The Implications of Defining When a Woman Is Pregnant

According to both the scientific community and long-standing federal policy, a woman is considered pregnant only when a fertilized egg has implanted in the wall of her uterus; however, state definitions of pregnancy vary widely. The differences may be more than academic. Debates over emergency contraception have put the question on center stage, with potentially serious implications.

By Rachel Benson Gold

The question of when life begins is an eternal one, debated by philosophers and theologians for centuries, and likely destined to forever elude consensus. However, on the separate but closely related question of when a woman is considered pregnant, the medical community has long been clear: Pregnancy is established when a fertilized egg has been implanted in the wall of a woman's uterus. The definition is critical to distinguishing between a contraceptive that prevents pregnancy and an abortifacient that terminates it. And on this point, federal policy has long been both consistent and in accord with the scientists: Drugs and devices that act before implantation prevent, rather than terminate, pregnancy.

At the state level, however, definitions of pregnancy—generally, as part of larger measures enacted to regulate abortion or prescribe penalties for assaulting a pregnant woman—vary widely. Some of these laws say that pregnancy begins at fertilization, others at implantation. Several use the term "conception," which is often used synonymously with fertilization but, medically, is equated with implantation.

To date, none of these laws has been used to restrict access to the array of hormonal contraceptive methods that can sometimes act between fertilization and implantation, but such restrictions are a long-standing goal of at least some antiabortion and anticontraception activists. And although attempts to legislatively impose the belief that pregnancy begins at fertilization have been repeatedly (sometimes narrowly) rebuffed—most recently by Congress in 1998—the current debate over emergency contraception has moved the issue back to center stage once again.

When Does Pregnancy Begin?

Although widespread, definitions that seek to establish fertilization as the beginning of pregnancy go against the long-standing view of the medical profession and decades of federal policy, articulated as recently as during the Bush administration. In fact, medical experts—notably the American College of Obstetricians and Gynecologists (ACOG)—agree that the establishment of a pregnancy takes several days and is not completed until a fertilized egg is implanted in the lining of the woman's uterus. (In fact, according to ACOG, the term "conception" properly means implantation.) A pregnancy is considered to be established only when the process of implantation is complete (see box, page 8).

The federal government has long accepted this definition of pregnancy and, by extension, what constitutes its prevention. For example, the federal regulations designed to implement the Hyde Amendment—the provision that blocks the use of public funds to pay for abortion services for low-income women—say that although funding is not available for abortions, it is available for "drugs or devices to prevent implantation of the fertilized ovum."

Since the 1970s, the Department of Health and Human Services has had an official definition of pregnancy for purposes of establishing certain safeguards when federally funded research involves pregnant women. During President Clinton's last week in office, his administration published an overhaul of the long-standing rules governing research involving human subjects. Shortly after President Bush came into office, his administration suspended those rules and reissued a regulation of its own at the end of 2001. Like the proposed Clinton regulation, however, the rules promulgated by the Bush administration, which remain in effect today, say that pregnancy "encompasses the period of time from implantation until delivery."

Evolving State Policy

A review of state laws conduced in April 2005 by The Alan Guttmacher Institute found that 22 states have enacted one or more laws defining "pregnancy." (Some of these states have adopted an explicit definition of pregnancy, whereas others have done so implicitly, by defining either "fetus" or "unborn child.") Despite the clear and long-standing medical consensus that pregnancy is not established until implantation, 18 states have enacted provisions premised on the notion that

When Is a Woman Pregnant?

To be sure, not every act of intercourse results in a pregnancy. First, ovulation *(i.e., the monthly release of a woman's egg) must occur. Then, the egg must be fertilized.* Fertilization *describes the process by which a single sperm gradually penetrates the layers of an egg to form a new cell ("zygote"). This usually occurs in the fallopian tubes and can take up to 24 hours. There is only a short window during which an egg can be fertilized. If fertilization does not occur during that time, the egg dissolves and then hormonal changes trigger menstruation; however, if fertilization does occur, the zygote divides and differentiates into a "preembryo" while being carried down the fallopian tube toward the uterus.* Implantation *of the preembryo in the uterine lining begins about five days after fertilization. Implantation can be completed as early as eight days or as late as 18 days after fertilization, but usually takes about 14 days. Between one-third and one-half of all fertilized eggs never fully implant. A pregnancy is considered to be established only after implantation is complete.*

Source: American College of Obstetricans and Gynecologists.

pregnancy begins at fertilization or conception (see table). (Although many of these laws use the imprecise term "conception," all but five leave it undefined. Significantly, however, all of the five states that do define the term equate it with fertilization.) Six states have provisions defining pregnancy as beginning at implantation, although two of these states include other definitions as well.

These provisions are found in different areas of the state legal codes, including those that establish the legal requirements for abortion services (17 states), prescribe penalties for assaulting a pregnant woman (seven states) and restrict fetal research (one state). Most of the 18 states have several different provisions, sometimes across different types of statutes, and sometimes even within the same section of law. Alabama, for example, has seven definitions in its abortion code—three refer to conception and four to fertilization. And some states seem to use the terms conception, fertilization and implantation interchangeably, even though they have different medical meanings and significance. For example, Louisiana's abortion code and its statutes concerning assault on pregnant women use all three terms, at times within a single definition.

