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What an abortifacient is -- and what it isn't

by Jamie Manson

Grace on the Margins

"One of the well known truisms in ethics is that good moral judgments depend in part on good facts."

So wrote Dr. Ron Hamel, senior director of ethics for the Catholic Health Association of the United States (CHA) in the January-February 2010 issue of their journal *Health Progress*.

This edition of *Health Progress* focused on emergency contraception, particularly on the just treatment of women who check into hospital emergency rooms after suffering rape.

The ethicists and medical professionals who contributed to the journal could not have known then how valuable their articles would become two years later, when the church and country would become embroiled in a controversy over contraception.

Hamel's words about the importance of adequate and accurate information in making moral judgments seems especially urgent now as many church leaders and commentators continue to use misleading information to argue that the HHS mandate will force employers to pay for abortion-inducing drugs.

The HHS mandate allows women free access to all FDA-approved forms of contraception. This includes the IUDs (intrauterine devices), the drug Plan B (levonorgestrel) and a new drug called Ella (ulipristal acetate), which came on the market in 2010. Church officials and others have argued that because these three contraceptives are abortifacients, the government is forcing them to participate in the distribution of devices and drugs that cause abortion.

The reality is that there is overwhelming scientific evidence that the IUD and Plan B work only as contraceptives. Since Ella is new to the market, it has not been studied as extensively. But as of now, there is no scientific proof that Ella acts as an abortifacient, either.

There is only one drug approved to induce abortion. It is called RU-486 (mifepristone) and is not on the FDA's list of approved contraception. It is available only by prescription and no employer is forced to pay for it as part of an employee health plan.

To understand why scientists believe that the IUD, Plan B and Ella are not abortifacients, it is important first to understand the biology of conception. In order for a woman to become pregnant after sexual intercourse, her ovaries must release an egg (ovulation). Sperm can remain viable inside her reproductive tract for five days. Therefore, if intercourse takes place up to five days before ovulation or within two days after, both sperm and egg are viable and the egg cell can be fertilized.

Now, just because an egg is fertilized doesn't necessarily mean that it will develop into an embryo. For that to happen, the fertilized egg must be implanted into the endometrium that lines the uterus. Implantation happens seven days after fertilization, if it happens at all. Scientists estimate that, at a minimum, two-thirds of fertilized eggs fail to implant. Some scientists estimate that the number may even be as high as 80 percent, according to *Discover Magazine*.

For this reason, according to the medical definition, a woman is not considered pregnant until the developing embryo successfully implants the lining of the uterus.

Some church officials argue that a woman is pregnant at the moment of fertilization. If that is the case, then it follows that 60 to 80 percent of the time, this natural process results in a massive loss of life.

Now, back to contraception. When church officials argue that the IUD could be an abortifacient, they are relying on research from the 1970s that indicated that the IUD could affect an embryo's ability to implant. Decades of research since has demonstrated that the IUD actually works much earlier in the reproductive process than once thought. It does not destroy an implanted embryo. Approximately one in 100 women using the IUD get pregnant.

Rather, the IUD, which is a T-shaped device inserted into the uterus by a medical professional, works by affecting the way in which sperm move. Some IUDs release a synthetic version of the hormone progesterone called progestin, which thickens cervical mucus making more difficult for sperm to enter the uterus. Few sperm are able to reach the fallopian tubes, and those that do reach the site of fertilization are usually incapable of fertilizing an egg.

The drug Plan B is also artificial progestin and therefore impedes the sperm from entering the uterus in the same way as the IUD. But the drug can also stop the ovaries from releasing an egg. If an egg has already been released, Plan B can slow down the movement of the egg. By slowing down both the egg and the sperm, it prevents fertilization.

The effectiveness of Plan B drops considerably if given more than two days after intercourse. But even at its peak of effectiveness, it is only works 50 percent to 80 percent of the time. Some have argued that Plan B acts after fertilization by changing the uterine lining is such a way that implantation is impossible.

But according to Dr. Sandra Reznik, who also wrote for the January-February 2010 edition of CHA's *Health Progress*, if Plan B "involved a change in the endometrium, then one would expect a higher rate of success [in preventing pregnancy]. ... Taken together, there are biological, clinical and epidemiological

data clearly indicating that Plan B's mechanism of action involves only pre-fertilization events."

For five years, staff at CHA collected, reviewed and summarized the great majority of articles on Plan B's mechanism of action, Ron Hamel explains in his article: "Virtually all of the evidence in the scientific literature indicates Plan B has little or no post-fertilization effect ... on the endometrium that would make it inhospitable to implantation."

The drug Ella is perhaps the most controversial because its chemical structure is similar to that of RU-486. Unlike Plan B, Ella can be taken up to five days after intercourse, therefore working for the entire life span of the sperm. Like Plan B, however, women who take Ella can still get pregnant, which suggests that this pill, too, is not an abortifacient.

In several studies, 2 percent of women taking Ella up to five days after intercourse became pregnant. Researchers estimate that at least 5 percent of women not taking the pill would have become pregnant. Ella prevents fertilization through a progesterone blocker that delays or inhibits ovulation.

Some have argued that because Ella is similar in composition to RU-486, it functions in the same way. RU-486 works by decreasing the lining of the uterus to the point that an implanted embryo will dislodge. Scientists argue that there is no evidence that Ella has this type of effect on the endometrium and therefore, there is no evidence that the drug can interrupt an existing pregnancy or prevent implantation. Experts point to the drug's 2 percent failure rate as proof.

According to one study published in *The Lancet*, when the drug is given in a massive dose, it could alter the lining of the uterus and theoretically impair an embryo's implantation. But no woman could have access to that amount of Ella.

The most important point that emerges from all of this research is that, so far, there is no scientific evidence that any FDA-approved contraception is capable of destroying an embryo. To say that any of these drugs are abortifacient is not only misleading, it does a profound disservice to women who find themselves in a situation where they might have to use one of these drugs or devices.

According to the U.S. Department of Justice's National Crime Victimization Survey, an average of 207,754 sexual assaults is reported in this country every year. And according to a study at Princeton, more than 25,000 women become pregnant every year after being sexually assaulted.

The CHA did a fine job of arguing why emergency contraception should be available to all victims of sexual assault, regardless of the hospital's Catholic affiliation. But ultimately, women other than those who have been raped could also find themselves in need of this contraception as well. Condoms break and slip, women miss doses of birth control pills, and some women face all types of sexual coercion by men.

Regardless of the situation, it is for a woman to decide what is best for her health and well-being.

As we saw last week in the all-male panel testifying before Congress about contraception and in the statements of the Rick Santorum and his financial backers, the culture of shaming women for taking control of their sexuality is still a powerful force in this country. And the desire by men to take control of women's bodies seems equally powerful.

In the face of these assaults on women's health and women's sexual autonomy, it is the responsibility of analysts and commentators to be honest about the science of contraception and to be cautious when asserting what an abortifacient is and what it isn't.

[Jamie L. Manson received her Master of Divinity degree from Yale Divinity School, where she studied Catholic theology and sexual ethics. Her columns for *NCR* earned her a first prize Catholic Press Association award for Best Column/Regular Commentary in 2010.]

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