

# ARGENTINA: Can Performance Payments Improve Newborn Health?

Poor children face barriers to healthy development even before they are born. Their mothers may not have nutritious food or proper prenatal care, which can harm a baby's brain development when it needs it most. Mothers may not deliver in a health

facility nor have a skilled birth attendant present, increasing the risk of complications and ultimately putting their life and that of the baby at risk. How can pregnant women be assured that they will receive the care needed to protect

children from the worst impacts of poverty while they are at their most vulnerable? Governments have successfully used the "pay-for-performance" model to improve the quality and use of health care, such as increasing vaccination rates or prenatal visits. However, this may not be enough to ensure the desired health outcomes. Can payments be linked to actual health benchmarks—such as lowering the rate of newborn deaths?

The World Bank actively partners with governments around the world to develop innovative approaches to improving lives and boosting shared prosperity. Knowing what works is part of succeeding and impact evaluations often are used to measure whether programs are having the desired effect. In Argentina, the World Bank supported a government program, Plan Nacer, to improve maternal-child health outcomes through increased coverage and quality of health services. The program gives provincial authorities financial incentives for enrolling pregnant women and children in the program and for achieving specific primary health care goals. An impact evaluation found that Plan Nacer improved the birth weight of babies and reduced newborn deaths, while improving access to public health facilities and boosting the quality of care. **The Government of Argentina has scaled up the program—now known as Program Sumar—across the country, reaching close to nine million people by expanding coverage to youth and women below the age of 65. This has since become a model for other Latin American countries, as governments seek to improve health care for their poorest citizens.**

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## Context

An economic crisis in Argentina that broke out in 1998 and peaked in December 2001 pushed millions out of their jobs and into poverty. By 2001, more than half the population was living below the poverty level, forcing many to rely on the publicly financed health system when they needed care. The health system faltered under the strain of the increased demand just as the government was cutting its own outlays across the board. Infant mortality worsened, especially in the poor northern provinces, where rates were as high as 25 deaths for every 1,000 live births.

In 2004, the Government of Argentina, with financing from the World Bank, launched Plan Nacer, a health program

for uninsured pregnant women and children under the age of six with a special focus on the first year. Plan Nacer provides additional funding beyond the existing public health system's budgets, while creating incentives to encourage more effective use of resources. Provincial governments receive an additional \$5 a month for every pregnant woman or child under the age of six enrolled in Plan Nacer, and up to \$3 a month per person for meeting the health targets for the eligible population.

Health targets are measured by a number of so-called tracers—outcomes that reflect the quality and frequency of the care. For example, if pregnant women receive a prenatal checkup before their 20th week of pregnancy, this indicates

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that the clinic has succeeded in the goal of early pregnancy detection. Higher birth weights (over 2,500 grams, or five pounds) indicate that the clinic's prenatal care is of good quality; if children under the age of 18 months are vaccinated, this shows that the clinic is meeting the immunization target. The performance targets for each tracer for each province are set annually and measured using administrative data. The performance payment is divided equally among the 10 tracers, with payments made based on how well the provinces do at meeting the targets. The provinces are then

responsible for paying clinics according to the level of care they have provided, based on services delivered to beneficiaries and billed to Plan Nacer.

Plan Nacer was launched in nine of Argentina's poor northern provinces where infant mortality was the highest. At the time, the nine provinces together had a population of 8.26 million, with an estimated 638,000 uninsured women and children. By December 2008, enrollment was at 82 percent of the eligible population and the participation rate among health providers reached 57 percent.

## Evaluation

Seven of the nine provinces targeted initially by Plan Nacer were included in the impact evaluation, which was supported by the Strategic Impact Evaluation Fund and the Health Results Innovation Trust Fund. Researchers relied on the geographic phasing of clinics into the program over time within each province to create treatment and control groups. They used the difference-in-difference method to determine the change in outcomes for people at health clinics that were incorporated into the program at the beginning of Plan Nacer's implementation and clinics that were incorporated into the program later on. The evaluation was designed to measure the impact of Plan Nacer on beneficiaries who received care from a Plan Nacer clinic; the impact on non-beneficiaries who received care from Plan Nacer clinics; and the impact on the population in general regardless of whether or not they were enrolled in Plan Nacer.

The evaluation relied on a database specifically created for this. It used different data sources including birth and medical records at maternity hospitals; the Plan Nacer beneficiary roster and Plan Nacer pharmaceutical records at the individual level; the 2001 population census that included the number of eligible mothers in a clinic's area; and the geographic coordinates for health facilities. This data was merged to create a comprehensive list of the births in maternity hospitals from 2004 to 2008 in the seven northern provinces. This allowed researchers to identify mothers who had become beneficiaries before birth, the clinic used by the mother for prenatal care, and the date when the clinic was incorporated into the Plan Nacer program. Researchers then analyzed these databases to determine the frequency of prenatal visits, quality of care, and birth outcomes. For details of the data analysis, please see the full paper.\*

## Results

**The likelihood that a newborn baby would die dropped by 74 percent among Plan Nacer beneficiaries who gave birth in a hospital with a large maternity practice.**

Plan Nacer succeeded in hitting one of its main targets—cutting the rate of newborn deaths. The 74 percent drop was seen among Plan Nacer beneficiaries who gave birth in

a hospital with a large maternity practice, defined as at least 1,000 births a year.