Implicating Contraception

What is motivating this interest and activity is not entirely clear. Certainly, it would appear to stem from the complex politics of the abortion issue and from the long-standing campaign of some antiabortion activists to personify the fetus and portray it, often using language as a powerful tool, as a baby from the moment of fertilization (see box, page 9). In this regard, it is likely that the proponents of the state laws may have been unaware of how the various contraceptive methods actually work, and were probably not taking aim at them directly. In fact, of the 18 states that have some definition of pregnancy as beginning at fertilization or conception, 12 define abortion as the termination of a "known" pregnancy. Furthermore, two of these states (Arizona and Texas) specifically exclude contraceptives from their definitions of abortion, even though they use fertilization as the starting point for pregnancy elsewhere in their statutes.

On the other hand, many in the antiabortion movement clearly understand the modes of action for contraceptive methods, especially the hormonal methods (see box, page 10). Understanding that, they have to know that the end result of enforcing a definition that pregnancy begins at fertilization would implicate not just some hormonal methods, but all of them.

This is clearly a cause for discomfort within the ranks of the abortion opponents. Some groups, notably including the National Right to Life Committee, try to avoid the

STATE DEFINITIONS OF PREGNANCY

	Definitions of Pregnancy Found in Statutes on…		
	Fetal Research	Fetal Assault	Abortion
Alabama			F, C
Arizona			F
California			I
Colorado			I
Illinois		F	F
Kentucky		C	F
Louisiana		F, C, I	F, C, I
Massachusetts			F
Minnesota		C	F
Missouri			C
Montana			C
Nebraska		C	
Nevada			C
New Mexico	C		I
Ohio		F	F
Oklahoma			C
South Carolina			C
South Dakota			I
Texas			F
Washington			I
Wisconsin		F	C
Wyoming			C

Note: F = pregnancy begins with fertilization, C = conception, and I = implantation.

Language Matters

Legislative activity at both the federal and state levels around the issue of fetal pain highlight how the inconsistency with which terminology is being used in ongoing policy debates could have real-world implications.

Legislation pending in Congress would require that women obtaining abortions after a certain point in pregnancy be told of the capacity of a fetus to feel pain and be offered anesthesia that could be administered directly to the fetus. The legislation repeatedly refers to that point as "20 weeks after fertilization." Medically, however, a pregnancy is generally "dated" from "gestation," defined as the time of the woman's last menstrual period, because that is a date most women can pinpoint. As a result, the federal mandate, should it be enacted, in fact would be effective for what doctors would consider to be a fetus at 22 weeks, rather than at 20 weeks.

Whether that is the case with various state bills is another question. Fetal pain legislation has been introduced in nearly half the states this year, and enacted in Arkansas. Although almost all of these measures, like the federal bill, refer to "20 weeks," most of them also use the term "gestation" rather than "fertilization." Whether that means they are aimed at abortions performed at 22 weeks from a woman's last menstrual period or at 20 weeks from that point is unclear. And in the real world, that two-week difference matters.

issue entirely, saying they have no position on contraception. But many, including Concerned Women for America and the Secretariat for Pro-Life Activities of the U.S. Conference of Catholic Bishops, are clear and consistent: For them, pregnancy begins at fertilization, and if that "fact" implicates contraception, so be it. As far back as 1981, Judie Brown, long-time president of the American Life League, made the point quite clear in testimony before a congressional committee: "However, once a chemical or device acts to destroy the newly fertilized egg, which is a brand new life, then we are not any longer dealing with a contraceptive. We're dealing with an abortion."

Abortion opponents who have sought to promote this view to ensnare contraceptives have often been publicly rebuffed in Congress. In the most high profile instance, the Senate rejected legislation introduced in the early days of the Reagan administration that tried to use a congressional "finding" that life begins at conception as a way to circumvent the need for a constitutional amendment overturning *Roe v. Wade* and to ban abortion nationwide. One of the most contentious issues in that debate, aside from the obvious question of the propriety of a legislative body making such moral and ethical determinations, was the potential impact of that finding on many commonly used forms of contraception. Testifying about the potential impact of the legislation, George Ryan, then president of ACOG, said, "I believe that it is realistic to assume that the IUD and the low-dose oral contraceptive pills could be considered as abortifacients and therefore declared illegal." After months of controversy, the measure was defeated by the full Senate in 1982.

In 1998, during consideration of a measure to include coverage of contraceptive services and supplies in the insurance coverage purchased for federal employees and their dependents, Rep. Chris Smith (R-NJ) offered an amendment to exclude coverage of "abortifacients." During the heated debate, then-Representative (and now Senator) Tom Coburn (R-OK) sought to "clarify" the discussion, by insisting that the measure would only affect IUDs and emergency contraception, but not any type of oral contraceptives, despite the clear statements by the Food and Drug Administration (FDA) that they also can act after fertilization to prevent implantation.

