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Review article

Over-the-Counter Access to Oral Contraceptives for Adolescents

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A B S T R A C T

Oral contraceptives (OCs) are used by millions of women in the U.S. The requirement to obtain OCs by prescription from a clinician may serve as a barrier to contraceptive initiation and continuation for women, in particular adolescents. Over-the-counter (OTC) availability would reduce this barrier and could further reduce unintended pregnancy rates. This review explores the scientific issues and regulatory processes involved in switching OCs to OTC status for minor adolescents. We review: (1) the regulatory criteria for switching a drug to OTC status; (2) risk of pregnancy and safety during use of OCs including combined oral contraceptives and progestin-only pills for adolescents; (3) the ability of adolescents to use OCs consistently and correctly; (4) OTC access to OCs and potential effect on sexual risk behaviors; and (5) the potential for reduced opportunities for clinicians to counsel and provide recommended reproductive health care to adolescents. We find strong scientific rationale for including adolescents in any regulatory change to switch OCs to OTC status. OCs are safe and highly effective among adolescents; contraindications are rarer among adolescents compared to adult women. Ready access to OCs, condoms, and emergency contraception increases their use without increasing sexual risk behaviors.

IMPLICATIONS AND CONTRIBUTION

Use of oral contraceptives (OCs) by adolescents is safe, and OCs are effective at preventing pregnancy. There is no scientific rationale for limiting access to a future over-the-counter OC product by age. The Food and Drug Administration should include adolescents in any regulatory change that moves OCs over the counter.

Oral contraceptives (OCs) are the most commonly used hormonal method by U.S. teens and other women of reproductive age [1,2]. OCs are widely used around the world and, in many countries, are available without prescription [3]. Increased use of contraception, primarily condoms, has contributed much of the reductions in the U.S. teen pregnancy rate over the past 2 decades [4,5]. While the Affordable Care Act designates all contraceptive methods (and accompanying clinical services) as preventive health care that therefore must be provided without cost sharing [6], many women still face burdensome logistical barriers to care including lack of health insurance and lack of access to providers of reproductive health care. A critical additional barrier for minor adolescents are concerns and misunderstandings about confidentiality in reproductive health care [7]. Ready access to OCs available over the counter has the potential to reduce barriers, further increase contraceptive use, and reduce teen pregnancy.

In a nationally representative survey (n = 2,046) of women ages 18–49 years at risk of unintended pregnancy (including

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mistimed and unwanted pregnancy), 62% supported over-the-counter (OTC) access to OCs and 37% reported being likely to use OTC OC [8]. Interest in OTC availability of OCs was highest among younger women, those living with a partner and those with private or no insurance [8]. There are no published surveys with a representative sample of minors; however, a small study recruiting a convenience sample of teens using Facebook found that 71% of respondents supported OTC access to OCs and 61% reported they would likely use them [9].

Professional societies dedicated to pediatric and adolescent health support minors' access to contraception and reproductive health care and OTC access to emergency contraception (EC) [10–13]. In 2012, the American College of Obstetricians and Gynecologists issued a Committee Opinion supporting OTC availability of OCs [14]. However, pediatric and adolescent health provider groups have not yet issued policy statements supporting OTC availability of OCs. This review grew out of an October 2015 expert meeting convened by the OCs OTC Working Group [15], which brought together representatives from professional societies focused on pediatric and adolescent health to discuss scientific and regulatory issues related to a possible OTC switch for OCs which includes minor adolescents.

The Regulatory Criteria for Switching a Drug to OTC Status

The Food Drug and Cosmetic Act gives authority to the Food and Drug Administration (FDA) to approve any drug that will be marketed for use in humans in the U.S. [16]. When initially passed in 1938, the Act did not specifically differentiate between OTC and prescription drugs, instead requiring all approved drugs to contain directions that could be understood by ordinary consumers [16]. Over time, however, the FDA began to approve drugs and to restrict their access via physician prescription. In 1951, the Durham-Humphrey Amendment to the Food Drug and Cosmetic Act codified the types of drugs available via prescription only; of these, labeling was directed to physicians or pharmacists and not consumers [16]. According to the Amendment, any drug that is "habit forming"; "not safe for use except under the supervision of a practitioner licensed by law to administer such a drug"; or "limited by an approved [new drug application] to use under the professional supervision of a practitioner licensed by law to administer such drug" can be approved for prescription use only [16]. Once a drug is approved for prescription access, the FDA has explicit authority to switch the drug to OTC access if the prescription restriction is not necessary. In short, a prescription drug should be switched to OTC status if: "the drug is safe for self-medication, the drug is effective when self-administered, the condition to be treated is self-diagnosable, and the drug's labeling is tailored to self-administration (21 CFR § 310.200(b), 1999; 21 CFR § 330.10(a)(4), 1999)."

