



ARGENTINA: Can Short Term Incentives Change Long Term Behavior?

It's hard to change how organizations do things, whether it's how they build a product or how they provide service to a patient. Even when there are guidelines showing best practices, there's always

a cost to instituting new routines. There's also a cost to not making changes, especially when it comes to health care. Prenatal care started at the right time, for example, can improve the odds of a healthy

birth. Started late, or not provided at all, the mother and her baby are at risk. Pay-for-performance schemes have successfully improved the quality and timing of healthcare, but maintaining such bonuses over the long term is costly and too expensive for many health budgets. Are there better ways to promote new practices?



The World Bank partners with governments to provide innovative solutions for ensuring that pregnant women and their young children get the care they need to grow up healthy. Knowing what works—and what doesn't—is critical to succeeding. In Argentina, the World Bank supported the government's Plan Nacer health program that gives provincial authorities financial incentives for enrolling pregnant women and children and for meeting specific primary health goals. As part of this, researchers tested whether providing a temporary increase in financial incentives to clinics would encourage providers to initiate care for pregnant women in the first trimester—and whether this would continue even after the increase stopped. The evaluation—the first of its kind to examine the effects of short-term incentives on long-term performance—found that the boost worked and the better care continued even after the incentives ended. **The results provide valuable insights into the possibility of using temporary incentives to change behavior over the long term.**

HEALTH

Context

After an economic crisis in Argentina in 2001 plunged millions of people there into poverty and worsened health outcomes, especially for women and children, the government crafted a new, national plan for a provincial health insurance program for the poor. The program, called Plan Nacer, was specifically designed for pregnant women without health coverage and children up to the age of six (the program has since been expanded to include other groups). Under the program, which was launched in 2005, the national government transfers money to the provinces to use for health services, basing part of the payment on how well the province has done at meeting certain health indicators. An evaluation of the program found that setting up the financial incentives

this way led to an improvement in health care, as measured by a drop in low birth weight babies and a decline in newborn deaths. (See Evidence to Policy Note *ARGENTINA: Can Performance Payments Improve Newborn Health?*)

Despite improvements in health care and outcomes, only a third of pregnant women covered by Plan Nacer were coming in for their first prenatal visit in their first trimester, an important time for health workers to identify problems and advise women on proper nutrition. The National Ministry of Health, jointly with the provincial authorities and the World Bank, decided to test whether temporarily offering clinics higher payments for starting prenatal care in the first trimester would help.

The eight-month intervention was implemented in primary health care clinics in Misiones province, one of the poorest in the country and a place where pregnant women and young children are most at risk of dying. When the pilot was launched in 2010, Plan Nacer had

been operating in Misiones for five years. Under the pilot, Plan Nacer clinics assigned to be part of the evaluation agreed to a new fee structure based on getting women into clinics for prenatal treatment before the start of their 13th week of pregnancy.

Evaluation

Of the 262 primary care clinics in Misiones province, 37 were included in the evaluation. Eighteen of these clinics were randomly assigned to the treatment group and 19 were assigned to the control group. Clinics in the treatment group followed a modified fee schedule for prenatal visits that paid them \$120 ARS (about US \$31 based on the exchange rate at the time) if the first prenatal visit occurred before the 13th week of pregnancy. Clinics received \$40 ARS (about US \$10.30) for each subsequent visit. The control group clinics continued on the regular fee schedule, under which clinics were paid \$40 ARS for any prenatal visit—regardless of when in the pregnancy the visit took place. Because of compliance issues, however, only 14 clinics actually received treatment, and one of the control clinics was offered treatment accidentally. Another clinic closed before the intervention began.

Public health clinics in the province have an automated health records information system, which include dates of visits, services delivered, and birth weights. Using patients' national identity number, researchers were able to merge health data with the program beneficiary status.

Researchers focused on services for pregnant women who were Plan Nacer beneficiaries at the time of their first prenatal visit, but information on birth outcomes was only available

for a subset of pregnant women. To figure what week of pregnancy women were in when they made their first prenatal visit, researchers measured the difference between the first prenatal visit and the patient's last menstrual date, which is used by health care workers to calculate a baby's due date. External auditors verified the clinical records, and researchers cross checked hospital records to verify gestational age at birth and rule out the possibility that clinics misreported the stage of pregnancy to secure the additional incentives.

Data was separated into four groups: before the pilot was implemented from January 2009 to April 2010; when the pilot was implemented from May 2010 to December 2010; a follow up period between January 2011 and March 2012, after the pilot had ended; and then a final follow-up period from April 2012 through December 2012. Because the province instituted a new information system for data starting in April 2012, it wasn't easy to compare data available in the last evaluation round to data available previously. As a result, the impact of the program after incentives were removed is harder to measure at the two-year follow up mark.

