PROGRESS IN FAMILY PLANNING

RESEARCH BRIEF

Free Pregnancy Testing Could Reduce Denial of Contraceptive Services: Findings from Zambia and Ghana

Objective

To determine how free pregnancy testing affects the immediate uptake of contraceptives among new family planning clients in Zambia and Ghana.

Methods

FHI 360/PROGRESS conducted a randomized study in 2009 and 2010 within 20 government family planning clinics in Zambia and Ghana. In each country, five clinics were randomly chosen to receive a supply of free pregnancy tests and five additional clinics were chosen as controls. Providers in the intervention clinics were supplied pregnancy tests, trained in their use, and instructed to use them as needed to help rule out pregnancy among their clients. Providers in the control clinics received no pregnancy tests or information about ruling out pregnancy among clients. Prior to the intervention, researchers gathered baseline data over three months on menstrual status, contraceptive method desired, and method received for more than 3,500 new clients. After the intervention, the project gathered the same type of data for three months. Baseline and follow-up data were compared between the intervention and control clinics to determine rates of denial of effective contraceptive methods. By tracking the number of pregnancy tests used in each intervention clinic, the study could estimate the cost of each denial of services that the tests averted.

Findings

- Overall, 44% of the clients were not menstruating — and thus were considered at risk of service denial — when they presented for family planning services.
- In Zambia, the baseline rate of service denial was similar among non-menstruating clients in the intervention clinics (15%) and clients in the control clinics (17%). At follow-up, the rate of service denial remained at 17% in the control clinics but decreased significantly to only 4% in the intervention clinics.
- Clients in the control clinics were estimated to be 4.4 times more likely than clients in the intervention clinics (95% confidence interval, 1.3 – 14.4) to be denied a family planning method in Zambia ($p = 0.0034$).
- In the Zambia study, results suggested that 17 clients would have been denied services if the free pregnancy tests had not been available. All of the tests used during the study in the Zambia clinics cost a total of only US $9.81. Hence, the estimated cost of a "denial averted" was only US $0.57 (i.e., $9.81 divided by 17 clients).
- In Ghana, adding pregnancy testing did not significantly increase the number of women getting contraceptive services.

Conclusion

Highly sensitive pregnancy test strips cost very little and fill an obvious gap when a client's history fails to exclude pregnancy. Results from Zambia suggest that the availability of free pregnancy testing reduced contraceptive service denial with statistical significance. While the inconclusive results from Ghana should be noted, the clearly positive results in Zambia, the very low cost of the intervention, and the risks of unintended pregnancy in developing countries suggest that free pregnancy testing should be made available in developing countries where service denial to non-menstruating clients remains a problem.

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Background

Because of uncertainty about a woman's pregnancy status, family planning providers in many developing countries routinely deny services to clients who are not menstruating.[1,2] Although very few of these women are actually pregnant,[3,4] denial of services can put them at risk of pregnancy as they wait for their next menses before returning to a clinic.

The scope of this problem is large. In many countries, nearly half of new family planning clients visit clinics when they are either amenorrheic or between menstrual periods. Research in one country suggests that nearly half of such clients are denied immediate services.[5] Other studies suggest a more modest — yet still problematic — proportion ranging from 5% to 16%.[6]

In response to this problem, a job aid called the "pregnancy checklist" was developed to help family planning providers exclude pregnancy with a reasonable degree of certainty.[3] Although the job aid has been shown to improve access to services when used correctly,[6] some providers do not use it because they do not trust the checklist or clients' responses to the questions on the checklist.

...common sense suggests that free pregnancy testing would make strong public health sense in developing countries where service denial to non-menstruating clients remains a problem.

In wealthy countries, family planning clinics use pregnancy testing to supplement or substitute for the client history on which the pregnancy checklist is based. In poorer countries, pregnancy tests are often perceived as too expensive for routine use in family planning. However, the price of highly accurate pregnancy tests has decreased significantly in recent years. Programs and donors can now purchase simple paper strip pregnancy tests for less than US $0.10.[7]

In spite of the low price of pregnancy tests, few developing countries have made pregnancy testing a routine part of family planning services. As a result, the impact of this service is unknown.

Study Design

FHI 360/PROGRESS conducted a randomized study to determine how free pregnancy testing affects the immediate uptake of effective contraceptives in two developing countries. The study was carried out in 2009 and 2010 in government family planning clinics in Central Province, Zambia, and in the Central Region of Ghana. Both areas are largely rural and are marked by poverty, high fertility rates, and low rates of modern contraceptive use.

In both Zambia and Ghana, Ministry of Health officials provided the researchers with a list of representative health centers in the areas. From each country's list, five clinics were randomly chosen to receive a supply of free pregnancy tests and five additional clinics were chosen to serve as controls. Clients from the intervention clinics were compared with clients from the control clinics on several variables related to their contraceptive preferences and uptake.