Rep. Nancy Johnson (R-CT) took the measure on directly, making the science behind the provision, and the motivation for it, quite clear: "Is there no limit to my colleague's willingness to impose his concept of when life begins on others? Conception is a process. Fertilization of the egg is part of that process. But if that fertilized egg does not get implanted, it does not grow.…For those who do not believe that life begins upon fertilization, but believe, in fact, that that fertilized egg has to be implanted, the gentleman is imposing his judgment as to when life begins on that person and, in so doing, denying them what might be the safest means of contraception available to them." The amendment was defeated, 198 to 222.

Implications for Emergency Contraception

The ongoing debate over emergency contraception has put the question of the dividing line between preventing and disrupting pregnancy back in the public eye. A product packaged specifically to be used as emergency contraception was first approved by the FDA in 1998 as a method of pregnancy prevention; the agency approved a second such product, Plan B, a year later. In a question-and-answer document developed in 2004, the FDA was explicit in describing the drug's method of action: "Plan B works like other birth control pills to prevent pregnancy. Plan B acts primarily by stopping the release of an egg from the ovary (ovulation). It may prevent the union of sperm and egg (fertilization). If fertilization does occur, Plan B may prevent a fertilized egg from attaching to the womb (implantation)." In short, despite the confusion that opponents have fostered surrounding emergency contraception's mode of action, how the method works depends more on when during a woman's monthly menstrual cycle it is taken (and, specifically, whether she has ovulated) than on when she had sexual intercourse.

Yet, attempting to capitalize on this confusion, some antiabortion advocates took the FDA's statement as an admission validating their view that because emergency

How Do Contraceptives Prevent Pregnancy?

Food and Drug Administration–approved contraceptive drugs and devices act to prevent pregnancy in one or more of three major ways: by suppressing ovulation, by preventing fertilization of an egg by a sperm or by inhibiting implantation of a fertilized egg in the uterine lining. Male and female condoms always act by preventing fertilization; however, the mode of action of any hormonal method may vary not only from woman to woman, but also for an individual woman from month to month, depending on the timing of intercourse in relation to ovulation.

• The primary mechanism of action of "combined" oral contraceptives (those containing both estrogen and a progestin) is the suppression of ovulation. In addition, these pills may interfere with sperm and egg transport, affect the fluids within a woman's reproductive tract or affect sperm maturation or the readiness of the uterine lining for implantation.

• Progesterone-only pills and injectables can suppress ovulation; however, other modes of action that inhibit fertilization and implantation are considered more important for these methods than for methods containing estrogen. For example, progestin-only methods can cause a woman's cervical mucus to thicken, reducing sperm and egg transport; interfere with sperm maturation; or decrease the readiness of the uterine lining for implantation.

• As with other hormonal contraceptives, there is no single mechanism of action for emergency contraception. The method is considered to act mainly by suppressing ovulation; it may also reduce sperm and egg transport or decrease the readiness of the uterine lining for implantation.

• The primary mode of action for IUDs is inhibition of fertilization, by causing the cervical mucus to thicken (for progesterone-releasing IUDs) or by altering the fluids in the fallopian tubes and uterus (for copper-releasing IUDs). In addition, IUDs affect the lining of the uterus in a way that may be unfavorable for implantation.

In summary, according to the American College of Obstetricians and Gynecologists, "the primary contraceptive effect of all the non-barrier methods, including emergency use of contraceptive pills, is to prevent ovulation and/or fertilization. Additional contraceptive actions for all of these also may affect the process beyond fertilization but prior to pregnancy."

Source: The American College of Obstetricians and Gynecologists.

contraception can act after fertilization to prevent implantation, it must clearly be an abortifacient. For example, the bishops asked, "'How is this contraception?' Women are being falsely led to believe that these pills are contraceptive in nature. But one of their common and intended modes of action is to prevent the development of the embryo, resulting in his or her death."

Whether abortion opponents will seek to "activate" existing state laws defining pregnancy for the purpose of restricting access to contraction—or seek to add new definitions for that specific purpose—remains to be seen. It is clear, however, that they have taken direct aim at emergency contraception, and are seeking to separate it from other contraceptive methods, no matter that the science says otherwise.

This effort is making its most public appearance in the controversy raging over whether and to what extent pharmacists must provide emergency contraception. But two less-noticed developments in the states this year are worth noting. First, a measure mandating contraceptive coverage in private insurance plans in Arkansas specifically excludes emergency contraception. Similarly, a measure recently enacted in Indiana that directs the state to apply to the federal government to expand eligibility for Medicaid-covered family planning services excludes "a drug or device intended to terminate a pregnancy after fertilization" from the package that would be covered. The ultimate impact of this provision may hinge on the use of the word "intend," since it is clear that emergency contraception's primary mode of action is to act prior to fertilization and its intent is not to act subsequent to that point. But nonetheless, this campaign has ominous implications for emergency contraception and, if carried to its logical conclusion, for contraception in general.

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