Researchers also conducted in-depth interviews with health care workers to better understand what methods they used to initiate early prenatal care.

Findings

Giving clinics higher payments for prenatal visits that occurred before the end of the first trimester improved the rate of early prenatal care.

In health clinics that followed the new fee structure, pregnant women had their first prenatal visit 1.5 weeks earlier

than women who went to clinics that were paid the same fee regardless of when the visit took place. Overall, 42 percent of pregnant women treated by health clinics that qualified for the higher payments had their first prenatal visit before their 13th week of pregnancy, compared with 31 percent of women in clinics that followed the tradi-

This policy note is based on World Bank Policy Research Working Paper 7348, "Long Run Effects of Temporary Incentives on Medical Care Productivity," Pablo Celhay, Paul Gertler, Paula Giovagnoli, Christel Vermeersch; June 2015. The impact evaluation was supported by the Health Results Innovation Trust Fund (HRITF) and the Strategic Impact Evaluation Fund (SIEF). The working paper can be found at: <http://documents.worldbank.org/curated/en/2015/06/24736285/long-run-effects-temporary-incentives-medical-care-productivity>

tional fee payment schedule. The rate of initiating prenatal care in the first three months rose by 34 percent in clinics that followed the new structure.

Even after the incentives ended, clinics that had received the higher fees continued to have improved rates of early prenatal visits among their pregnant patients.

The higher levels of early care persisted for at least 15 months and likely continued for more than 24 months after clinics stopped receiving the higher fees for prenatal care that happened in the first trimester. Long after the higher payments stopped, women in the treatment group were still starting prenatal care 1.6 weeks before women in the control group. Overall, there was an eight percentage point difference in the rate of first trimester care between women seen by clinics that had received extra fees and those seen by clinics that were paid as usual.

The higher payments resulted in changes in medical care routines, as clinics devised creative ways to identify women in the first trimester of pregnancy and to encourage them to come in early for prenatal care.

The higher fees motivated clinics to create new strategies for making sure pregnant women had their first prenatal care visit before the 13th week of pregnancy. In some clinics, for example, individual team members received bonus payments based on the number of pregnant women they brought in every month. In other clinics, staff would check whether female patients were picking up their birth control pill prescriptions and then prioritize home visits to those who hadn't.

Clinics also tried to reach out directly to women who already had children, since they were more likely to delay the first prenatal visit, as compared with women who were pregnant for the first time. Since these women often were eligible for free milk for their older children, health workers would talk to them during the milk distribution, ask when they had last menstruated and give the women instant-read pregnancy tests to those whose menstruation was late. In some clinics, workers realized that adolescents were particularly unlikely to receive early care, since their pregnancy was often a secret from their parents, and so health workers changed the timing of home visits so that they'd be more likely to find the teenager home alone. These new and expanded outreach methods were sustained, even after the incentives stopped.

The new focus on getting pregnant women in for prenatal care didn't lead clinics to cut back on other services they provided.

There was no evidence of any negative spillover onto other services, such as the overall number of health visits by women and children. For example, before the pilot program started, more than 80 percent of pregnant women received a tetanus vaccine. The figure stayed constant during and after the pilot.



Early prenatal care is important for the health of mother and child—but the pilot didn't lead to any drop in the rate of premature birth or increase birthweight.

Researchers believe there may be a number of reasons for the lack of any measured impact on birthweight and premature births. First, the sample was relatively small to detect any statistically significant change. Second, it may be that best practices matter when it comes to prenatal care, but mainly for women who are high-risk because of substance abuse, smoking, pre-existing conditions or because they don't see a doctor until close to the end of their pregnancy. It's possible that high-risk women weren't the ones who changed their behavior and came in for prenatal care in the pilot—but creating a more targeted program is difficult.

Still, the pilot showed that it's possible to get health clinics to change how they do things—and that the new behavior sticks even after incentives are removed.

The incentives convinced health care workers to overcome their resistance to change, which researchers believe to be one of the biggest barriers to compliance with clinical care guidelines. The increased fees probably helped cover the

costs associated with lowered productivity while the health care workers learned the new routines, making it worthwhile for clinics to institute changes.

Conclusion

As the results of this impact evaluation show, temporary incentives are an effective way to motivate health care workers to change their routines so that ultimately, they're providing better care for the people they're tasked to serve. The results will be particularly useful to policy makers looking to make long-term changes more cheaply than traditional pay-for-performance programs.

Nevertheless, the results also highlight the challenge of improving birth outcomes for high-risk populations. As researchers continue to search for innovative ways to help the world's poor, the lessons from this intervention underscore the importance of providing solutions that specifically target those who need it most.

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1818 H STREET, NW WASHINGTON, DC 20433

Produced by the Strategic Impact Evaluation Fund
Series Editor: Aliza Marcus
Writer: Daphna Berman