USAID
FROM THE AMERICAN PEOPLE

P4P Case Studies

USING SUPPLY-SIDE PAY FOR PERFORMANCE TO STRENGTHEN HEALTH PREVENTION ACTIVITIES AND IMPROVE EFFICIENCY: THE CASE OF BELIZE

By Michelle Vanzie, Natasha Hsi, Alix Beith, and Rena Eichler

Inside

Supply-side pay for performance (P4P) in Belize consists of monthly capitation payments, discounted based on achievement of monthly performance indicators by contracted public and private primary health care clinics, plus annual performance awards to the clinics. The goal of the scheme is to increase access, improve the quality of services, and enhance the productivity of health care workers. The scheme specifically focuses on pre- and postnatal care and deliveries, and primary care for chronic illnesses such as diabetes, hypertension, and asthma. Belize's National Health Insurance (NHI) administers the P4P scheme and the Ministry of Health determines policies that include defining the packages of services and licensing and accrediting health facilities. The program started as a pilot in 2001 and currently covers 40 percent of the population. Scheme managers are considering a shift from rewarding process and some output measures to rewarding output and outcome measures. However, support for the scheme by political leaders is weakening and hence, its future is unclear. This case study describes P4P implementation through the NHI and Social Security Board and offers lessons for countries that are considering implementing similar NHI-led schemes.

HEALTH SYSTEMS 20/20

ABOUT THE P4P CASE STUDIES SERIES

Pay-for-performance (P4P) is a strategy that links payment to results. Health sector stakeholders, from international donors to government and health system policymakers, program managers, and health care providers increasingly see P4P as an important complement to investing in inputs such as buildings, drugs, and training when working to strengthen health systems and achieve the Millennium Development Goals (MDGs) and other targets that represent better health status for people. By providing financial incentives that encourage work toward agreed-upon results, P4P helps solve challenges such as increasing the quality of, as well as access to and use of health services.

Many developing countries are piloting or scaling up P4P programs to meet MDGs and other health indicators. Each country's experience with P4P is different, but by sharing approaches and lessons learned, all stakeholders will better understand the processes and challenges involved in P4P program design, implementation, evaluation, and scale-up.

This Health System 20/20 case study series, which profiles maternal and child health-oriented P4P programs in countries in Africa, Asia, and the Americas, is intended to help those countries and donors already engaged in P4P to fine-tune their programs and those that are contemplating P4P to adopt such a program as part of their efforts to strengthen their health system and improve health outcomes.

Annexed to each case study are tools that the country used in its P4P program. The annexes appear in the electronic versions (CD-ROM and Health Systems 20/20 web site) of the case study.

Rena Eichler, Ph.D
Technical Advisor, Pay for Performance
Health Systems 20/20 Project

ACRONYMS

BHIS	Belize Health Information System
CEO	Chief Executive Officer
IADB	Inter-American Development Bank
MOH	Ministry of Health
NHI	National Health Insurance
P4P	Pay for Performance
SSB	Social Security Board

INTRODUCTION

P4P payments focus specifically on pre- and postnatal care and deliveries, and primary care for chronic illnesses such as diabetes, hypertension, and asthma.

This case study looks at the pay-for-performance (P4P) experience of the health sector in the Central American country of Belize. Since 2001, Belize has been implementing a supply-side P4P scheme to strengthen health prevention activities, boost primary care, improve service quality, and increase worker productivity. The scheme focuses on pre-natal and postnatal care and deliveries, and primary care for chronic illnesses such as diabetes, hypertension, and asthma. Financial incentives linked to performance on pre-determined targets are given to public and private health centers.

WHAT DROVE THE DECISION TO IMPLEMENT P4P IN BELIZE AND HOW DID IT EVOLVE?

