Rx

Changes to Pregnancy and Lactation Risk Labeling for Prescription Drugs

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Medication use by pregnant women not only affects each individual woman, but can have profound effects on a developing fetus. Researchers have documented rates of prescription and over-the-counter (OTC) medication use during pregnancy to range from 50 percent to 80 percent (Andrade et al., 2004; Lupattelli et al., 2014). These numbers are likely to increase as women delay childbearing until later in their reproductive lives when the incidence of illnesses requiring medication increases (Hamilton, Martin, & Ventura, 2012). While many medications can be taken safely in pregnancy, others have the potential to cause fetal malformation and pregnancy loss.

Abstract Safe medication use by women during pregnancy and lactation is an area of concern for women and their health care providers. In December 2014, the U.S. Food and Drug Administration (FDA) issued a final rule on new labeling changes, which go into effect in June 2015 and eliminate the current letter system of A-D, X. The new labeling will include a summary of risks to using the medication during pregnancy and lactation, and supporting data and relevant information to assist health care providers in counseling pregnant and lactating women. DOI: 10.1111/1751-486X.12209

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Determining medication safety during pregnancy can be challenging for both women and their health care providers. Data on medication safety are limited due to ethical issues of including pregnant and breastfeeding women in clinical trials for new medications (American College of Obstetricians and Gynecologists [ACOG], 2007; Doering, Boothby, & Cheok, 2002). Therefore, many medications are often approved while lacking information on pregnancy and lactation (Doering et al., 2002). In December 2014, the U.S. Food and Drug Administration (FDA) published the final rule on changes to how information on safety, risks and benefits of using medications during pregnancy and lactation are presented (FDA, 2014a, 2014b). This article reviews the history of medication risk categories, the proposed changes and implications for nurses who work with women of childbearing age.

History of Medication Risk Classification

Regulations in the United States on required safety and risk information for pregnancy have evolved over the past 50 years. Prior to the 1960s, little information was provided for individual medications. Often the only information health care providers received was a general statement that the safety of the drug had not been established in pregnant women (Doering et al., 2002). This type of disclaimer did not help women or their providers make informed decisions about potential risks and benefits of medications. Unfortunately, it took a serious teratogenic outcome associated with one medication—thalidomide—to change the way new medications were tested and what information was required once new medications were approved.

A series of changes to medication labeling were proposed after the thalidomide tragedy that occurred during the early 1960s (Doering et al., 2002; Mazer-Amirshahi, Samiee-Zafarghandy, Gray, & van den Anker, 2014; Ramoz & Patel-Shori, 2014). Thalidomide was originally prescribed as a hypnotic/sedative and later as a treatment for nausea and vomiting of pregnancy (Botting, 2002). It was available in the United Kingdom, Germany and Australia, and although never approved in the United States due to safety concerns, approximately 1,000 doses were made available as an investigational drug to U.S. physicians (Doering et al., 2002; Ramoz & Patel-Shori, 2014).

Thalidomide was discovered to be teratogenic. When taken during pregnancy, especially during organogenesis in the first trimester, thalidomide caused phocomelia. This type of birth defect is characterized by absent or underdeveloped limbs. Other adverse effects included congenital absence of ears, abnormalities of the eye and bowel malformations.

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Neonatal death is also common in exposed infants (Botting, 2002).

Following the discovery of thalidomide as a teratogen, the FDA issued new regulations regarding approval of all investigational medications. By the mid-1960s animal studies were mandatory prior to testing in human subjects (Doering et al., 2002). Additionally, new regulations stipulated that reproductive and fertility data must be collected and studies of teratogenic effects must be investigated in two different animal species prior to approval for women of reproductive age (Doering et al., 2002; Ramoz & Patel-Shori, 2014).

Labeling Categories

The medication labeling categories that have been in effect for the past 35 years were not introduced until 1979 (Mazer-Amirshahi et al., 2014; Ramoz & Patel-Shori, 2014). These regulations required that labeling for all prescription drugs be consistent and uniform. This included information specific to pregnancy risks and teratogenic potential, which was identified by one of five letter categories: A, B, C, D and X (see Box 1). Although this system provided some improved guidance for health care providers and patients, concerns regarding the categories persisted for decades. Some of the major criticisms included rigid categories that failed to fully elucidate risk versus benefit, confusion over the actual meaning of each category relative to teratogenicity, limited information

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