, and Abortion Mortality Rates—United States, 1972–1997

Year	Legal induced abortion-related deaths (n)*	Legal induced abortions (n)	Legal induced abortion mortality rate (per 100,000 legal induced abortions)
1972	24	586,760	4.1
1973	25	615,831	4.1
1974	26	763,476	3.4
1975	29	854,853	3.4
1976	11	988,267	1.1
1977	17	1,079,430	1.6
1978	9	1,157,776	0.8
1979	22	1,251,921	1.8
1980	9	1,297,606	0.7
1981	8	1,300,760	0.6
1982	11	1,303,980	0.8
1983	11	1,268,987	0.9
1984	12	1,333,521	0.9
1985	11	1,328,570	0.8
1986	11	1,328,112	0.8
1987	7	1,353,671	0.5
1988	16	1,371,285	1.2
1989	12	1,396,658	0.9
1990	9	1,429,247	0.6
1991	11	1,388,936	0.8
1992	10	1,359,146	0.7
1993	6	1,330,414	0.5
1994	10	1,267,415	0.8
1995	4	1,210,883	0.3
1996	9	1,221,585	0.7
1997	7	1,186,039	0.6
1972–1979	163	7,298,314	2.2
1980–1987	80	10,515,207	0.8
1988–1997	94	13,161,608	0.7
1972–1997	337	30,975,129	1.1

* For some years, the number of deaths and total legal abortions differ from those in previously published reports to reflect additional information obtained by the Centers for Disease Control and Prevention.

0.05 per 100,000 abortions (from 0.13 to 0.18 deaths per 100,000 abortions). However, if an abortion is performed at 18 weeks of gestation instead of at 17 weeks, the estimated absolute increase is 0.91 (from 2.4 to 3.3 per 100,000 abortions). Thus, the estimated increase in the risk of death due to delaying the procedure by 1 week at 17 weeks of gestation is 18 times greater than the estimated increase in the risk of death by delaying the procedure by 1 week at 8 weeks of gestation.

The second most significant risk factor for death overall was race. Women of black and other races were 2.4 times as likely as white women to die of complications of abortion (Table 2). At all gestational ages, women of black and other races had higher case mortality rates than white women. Because women of black and other races tend to have abortions at later gestational ages,^{1,11} we standardized the mortality rates for black women to the gestational age distribution of white women to assess the effect that gestational age may have had on the higher risk of death for women of black and other races. The

ratio of the adjusted mortality rates for women of black and other races compared with white women decreased 20% to 1.9. However, this adjusted rate still differs significantly from the rate for white women. No statistically significant differences were observed between crude mortality rates for women of different age or parity. However, data from the Abortion Surveillance System indicate that women younger than 20 years of age had abortions later in gestation than did women aged 20–29 years, and women aged 30 years or older obtained abortions earlier in pregnancy than women in any other age group.^{1,11} To determine the impact of these differences on age-specific mortality, we standardized the maternal age-specific mortality rates for gestational age using the gestational age distribution of women aged 30 years or older as the standard. If women younger than 20 years of age who terminated their pregnancies had the same gestational age distribution as women aged 30 years or older, mortality among women younger than 20 years of age would decrease by 32%, and mortality among women aged 20–29 years would decrease by 17%.

Table 2. Legal Induced Abortion-Related Deaths, Mortality Rates, and Relative Risks, by Selected Characteristics—United States, 1988–1997

Characteristic	1988–1997		
	Legal induced abortion-related deaths (n)	Mortality rate*	Relative risk (95% confidence interval)
Gestational age (wk)			
First trimester			
≤ 8	8	0.1	Referent
9–10	5	0.2	1.4 (0.5, 4.2)
11–12	6	0.4	3.4 (1.2, 9.7)
Second trimester			
13–15	15	1.7	14.7 (6.2, 34.7)
16–20	19	3.4	29.5 (12.9, 67.4)
≥ 21	15	8.9	76.6 (32.5, 180.8)
Unknown	26	Not applicable	Not applicable
Race			
White	38	0.5	Referent
Black or other	56	1.1	2.4 (1.6, 3.6)
Time period			
1972–1979	163	2.2	3.1 (2.4, 4.0)
1980–1987	80	0.8	1.1 (0.8, 1.4)
1988–1997	94	0.7	Referent
Age (y)			
≤ 19	20	0.7	1.2 (0.6, 2.2)
20–24	29	0.7	1.1 (0.6, 2.0)
25–29	18	0.6	Referent
30–34	16	0.9	1.5 (0.7, 2.9)
≥ 35	10	0.8	1.3 (0.6, 2.9)
Parity			
0	16	0.3	Referent
1–2	27	0.5	1.9 (1.0, 3.5)
≥ 3	7	0.5	2.1 (0.9, 5.2)
Unknown†	42	Not applicable	Not applicable

* Legal induced abortion mortality rate is the number of legal induced abortion-related deaths per 100,000 legal induced abortions.