Data Collection

Before the pregnancy tests were made available in the intervention clinics, the researchers collected three months of baseline data from new clients in both the intervention clinics and the control clinics. For each client, family planning providers used a simple log to anonymously record the client's date of service, contraceptive method desired, and method received. If a client did not receive a method, the reason was documented. Menstrual status was also recorded for each client. Menstrual status was classified as currently menstruating, postpartum amenorrhea, or intermenstrual (between two normal menstrual periods).

After baseline data were collected, the intervention phase of the study began. Providers in the intervention clinics were shown how to properly use the pregnancy tests and were instructed to use them as needed to help rule out pregnancy among their family planning clients. Providers in the control clinics received no pregnancy tests and no specific instructions about ruling out pregnancy among their family planning clients.

Immediately after the pregnancy tests were provided to the intervention clinics, three months of follow-up data were collected in all 10 clinics in each country. The same log sheets that were used to collect baseline data were used to collect the follow-up data. Because the researchers sought to isolate the effect of pregnancy testing when compared with standard care, use of the pregnancy checklist was not included in the intervention.

Data Analysis

Changes between baseline data and follow-up data were compared between the two study groups to determine the effects of the intervention. Denial of effective contraceptive methods to non-menstruating women was the primary outcome assessed. A p-value of less than 0.05 was considered statistically significant. The number of pregnancy tests used in each clinic was also tracked to estimate the cost of each denial of services that was averted.

Menstrual Status

Data were collected from more than 3,500 new clients. Overall, 44% of the clients (similar proportions in Zambia and Ghana) were not menstruating when they presented for services. Women who were not menstruating were considered at risk of service denial because of uncertainty about their pregnancy status. Among the non-menstruating clients in Zambia, the proportion who had postpartum/lactational amenorrhea and the proportion who were between menstrual periods were equal. In Ghana, nearly two-thirds (63%) of non-menstruating clients were amenorrheic.

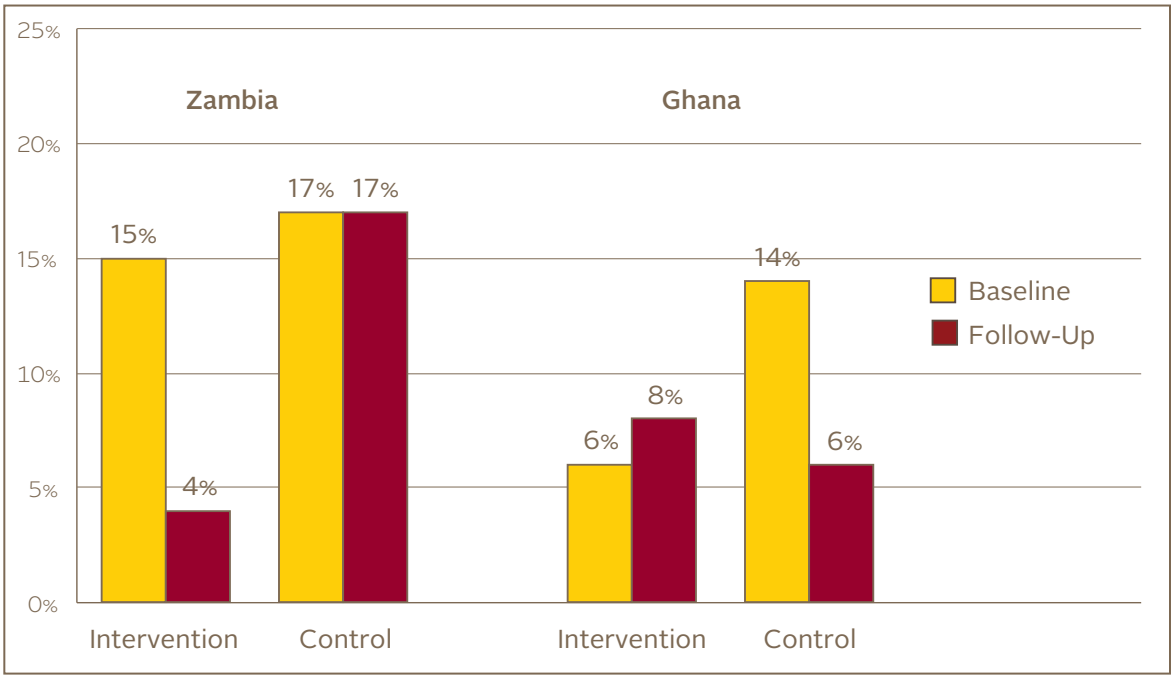
Denial of Contraceptive Services

In Zambia, clients in the intervention and control clinics faced similar rates of service denial at baseline (15% and 17%, respectively). At follow-up, service denial remained at 17% in the control clinics but decreased significantly to only 4% in the intervention clinics.

