

Original research article

# Potential public sector cost-savings from over-the-counter access to oral contraceptives<sup>☆</sup>

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## Abstract

**Objective:** This study estimates how making oral contraceptive pills (OCPs) available without a prescription may affect contraceptive use, unintended pregnancies and associated contraceptive and pregnancy costs among low-income women.

**Study Design:** Based on published figures, we estimate two scenarios [low over-the-counter (OTC) use and high OTC use] of the proportion of low-income women likely to switch to an OTC pill and predict adoption of OCPs according to the out-of-pocket costs per pill pack. We then estimate cost-savings of each scenario by comparing the total public sector cost of providing OCPs OTC and medical care for unintended pregnancy.

**Results:** Twenty-one percent of low-income women at risk for unintended pregnancy are very likely to use OCPs if they were available without a prescription. Women's use of OTC OCPs varies widely by the out-of-pocket pill pack cost. In a scenario assuming no out-of-pocket costs for the over-the-counter pill, an additional 11–21% of low-income women will use the pill, resulting in a 20–36% decrease in the number of women using no method or a method less effective than the pill, and a 7–25% decrease in the number of unintended pregnancies, depending on the level of use and any effect on contraceptive failure rates.

**Conclusions:** If out-of-pocket costs for such pills are low, OTC access could have a significant effect on use of effective contraceptives and unintended pregnancy. Public health plans may reduce expenditures on pregnancy and contraceptive healthcare services by covering oral contraceptives as an OTC product.

**Implications:** Interest in OTC access to oral contraceptives is high. Removing the prescription barrier, particularly if pill packs are available at low or zero out-of-pocket cost, could increase the use of effective methods of contraception and reduce unintended pregnancy and healthcare costs for contraceptive and pregnancy care.

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**Keywords:** Oral contraceptives; Over the counter; Insurance coverage; Projections

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## 1. Introduction

The percentage of pregnancies that are unintended in the United States has remained steady at about 50% for the past 2 decades [1,2]. The leading cause of unintended pregnancy is inconsistent or lack of contraceptive use, rather than contraceptive method failure [3]. For many women, particularly those who are uninsured and young, the need for a prescription to obtain a reliable contraceptive method is

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Table 1  
Data Inputs

Input	Value	Source
Current contraceptive method use among women aged 15–44 with incomes $\leq$ 200% federal poverty line ( $n=2870$ ) and at risk of unintended pregnancy	IUD (7.7%), implant (1.1%), shots or injections (8.1%), OCPs (30.6%), ring (2%), patch (1.1%), condoms (21.6%), other (9.5%) and no method (18.2%)	National Survey of Family Growth, 2006–2010
Typical use one-year OCP pregnancy rate in model with no OTC access to OCPs	8%	Trussell 2011
One-year OCP pregnancy rate assuming 50% increase in OCP effectiveness	4%	Sensitivity model
One-year OCP pregnancy rate assuming 50% decrease in OCP effectiveness	12%	Sensitivity model
Annual cost to public sector for prescription OCP users	\$389 per client (includes all contraceptive, STI and annual visit costs over a year)	Foster et al., 2013
Annual cost to public sector for OTC OCP users	\$65 for one office visit plus cost of pills; cost of pills is \$37 minus the copay per pack (assumes 13 packs)	Family PACT claims, Foster et al., 2013
Public sector pregnancy costs	\$2923 per pregnancy, includes public sector medical costs for a woman and, for pregnancies carried to term, the child from birth up to age two	Biggs et al. 2010

IUD, intrauterine device; OCP, oral contraceptive pill.

a barrier to use [4,5]. Making oral contraceptive pills (OCPs) available without a prescription has the potential to increase contraceptive use and continuation rates by facilitating continuity of use [6] and encouraging OCP use among women who currently do not use any method or use less effective methods [7].

While women have shown interest in over-the-counter (OTC) access [7,8], they have also voiced concerns about its safety and potential cost [9]. Several studies have looked at the safety of offering OCPs over the counter and have concluded that OCPs, particularly progestin-only pills, are safe and that women can accurately self-screen for any contraindications [10–12]. Based on findings from these studies, in 2012, the American College of Obstetricians and Gynecologists issued the recommendation to make oral contraceptives available over the counter [13].

The current study estimates how making OCPs available without a prescription could affect OCP use, unintended pregnancies and associated pregnancy and contraceptive costs. We also consider the policy implications, including the impact of contraceptive coverage under the Affordable Care Act.

## 2. Materials and methods

Using published national and state data, we predict the proportion of low-income women at risk of an unintended pregnancy who are likely to switch to an OTC pill based on the current distribution of contraceptive methods used, women's reported interest in using an OTC pill, and the potential range of out-of-pocket costs of an OTC pill pack. We estimate the number of expected pregnancies if OCPs were available over-the-counter compared to the number expected given the current contraceptive method mix. We

also predict the effect on the number of pregnancies averted if OTC access changes OCP failure rates. Our cost data are based on average expenditures for OCP use in Family PACT, California's Medicaid waiver family planning program, and average expenditures in Medi-Cal, California's Medicaid program, for pregnancies to low-income women. We then estimate the change in the number of unintended pregnancies among women at or below 200% of the federal poverty level associated with making OCPs available over the counter, as well as the change in public healthcare costs associated with contraceptive provision and pregnancy care.

First, we project how OTC access to OCPs may change contraceptive use in the United States among low-income women who are at risk of an unintended pregnancy. Current contraceptive use data are based on the most effective contraceptive method reported from the 2006–2010 National Survey of Family Growth (Table 1). We define low income as household incomes at or below 200% of the federal poverty level [14]. At risk of unintended pregnancy is defined as women aged 15–45 sexually active with a male partner and are not pregnant, sterilized or seeking pregnancy. The National Survey of Family Growth tabulations exclude women who were pregnant, trying to become pregnant or are postpartum ( $n=1072$ ); not sexually active in the last 3 months ( $n=2637$ ); sterilized or with a sterile male partner ( $n=2609$ ); or with incomes  $>200\%$  of the federal poverty level ( $n=3091$ ), leaving a total sample of 2870 women.

We consider two scenarios of adoption of OCPs (low and high) and predict adoption of OCPs by the out-of-pocket cost per pill pack, from \$0 to \$50. Data on the likelihood of using OCPs if they are available over the counter are based on secondary analyses of a nationally representative survey of adult women at risk of unintended pregnancy. Details of the sampling methodology are published elsewhere [7]. Briefly,

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