† Denominators for calculating rates by parity use previous live births from abortion surveillance data; deaths with unknown parity are excluded.

The procedures that can be used to terminate a pregnancy are determined by the gestational age at the time of the procedure. For the years 1988–1997, more than 99% of abortions in the first trimester were performed by curettage. Therefore, we examined the relationship between abortion procedure and mortality in the second trimester. For women in the second trimester, the mortality rates for D&E were 2.5 times lower than those for instillation and other procedures. These differences were not significant; however, our analysis was limited by very small numbers in some categories and the large number of women who could not be included in this analysis because of unknown procedure or unknown gestational age. No deaths associated with early medical abortion procedures using abortifacients were reported during the study period.

Of abortion-related deaths, 85% were attributable to direct causes and 15% to indirect (ie, "other") causes. Of the direct causes, hemorrhage and infection exceeded any other cause. Overall, each were responsible for approximately one fourth of abortion-related deaths,

whereas embolism, anesthetic complications, and other causes were each responsible for about 15% of deaths (Table 3). Cause of death varied by gestational age and procedure type. For example, hemorrhage, a less frequent cause of death at or before 12 weeks of pregnancy, was the most frequent cause of death associated with D&E at 13 weeks or more of gestation.

Among women for whom the interval between the abortion procedure and death was known, 35% of the deaths occurred within 24 hours, and 85% died within 42 days of the procedure, the length of time considered the puerperal period.

DISCUSSION

In the 25 years following the legalization of abortion in 1973 (*Roe v. Wade*, 410 U.S. 113, 1973), the risk of death from legal abortion declined dramatically by 85%, from 4.1 to 0.6, with most of this decline occurring from 1973 through 1976. The number of illegal abortion-related deaths (induced abortions not performed by a licensed



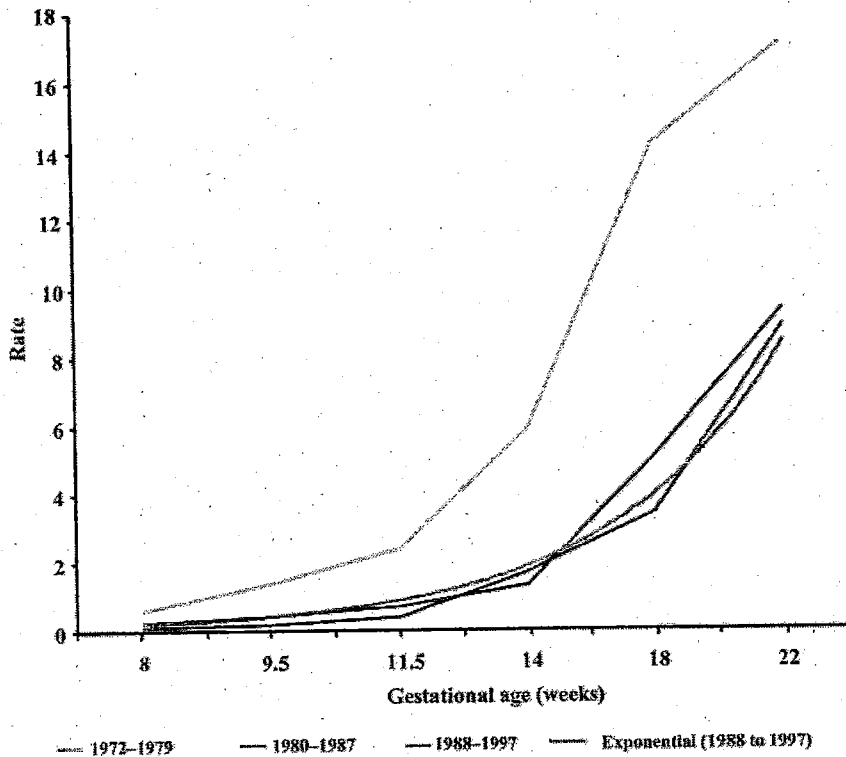


Figure 1. Legal induced abortion mortality rates with plot of exponential model, by gestational age—United States, 1972–1979, 1980–1987, and 1988–1997.