In 1994, the government of Belize became concerned with improving health service delivery and increasing access to quality care. This led to discussions with the Inter-American Development Bank (IADB) about funding to support health sector reform. The Cambridge Consulting Corporation and Resources Management Corporation provided technical assistance to support the development of government policies to improve the quality and allocation of health services. Subsequently, in 1998, the Health and Life Sciences Partnership was hired to further develop the options presented to the government. As a result, the government embarked upon three health system reforms: organizational restructuring of the Ministry of Health (MOH), rationalization and upgrading of health facilities, and financing of health services. The National Health Insurance (NHI) program was established as the primary funder and purchaser of health services. The IADB and Caribbean Development Bank provided technical assistance for NHI design through the Belize Multilateral Investment fund. Key stakeholders in NHI development were the MOH, the Belize Medical and Dental Association, and the Social Security Board (SSB).

The NHI program was envisioned to be an independent authority with a sustainable source of funding to be used to purchase health services. In reality, it was made a department of the SSB, because that entity already had in place systems to collect premiums and pay providers; it also had a unique identification system for the population. The Cabinet agreed that, for the sake of transparency and accountability, the SSB was best placed to manage NHI.

The NHI program was intended to remedy obstacles to access and poor service quality by strengthening the primary care program, opening new clinics in both the public and private sectors, and improving quality of care. Potential sites for new clinics were identified based on a goal of enrolling 12,000 people per primary care physician and other criteria. Where public clinics already existed, the NHI contracted with them. If the potential site had no public service providers, private clinics were invited to bid. In contrast to other countries in the region, no clinic in Belize is owned by the Social Security institution; all clinics are publicly or privately owned and NHI pays, monitors, and evaluates them "on behalf" of the MOH.

The P4P scheme sought to improve quality, increase productivity, reduce unnecessary prescribing of tests and imaging, and trigger more efficient resource planning. As a potential way to strengthen primary care prevention activities, it focused on pre- and postnatal care in selected geographic areas and on two chronic diseases that are pervasive throughout the country: diabetes mellitus and hypertension. While many women in Belize have at least one antenatal care visit (94 percent in the 2003–08 period), significantly fewer (76 percent in the same period) have the often-recommended four visits.[1] Regarding the chronic illnesses, recent estimates put the overall prevalence of diabetes mellitus at 13.1 percent of the population, and of hypertension at 28.7 percent (Gough et al. 2008). Diagnosis and treatment of both illnesses are clearly increasing: in 1999, diabetes mellitus and hypertensive diseases were, respectively, the number 10 and 12 causes of hospitalization; by 2005, they had risen to 7 and 9 (Gough et al. 2008). Also in 2005, these two illnesses were the first and second leading causes of death in Belize (Gough et al. 2008).

1 UNICEF child statistics website for Belize: http://www.unicef.org/infobycountry/belize_statistics.html. Accessed April 22, 2010.

GENERATING BUY-IN: FROM PROPOSAL TO DECISION TO IMPLEMENT P4P

The performance-based incentive program was not part of the original design of NHI but it became a formal part of the program following a recommendation by Cambridge Consulting Corporation and as a result of a six-month pilot project in 2001 that took place in Belize City Southside and covered 36,856 people. The popularity of the pilot project and full Cabinet support led to the project being expanded to the southern parts of the country in 2006. Several problems arose, however: On the demand side, project popularity meant that more people wanted to participate in the program than there was capacity to provide services. A cost-related challenge was that the per capita payment encouraged over-referrals, resulting in the need to cap referrals to control the program costs. Some private providers initially resisted scheme implementation, fearing their support service referral patterns would be regulated, which would have an impact on subsequent earnings, but this initial resistance was quickly overcome once private providers saw benefits from the pilot program.

P4P SCHEME DESIGN: THE WHAT, WHO, AND HOW

WHOS OF DESIGN

The NHI program purchases health services on behalf of the MOH. The MOH develops policy, determines the package of services to be purchased by the NHI, licenses and accredits the health facilities, and designs criteria for the selection of the health facilities to be included in the NHI program. The NHI is ultimately responsible for all of the management functions of the P4P scheme: selecting health facilities, designing contracts and performance agreements, negotiating the contract terms and finalizing contracts, monitoring and validating results, and transferring the payment to the recipient.

Key NHI staff who administer the P4P scheme include the NHI general manager, the quality control officer, the resource officer, the primary care coordinator and the IT administrator. All staff report to the general manager who in turn reports to the CEO of the SSB.