For drug approval regulations specific to the population under age 18 years, it is also important to consider the Pediatric Research Equity Act (PREA). PREA, enacted in 2003, requires pediatric data when submitting a drug application for a new active ingredient, a new indication, a new dosage form, a new dosing regimen, or new route of administration [17]. However, in the case of recently approved prescription OC products, including Natazia and Beyaz (Bayer HealthCare Pharmaceuticals Inc., Whippany, NJ) [18,19], the FDA has waived PREA for premenarcheal populations for whom contraceptives are not indicated and has stated that extrapolated data from adults are sufficient for postmenarcheal females under age 18 years. In the case of a switch to OTC for an already approved drug with no change to dosing regimen, PREA would not apply.

Age-based restrictions on OTC products are extremely rare and currently limited to nicotine replacement products whose sales are restricted to those 18 years and older. Nonetheless, a protracted regulatory battle occurred during the effort to switch EC to OTC status. This battle revolved largely around the question of safety of use in young women without medical supervision; this rationale was rejected by the federal courts and ultimately by FDA. In 2006, Plan B (Paladin Labs Inc., St-Laurent, Quebec, Canada) was granted approval by the U.S. FDA to be marketed without a prescription, but only for consumers aged 18 years and older. In 2009, after a Federal court order, Plan B 1.5 (1.5 mg in a single tablet) was approved for use OTC for women 17 years and older. For females age 16 years and younger, it was restricted to use by prescription only until 2012 when another Federal judge determined in a ruling in a lawsuit brought against the FDA that Plan B 1.5 should be made available OTC to women of all ages [20]. Since June 20, 2013, OTC EC has been available to all women—without restriction.

Population surveys suggest that as EC has become increasingly available without prescription, ever use of EC by U.S. teens has also increased from 8% in 2002 to 22% in 2011–2013 [1]. Data on sexual behavior from the same source (National Survey of Family Growth) indicate that there has been no increase in the number of teens initiating sexual intercourse or reporting recent sexual intercourse during that time [1,4]. The increase in use of EC that has followed reduced restrictions suggests that there is a need for improved contraceptive access for teens and that, when contraceptives are made easily available, adolescents will use them.

The Risk of Pregnancy and Safety During Use of Combined Oral Contraception and Progestin-Only Pills for Adolescents

The percentage of women experiencing an unintended pregnancy when using oral contraception has been established by decades of research. During perfect use (i.e., in well-monitored studies or clinical trials), less than one in a hundred women (.3%) who use combined or progesterone-only pills will become pregnant in the first year of use [21]. However, during typical use, women experience higher pregnancy rates, with 7.5% of women becoming pregnant in the first year of use and 5.3% becoming pregnant in the second year [22]. In spite of common perception that progestin-only pills (POPs) are less effective than combined oral contraceptions (COCs), clinical data supporting differences in effectiveness are limited. One multicenter, double-blind study compared two POPs and two COCs and found the pregnancy rate for the POPs was not significantly higher than the rate for COCs (9.5% vs. 4.5%, $p = .089$) [23]. A 2013 Cochrane Review of available studies found insufficient evidence to compare efficacy of POPs to COCs [24].

The safety of OCs has been established in clinical trials and through decades of use in millions of women worldwide. The majority of contraindications are related to the estrogen component of the pills, which may increase the risk of cardiovascular diseases including venous thromboembolism and arterial vascular disease (myocardial infarction and strokes). The background risk of cardiovascular disease in adolescents is low, and therefore, contraindications are very uncommon among adolescent women. The U.S. Medical Eligibility Criteria for