Bartlett. Abortion-Related Mortality. Obstet Gynecol 2004.

physician or a supervised assistant) also declined after legalization of abortion—only 5 deaths associated with illegal abortion were identified during 1988–1997.¹ The initial decrease in legal abortion-related deaths can be largely attributed to an increase in the level of experience and skill of the providers,^{7,13} a factor that has reduced the risk of complications with other procedures.¹⁴ Further reductions in the number of deaths and risk of mortality can be attributed to changes in clinical prac-

tice—changes made in response to reports that identified procedures with an increased risk of complications. For example, in 1972, approximately 10% of abortions were performed by either saline or prostaglandin instillation procedures. Use of this higher-risk procedure declined through the 1970s to approximately 3% in 1980 and, concurrently, the proportion of providers using dilation and curettage (a procedure associated with lower risk of complications) increased. The heightened risk of death

Table 3. Distribution of Causes of Legal Induced Abortion-Related Deaths,* by Type of Procedure and Trimester of Abortion—United States, 1988–1997

Trimester and procedure [†]	Cause of death (%)					
	Hemorrhage	Infection	Embolism	Anesthesia complications	Other [‡]	Unknown
First trimester (< 13 weeks of gestation)						
Curettage	14	31	14	22	17	3
Other [§]	0	0	0	0	0	0
Second trimester (≥ 13 weeks of gestation)						
Dilatation and evacuation	38	14	19	19	11	
Intrauterine instillation	33	33			33	
Other [‡]		25	50		25	
Unknown procedure		50			50	
Total for all gestational ages and procedures	24	27	17	16	15	1

Data are presented as percentages only because of small numbers in some cells.

* Excludes 9 women for whom data regarding abortions procedure and gestational age are unknown.

[†] Women receiving abortions during the first trimester using an unknown procedure were classified as having had a curettage procedure.

[‡] Other causes of death include cardiac and cerebrovascular events.

[§] Other procedures include hysterectomy, hysterotomy and prostaglandin vaginal suppositories, and medical termination.



with the use of general anesthetics, in particular fast-acting barbiturates, was also identified in the 1980s; few abortions currently are performed using these substances.⁶ As the strong association between gestational age and the risk of complications became more widely known, an increased percentage of abortions were performed early in the first trimester; 34% of abortions were performed before 8 weeks of gestation in 1972 compared with almost 55% in 1997.¹

The risk factor that continues to be most strongly associated with mortality from legal abortion is gestational age at the time of the abortion. The relationship between gestational age and risk of death has changed over time; currently, the risk of death increases exponentially at all gestational ages, whereas for women obtaining abortions in the earlier time period (1970–1979), the risk of death increased with increasing gestational age but leveled off at the highest gestational ages. The change in models for risk of death by gestational age likely results from the reduction in risk at earlier gestational ages as abortion policy and practice have changed; the risk of death at later gestational ages may be less amenable to reduction because of the inherently greater technical complexity of later abortions related to the anatomical and physiologic changes that occur as pregnancy advances. The increased amount of fetal and placental tissue requires a greater degree of cervical dilation, the increased blood flow predisposes to hemorrhage, and the relaxed myometrium is more subject to mechanical perforation. The technical challenges of the procedure during the second trimester are different from those present in the first trimester, and the inherently greater risk of complications may be less amenable to prevention. However, it is possible that other factors such as exacerbation of a preexisting disease may have also contributed to the greater risk of death for women obtaining abortions at later gestational age, but our ability to determine the potential contribution of other factors is limited because of limited information about the deceased women's medical or social history.

Almost half of abortions still occur after 8 weeks of gestation. Because access to abortions even 1 week earlier reduces the risk of death disproportionately as gestational age increases, addressing this risk factor by further reducing the gestational age at which women have abortions may help to further reduce the risk of death.

Our analysis suggests that almost one fifth of the excess abortion-related mortality among women of black and other races resulted from later gestational age at the time of the abortion. In addition, more than one third of the abortion-related mortality risk for women aged 19 years or younger was due to having an abortion at a later

gestational age as compared with women aged 30 years or older.

Because gestational age at the time of abortion is such a strong risk factor for death, factors that can affect access to abortion services deserve examination. First, availability of services influences access to early abortion. Since 1982, the number of abortion providers has decreased by 20%; most of the decline has occurred among hospital-based providers and in nonmetropolitan areas, leading to decreased appointment availability and an increased average distance that women must travel to abortion facilities.^{15–17} In addition, many abortion facilities set a gestational age limit after which they will not perform abortions. Consequently, women seeking abortion services after the first trimester may have to travel longer distances, which may lead to even greater delay in obtaining services. Other factors that may also lead to abortions at later gestational ages include failure to recognize a pregnancy or miscalculation of the length of pregnancy; reluctance to tell a partner or parents about a pregnancy; time needed to decide how to resolve the pregnancy; and difficulty in finding a provider, making arrangements for the abortion, obtaining transportation, and being able to afford the procedure.^{18–20} In 2001, a total of 33 states required either parental notification or consent or a mandatory waiting period after a woman's initial visit to the abortion provider before the procedure could be performed.^{15,19} Both parental notification laws and mandatory waiting periods have been associated with an increase in second-trimester abortions.^{21,22} In 1998, only 16 states had Medicaid or other state-supported funding of abortions; thus women in most states must spend time seeking financial resources to pay for an abortion.¹⁵