After accounting for clustering at the clinic level and adjusting for inter-menstrual status, clients in the control clinics were estimated to be 4.4 times more likely than clients in the intervention clinics (95% confidence interval, 1.3 – 14.4) to be denied a family planning method ($p = 0.0034$).

Based on the differences in denial between baseline and follow-up, 17 clients in the Zambia study would have been denied services if the free pregnancy tests had

Figure 1. Percentage of Clients Who Were Denied Contraceptive Services



not been available. All of the tests used during the study in all clinics cost a total of only US $9.81. Hence, the estimated cost of a "denial averted" was only US $0.57 (i.e., $9.81 divided by 17 clients).

The results from Ghana were less clear. At baseline, the risks of denial were different in the intervention and control clinics (6% and 14%, respectively). At follow-up, denial rates remained relevantly stable in intervention clinics (8%) but decreased to 6% in control clinics. In Ghana, adding pregnancy testing did not significantly increase the number of women getting contraceptive services.

Benefits of Free Pregnancy Testing

Taken alone, the results from Zambia suggest that the availability of free pregnancy testing significantly reduced contraceptive service denial in government clinics. However, even after discussions with the country research team, no explanation was found for the results in Ghana, where denial rates appeared to drop in control clinics but not in intervention clinics.

The inconclusive results from Ghana preclude an unqualified recommendation for free pregnancy testing in family planning clinics. However, the evidence from Zambia, as well as common sense, suggests that free pregnancy testing would make strong public health sense in developing countries where service denial to nonmenstruating clients remains a problem.

Highly sensitive pregnancy test strips cost very little and fill an obvious gap when a client's history fails to exclude pregnancy. Wider availability of pregnancy tests could have other benefits as well. Free testing could encourage women to enter the health system. Although they may enter so that they can know their pregnancy status, those who are pregnant can get a timely referral for antenatal services. Those who are not pregnant can have immediate access to family planning services.

There are other benefits as well. Pregnancy tests can help rule out pregnancy when a woman using the injectable depot-medroxyprogresterone acetate (DMPA) presents more than one month late for a re-injection, when she is likely to be amenorrheic but is at high risk for being denied same-day provision of a method by a provider8 Also, for women who are using progestin-only hormonal contraceptives, pregnancy testing can reassure those who worry that they are pregnant when they experience the normal side effect of amenorrhea.

Recommendations

Despite the advantages of free pregnancy testing, barriers to wider availability still exist. The poorest developing countries depend on donors such as the United Nations Population Fund (UNFPA) and the U.S. Agency for International Development (USAID) for contraceptive commodities. These donations allow countries to offer family planning services to their populations at little or no cost to clients. However, although donors provide complementary products like latex gloves and sharps containers, they do not usually provide pregnancy tests.

During this study, a three-month supply of pregnancy tests for the five intervention clinics in Zambia cost a total of less than US $10. Given the very low cost of pregnancy tests and their potential role in improving women's access to family planning, donors should consider providing pregnancy tests along with their other contraceptive commodities.

If pregnancy tests do become more widely available in family planning programs in developing countries, a strong role should remain for the simple, low-tech pregnancy checklist to help providers rule out pregnancy. Because paper strip pregnancy tests cannot detect pregnancy earlier than a week or two after a missed period, they can be wasted on some women who present at a family planning clinic between menses. A good rule is to take a history first, using the pregnancy checklist if possible, and use pregnancy tests only when necessary. Ideally, family planning providers in developing countries should be trained to use both client histories with the pregnancy checklist and pregnancy tests to exclude pregnancy.

A key next step would be to address procurement considerations, such as logistics and quality control, so that pregnancy

tests are reliably delivered to family planning clinics and used correctly. Several steps indicate some progress in this direction. In Zambia, the study findings led the national Family Planning and Technical Working Group to decide to scale up use of pregnancy tests along with the pregnancy checklist in family planning clinics. Pregnancy tests will be included in upcoming quantification meetings in the country where national commodity procurement recommendations will be developed for the coming year.

In addition, the findings have generated interest among the international community. At the 2012 annual membership meeting of the Reproductive Health Supplies Coalition, the study results contributed to a decision to pursue pregnancy tests as one of the focus technologies by the Coalition Caucus for New and Underused Reproductive Health Technologies.

These steps can help to move toward more universally providing effective contraception on the same day that a woman presents for contraceptive services. A pregnancy test can help achieve this goal, and in turn, contribute to reducing the high maternal mortality and morbidity rates in many developing countries.

Given the high maternal mortality and morbidity rates in many developing countries, every effort should be made to provide effective contraception on the same day that a woman presents for contraceptive services.

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