Women enrolled in Plan Nacer received better prenatal care and they started getting it earlier in their pregnancy. The clinics they went to had more autonomy in the use of funds, all of which helped ensure that pregnant women got the care necessary to improve their babies' health. Even

\*This policy note summarizes the evaluation discussed in World Bank Policy Research Working Paper 6884, "Rewarding Provider Performance to Enable a Healthy Start to Life: Evidence from Argentina's Plan Nacer," Paul Gertler, Paula Giovagnoli, Sebastian Martinez, May 2014. Available at [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2014/05/21/000158349\\_20140521140101/Rendered/PDF/WPS6884.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2014/05/21/000158349_20140521140101/Rendered/PDF/WPS6884.pdf)

women who weren't enrolled in the program but who went to a Plan Nacer clinic for care benefitted: the rate of neonatal mortality among babies born to these women declined by 22 percent.

**The mortality rate for newborns was reduced thanks to two things—a decline in the probability that a baby would be born with a low birth weight, and better care for low birth weight babies.**

A baby's birth weight is a good indicator of child's future health and abilities. Low birth weight, defined as less than 2,500 grams—or five pounds—is associated with higher rates of infant death, more health problems and delays in learning later on in life. The probability of having a low birth weight baby was reduced by nine per-



cent for all women who went to Plan Nacer clinics—regardless of whether the women were enrolled in the program—and for Plan Nacer beneficiaries, the probability decreased by 19 percent.

The probability of a low birth weight baby dying was cut by more than half if the mother was enrolled in Plan Nacer, compared with babies born to mothers who didn't go to a Plan Nacer clinic. Overall, researchers calculated that 54 percent of the drop in newborn mortality was due to the decline in low birth weight babies, and the remaining 46 percent was due to improved care for babies born under five pounds.

**Women in Plan Nacer went for more prenatal visits and were less likely to deliver by cesarean section.**

Prenatal visits are important because they allow health workers to identify problems early on and to provide the preventive care to protect women's health and the health of their babies. Women enrolled in the program were 5.6 percentage points more likely to receive the recommended tetanus vaccine (translating into almost a 25 percent drop in the percent of women who didn't get it). There also was a 21 percent drop in birth by cesarean sections—an indication of quality prenatal care. Overall, for every 100 women enrolled in Plan Nacer, there were 68 additional prenatal care visits.

**The program encouraged accountability and results, not just procedures.**

When the program was designed, provinces received more control over health care because they had a say over how to distribute funds to clinics that enrolled in Plan Nacer. At the same time, provinces were held accountable because they wouldn't receive funding from the national government unless certain health targets were reached, including enrolling more eligible women and children in Plan Nacer. The

**Examples of Plan Nacer Targets**

- First prenatal checkup before week 20 of pregnancy
- APGAR score of over 6
- Birth weight more than 2,500 grams
- Children under 18 months given vaccines
- Mothers receive reproductive counseling within 45 days of delivery
- Preventative checkups for children under 6
- Staff trained to provide care for indigenous populations

two-pronged payment approach gave local governments an incentive to ensure that clinics enrolled potential beneficiaries and an incentive to ensure that clinics did a better job taking care of them.

**The program has provided millions of services to the people who need it most, while proving cost effective in terms of helping people stay healthy.**

In the nine provinces where Plan Nacer started, spending on health care rose 1.4 percentage points to 3.5 percent of the provincial budgets between 2005 and 2008, for a total of \$107 million spent on the health program. Most of the money, about 71 percent in 2008, went to clinics for services provided to beneficiaries. The second largest category was investment in medical equipment and other facility necessary hardware. Most of this spending happened in the first year, when it made up 30 percent of spending, falling to eight percent in 2008. As the program has grown, overhead costs have decreased, from 16 percent of total provincial health expenditures in 2005 to just 11 percent by 2008. The program also has been cost-effective when compared with the number of years of life that could be lost because of illness, disability or early death.

## Conclusion

Plan Nacer's incentive-based model helped improve maternal and new born health, and ensure that children have the chance at a good start in life. The evidence from this evaluation will equip policy makers in low and middle income countries with additional information when designing health

programs aimed at improving specific outcomes. As governments around the world look for ways to create effective programs to help their poorest citizens, the results from this impact evaluation provide an example of how health sector reforms can give children the right start in life.

The Strategic Impact Evaluation Fund, part of the World Bank Group, supports and disseminates research evaluating the impact of development projects to help alleviate poverty. **The goal is to collect and build empirical evidence that can help governments and development organizations design and implement the most appropriate and effective policies for better educational, health and job opportunities for people in developing countries.** For more information about who we are and what we do, go to: <http://www.worldbank.org/sief>.

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