Since the mid-1990s, methotrexate with misoprostol and more recently mifepristone have been used for non-surgical termination of early pregnancies (ie, those up to 7 weeks of gestation).²³ Mifepristone (commonly called RU-486) is approved for such use in most of Europe²⁴ and has been used for more than a decade in France,²⁴ Sweden, and Great Britain.^{25,26} Before the U.S. Food and Drug Administration approved the drug for use as a medical abortifacient in 2000, it was used in clinical trials in the United States.⁹ The CDC's Abortion Surveillance System began to collect data on medical terminations in 1997. In 1999, a total of 25 states reported that 6,278 of these early medical abortions using RU-486 had been performed, which likely is an underestimate.²⁷ An early medical abortion requires more visits by the woman to her health care provider than are required for a surgical procedure, but acceptability among both providers and patients is reported as being high.^{28,29} No deaths determined to be related to use of medical abortifacients were reported in the United States during the study period.



The number or rate of abortions in European countries where mifepristone is used as an abortifacient has not increased, although the proportion of abortions performed at earlier gestational ages has risen.²⁵ If the number of abortions remains constant in the United States, increased availability of mifepristone to U.S. women who choose to terminate their pregnancies may increase the proportion of abortions at earlier gestational ages and in turn decrease the risk of abortion-related mortality. Ongoing monitoring of both abortion procedures and abortion-related mortality will help to evaluate the effect of medical abortion regimens.

The United States continues to monitor the number of abortion procedures and abortion-related deaths nationally. Furthermore, CDC's Abortion Mortality Surveillance System uses multiple methods to identify cases of abortion-related mortality, thereby increasing the identification of potential deaths. Cases are confirmed through review of available hospital charts and coroners' reports by clinically experienced epidemiologists. On average, the Abortion Mortality Surveillance System reports more than twice as many deaths related to legal induced abortion than are reported on routine death-certificate data. The completeness of death reporting is difficult to determine; however, an assessment that used multiple methods indicated that both reported numbers and rates of abortion-related deaths was consistent among multiple sources.³⁰ Surveillance of abortion-related mortality continues to be essential in monitoring trends, evaluating risk factors, and identifying potential clusters of deaths.

Our analyses have several possible limitations. Although state health departments are asked to provide death certificates on all deaths associated with pregnancy and other sources are used to try to ascertain abortion-related deaths, some cases may not be identified. In addition, we were unable to obtain detailed clinical records for all cases, and therefore data on certain factors (eg, gestational age, type of abortion procedure, and other risk factors for death, such as preexisting diseases), were not available for all deaths. In addition, because of the data sources used for this study, we are unable to determine why some women obtain abortions later in their pregnancies. Some of these women may choose to terminate their pregnancies because of a preexisting medical condition or fetal indications (eg, severe fetal anomalies). Thus, our ability to understand all the barriers to early abortion is incomplete. Although determination of the cause of death and relatedness to the abortion procedure is a straightforward process, some misclassification may have occurred. Timeliness in reporting abortion-related deaths is affected by several factors, including delays of up to several years in death notification, difficulty in obtaining clinical information

from providers and facilities, and the need to compile multiple years of data before release because of the small number of cases that occur annually and the need to maintain anonymity. In some stratified analyses, abortion-related mortality rates for the different strata may be underestimated, because cases with unknown values for the characteristic of interest could not be included. The aggregate nature of CDC's Abortion Surveillance System also served as a study limitation by preventing multivariable analyses of abortion mortality. Denominator data on abortion procedures is reported univariately, with a subset of states providing bivariate data. Thus, examining the affects of one risk factor while controlling for all other potential risk factors was not feasible.

Legal induced abortion-related deaths occur only rarely. Substantial reduction in the number and risk of deaths caused by complications of abortion can be affected by identification of risk factors for death and use of this evidence to inform policy and practice changes. Currently, gestational age at the time of the abortion is the strongest risk factor for death. If women who terminated their pregnancies after 8 weeks of gestation had accessed abortion services during the first 8 weeks of gestation, up to 87% of deaths might have been avoided. Reasons for delay in accessing services are likely multifactorial; to help guide prevention efforts to reduce mortality from complications of abortion, additional information is needed about the women who access abortion services later during pregnancy and the reasoning behind this decision. Primary prevention of unintended pregnancies is optimal. However, among women who choose to terminate their pregnancies, increased access to early abortion services (including emerging technologies such as early medical abortion regimens) may increase the proportion of abortions performed at the lower-risk, early gestational ages and help reduce maternal deaths.

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