Number of oral contraceptive pill packages dispensed and subsequent unintended pregnancy

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Background

Our previous work showed dispensing a year's supply of oral contraceptives at California family planning clinic visits was associated with lower healthcare costs and higher contraceptive continuation. In our first study, women who received a year's supply of pills were more likely to continue use at 15 months after the initial dispensing visit than women who received 1 or 3 packs (43% vs 20-22%).

To date, there are no studies of number of pill packs and contraceptive continuation. In our first study, women who received a year's supply were more likely to continue use at 15 months after the initial dispensing visit than women who received 1 or 3 packs.

Study design

We compare pregnancy rates between women who received a year's supply (12 or 13 packs) versus 1 or 3 packs using a linkage between contraceptive dispensing claims in California's family planning program Family PACT and pregnancy events in Medi-Cal. We linked 84,644 women in California's family planning program Family PACT and using a linkage between contraceptive dispensing claims who received oral contraceptives at California family planning clinic visits and subsequent unintended pregnancy.

Contraceptive continuation and pregnancies

An estimated 2.8% of women who were dispensed oral contraceptives in January 2006 conceived a pregnancy in the subsequent year whose resolution (birth, abortion, ectopic pregnancy or spontaneous abortion) was paid by Medi-Cal. Women who received a year's supply were less likely to have a pregnancy (1.2% compared to 2.9% of women getting 1 cycle and 3.3% of women getting 3 cycles).

Contraceptive continuation and pregnancies

Conceived in the subsequent year, by number of oral contraceptive packs dispensed in January 2006

<table>
<thead>
<tr>
<th>Cycles received at first visit in Jan 06</th>
<th>1</th>
<th>3</th>
<th>12-13</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuation at 15 months</td>
<td>21%</td>
<td>20%</td>
<td>40%</td>
<td>38%</td>
<td>21%</td>
</tr>
<tr>
<td>Switch to another primary method</td>
<td>11%</td>
<td>10%</td>
<td>7%</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>Pregnancy conceived*</td>
<td>2.90%</td>
<td>3.30%</td>
<td>1.20%</td>
<td>2.02%</td>
<td>2.80%</td>
</tr>
<tr>
<td>Induced abortion*</td>
<td>0.52%</td>
<td>0.69%</td>
<td>0.15%</td>
<td>0.35%</td>
<td>0.53%</td>
</tr>
</tbody>
</table>

*Includes only pregnancies in which medical care for the pregnancy outcomes was paid by Medi-Cal. All differences by number of packs dispensed are significant at 0.05 level using Chi-Square test.

Conclusions

Dispensing a year's supply is associated with a significant reduction in the odds of conceiving an unplanned pregnancy compared to dispensing just 1 or 3 packs. Dispensing a year's supply is associated with a 30% reduction in the odds of conceiving a pregnancy in the subsequent year and a 46% reduction in the odds of an abortion, controlling for age, race/ethnicity and previous pill use.

Possible explanations for the reduction in pregnancies:

- A selection effect whereby more compliant users are given a larger supply of oral contraceptives
- Differences in quality of care and subsequent contraceptive continuation between providers who can dispense on-site and those who cannot.
- Improved access and convenience results in higher continuation and fewer pregnancies among women given a year's supply.
- Having new packs on hand reduces the likelihood that a woman runs out of pills and becomes pregnant
- Being given a year's supply may enhance the expectation that the method is acceptable and safe and promotes continued use

References:

1 Foster DG, Parvataneni R, Thiel de Bocanegra H, Lewis C, Bradsby M, Darney P. Number of oral contraceptive pill packages dispensed, method continuation, and costs. Obstetrics & Gynecology 2006; 108: 1107-1114