INCENTIVES AND TARGETS

Contracted health clinics, both public and private, must fulfill monthly and annual performance indicators to earn their incentive payments.

MONTHLY PAYMENTS

The NHI pays the clinics a monthly member capitation payment; "members" are persons enrolled on a clinic roster. Clinics, therefore, have an incentive to register as many people as they can. Each month, the NHI pays clinics 70 percent of the member capitation payment upfront. The remaining 30 percent of the payment depends on how the clinic performs on groups of indicators that lead to scores for efficiency (70 percent of the withheld amount), quality (20 percent of the withheld amount), and administrative processes (10 percent of the withheld amount). If an indicator is not fully achieved, then the proportional weight is deducted from the clinic's total potential payment for that month. A very low performing clinic could potentially receive only 70 percent of the capitation payment, though this has not occurred. The total potential payment is a per capita allotment multiplied by the number of people registered. Table 1 shows an example of how the indicators are valued and measured and potential maximum payment a clinic can receive with 12,000 enrollees. Targets were originally developed in 2002 and implemented in 2003 as part of technical assistance provided by the Cambridge Consulting Corporation. These original targets, which are in line with national targets, continue to be used today.

TABLE 1. EXAMPLE OF MAXIMUM MONTHLY PAYMENT

Monthly Indicators	How Measured	Performance Standard	Maximum Amount (US dollars)
Efficiency Indicators: (70%)			$15,876
1. Productivity per GP team/day	Database exported to NHI by clinic	28-36 pts/shift	$3,176
2. Rational drug usage (drugs/encounter)	Database exported to NHI by clinic	<2.0	$3,176
3. Rational imaging usage (tests/encounter)	Database exported to NHI by clinic	<0.5	$3,176
4. Rational laboratory usage (tests/encounter)	Database exported to NHI by clinic	<1.5	$3,176
5. Completeness of encounter forms/rostered patients	Survey (bi-annual survey implemented by NHI)	99% forms complete	$3,176
Quality Indicators: (20%)			$4,536
6. Patient satisfaction: survey	Survey (bi-annual survey implemented by NHI)	>80 patient satisfaction	$2,268
7. Medical Records compliance	Random auditing of medical records	99% compliance	$2,268
Administrative Indicators: (10%)			$2,268
8. Unreported encounters/activities	Database exported to NHI by clinic	<0.5% margin of error	$1,134
9. Data entry errors	Database exported to NHI by clinic	<1.0% margin of error	$1,134

Note: Assumes clinic with 12,000 enrolled members at US$6.50 per person per month.

ADDITIONAL BONUS PAYMENT

In addition to the monthly incentive payment, participating clinics can receive an annual bonus, equivalent to 10 percent of total annual earning, if they meet a minimum overall score of 70 percent for already established clinics or 60 percent for newly established clinics. Annual performance bonus indicators used to determine the financial incentive amount seek to promote delivery of prevention programs, quality of care and use of clinical protocols, patient satisfaction, and improved health outcomes. The indicators are the same for all public and private clinics contracted by the NHI and are established by the MOH and NHI. Once a clinic meets the minimum score needed, 10 percent of annual revenues generated is calculated. Total bonus payments are determined by distributing the potential maximum bonus amount according the weights for each indicator in Table 2. Clinics receive annual bonuses for each achieved target. The indicator list, targets, and means of verification are listed in Table 2.

TABLE 2. KEY PERFORMANCE INDICATORS FOR ANNUAL BONUS PAYMENTS FOR BELIZE CITY PRIMARY CARE PROVIDERS, APRIL 1–DECEMBER 31, 2009

Primary Care Providers (PCPs)	Target	Bonus	Means of Verification
At least 90% of the GPs and nurses have received training on protocols in the last year (Chronic Disease Management Protocols)	90%	5%	Report from PCPs on training with list of participants signatures
Percentage of clinical records with incorporated forms and complete information*	80%	15%	Audits by NHI
System for suggestions/complaints in place	Yes	5%	Facility evaluation by NHI (direct observation)
Percentage of complaints resolved within two weeks	80%	5%	Facility evaluation by NHI (direct observation)
At least 85% of PCP patients expressed full satisfaction** with regard to services received from the PCP	85%	15%	Patient Satisfaction Survey by NHI
Percentage of women age 19-64 who had a Pap smear test in the last two years	50%	10%	Reports from PCPs and data analysis by NHI
Percentage of pregnant women with one prenatal care visits during the first trimester	50%	10%	Reports from PCPs and data analysis by NHI
Percentage of high-risk pregnancy cases with at least seven prenatal care visits during their pregnancy period	80%	10%	Reports from PCPs and data analysis by NHI
Percentage of men over 50 yrs of age who had Prostate Specific Antigen (PSA) test a during the past two years	30%***	10%	Reports from PCPs and data analysis by NHI
Compliance with Medical Protocols implementation (diabetes, hypertension, and asthma)$^{\lambda}$	75%	15%	Protocol audits by NHI
		100%	

* See Annex A for the form used to conduct the internal medical record audit.

** See Annex B for the patient satisfaction survey questionnaire.

*** This target is 20%, rather than 30%, for Southern Region PCPs.

λ See Annexes C, D, and E for audit tools for diabetes, hypertension, and asthma, respectively.

PAYMENT PROCESS

The NHI makes the incentive payments to each clinic. It is up to the clinic administration to distribute the payment; that is, each clinic can choose how much of the payment is used to pay personnel vs. investing in infrastructure or other inputs. In public clinics that receive a bonus, the usual policy is for all staff to get a $300 bonus.

START-UP: SYSTEMS AND PERSONNEL INVESTMENTS NEEDED TO GET P4P UP AND RUNNING

Prior to the introduction of the NHI, personnel needed to be hired and the information system needed to be strengthened. The NHI information system, which registers enrollees and processes provider claims, duplicates some of the information managed through the MOH's Belize Health Information System (BHIS) leading to the recommendation to integrate the two systems. However, both systems are still being used in a parallel manner. The MOH is currently trying to develop the capacity to collect and analyze information on clinic activity within the BHIS.

Training programs were developed and implemented jointly by the MOH and NHI to teach health workers and managers in contracted public and private clinics their new roles and the performance-based aspects of the program. Training is ongoing, but a more structured and systematic training and refresher course schedule for all affected clinic staff is needed.

To increase the population's registration with primary care providers and, hence, demand for services, the NHI, SSB, and vital statistics office has carried out a communication campaign of radio and television advertisements during both the pilot and scale-up phases of the P4P project. In some places, such as the South, a large portion of the population was registered (including a large illegal immigrant population). However, the most effective registration activities were the door-to-door campaigns carried out by the contracted clinics themselves.

CONTRACTING

The SSB's legal department draws up the contracts in conjunction with NHI. Contracts are then sent to the MOH for agreement. Once agreement is obtained, contracts are signed by the SSB CEO, NHI General Manager, the MOH CEO (in the case of public sector facilities) or directly with private clinic management. Contracts do not differ between public and private clinics.

P4P SCOPE AND SCALE

In 2006, NHI was scaled-up to include the entire southern region, which includes Stann Creek and Toledo districts. Currently, the scheme covers 42,506 individuals in the Southern Region in addition to those in Belize City Southside. There are plans to expand the scheme further, but this is contingent on financial sustainability within the context of tight fiscal management measures which are being implemented. There is concern that the NHI will not continue due to a lack of sustainable funding.

Nevertheless, scheme expansion is desired: presently it covers 41 percent of the country as per geographic distribution. The population in rest of the country is clamoring to be registered with an NHI-paid clinic, as it often results in more complete services, better and more adequate physical installations, and greater access to once unaffordable or unavailable medicines.

STRENGTHENING THE SCHEME: REVISIONS REQUIRED POST-IMPLEMENTATION

After the six-month pilot period, indicators were added to cap the number of patients who were being over-referred for support services, thereby driving up program costs. The final indicators referred to above (see Tables 1 and 2) are those that were developed as a result of the pilot period. The main implementation investment was the modification of the NHI's "Registration and Clinic Activity Application" software, which was adapted specifically to accommodate performance indicators.

FINANCING THE SCHEME: WHO, HOW, AND POSSIBLE CONCERNS ABOUT FUTURE SUPPORT

Thus far, funding for the P4P scheme has come from the SSB, MOH, and general government revenues, but in the future, funding from the SSB will decrease and general government revenues increase. There are concerns about the availability of future funding: options currently being considered include increasing the income tax, "sin" taxes, and Social Security deductions. NIH funding is committed on an annual basis, and it is up to the Cabinet to make final funding decisions.

FROM THEORY TO EVIDENCE: FINDINGS FROM ANY AVAILABLE RESULTS

The evaluation of the six-month pilot is documented in the report National Health Insurance Belize South Side Pilot Project Evaluation of Six Month Results (Cercone 2002). There are plans to conduct an impact evaluation during 2010. While a wealth of epidemiological data are available, little analysis has been done. Results to date that are attributed to the scheme include the following:

- The county district with the highest maternal mortality rate prior to the P4P scheme reported no maternal deaths during the first two quarters of 2008. The additional resources that were required to ensure this outcome (funds to hire adequate resources, purchase extra pharmaceuticals, etc.) came from the NHI.
- Prior to P4P introduction, many residents of the South Side of Belize City (the poorest part of the city) had never visited a general practitioner. The NHI P4P scheme contracting of additional clinics provided these people easier access to a clinic and its services (pharmacy, lab, X-ray, etc.).

UNDERSTANDING P4P BETTER: KEY CHALLENGES AND LESSONS LEARNED

POLITICAL WILL

Despite wide stakeholder buy-in of the NHI P4P scheme and the media information campaigns resulting in growing enrollment, funding for NHI is uncertain. The NHI Policy Committee, composed of representatives of various social sectors such as the NHI, SSB, MOH, Belize Chamber of Commerce, Better Business Bureau, Association of Insurance Agencies, Belize Medical and Dental Association, a Union Representative, and the Opposition Party, is currently short-listing the funding options.

PERFORMANCE INDICATORS

Consensus for improving the indicators is an ongoing process that needs wide stakeholder buy-in. Current performance indicators reflect process measures, not health outcomes. There is interest in moving toward tying indicators to improved health outcomes and discussion of this subject has begun. However, no firm decisions have been made.

REFERENCES

Gough E., E. Emmanuel, V. Jenkins, L. Thompson, E. Perez, and A. Barcelo. October 2008. The Central American Diabetes Initiative: Survey of Diabetes, Hypertension and Non-communicable Disease Risk Factors. Belize: Ministry of Health and Pan American Health Organization. http://www.health.gov.bz/www/attachments/407_Central%20American%20Diabetes%20Initiative,%20Belize%202008.pdf. Accessed April 22, 2010.

James A. Cercone, Carolina Ortiz, Monia Dini. July 2002. National Health Insurance Belize South Side Pilot Project Evaluation of Six Month Results.

Health Systems 20/20 is a five-year (2006-2011) cooperative agreement No. HS-A-00-06-00010-00 funded by the U.S. Agency for International Development (USAID). The project addresses the financing, governance, operational, and capacity-building constraints that block access to and use of priority population, health, and nutrition services by people in developing countries.
Health Systems 20/20 offers global leadership, technical assistance, training, grants, research, and information dissemination.

Abt Associates Inc. (www.abtassociates.com) leads a team of partners that includes:
| Aga Khan Foundation | Bitrán y Asociados | BRAC University | Broad Branch Associates | Deloitte Consulting, LLP | Forum One Communications | RTI International | Training Resources Group | Tulane University School of Public Health

Recommended Citation: Vanzie, Michelle, Natasha Hsi, Alix Beith, and Rena Eicher. 2010. *Using Supply-side P4P to Strengthen Health Prevention Activities and Improve Efficiency: The Case of Belize*. Bethesda, Maryland: Health Systems 20/20, Abt Associates Inc.

For more information about Health Systems 20/20 please contact:
Health Systems 20/20 | www.healthsystems2020.org
Abt Associates Inc. | www.abtassociates.com
4550 Montgomery Lane
| Suite 800 North | Bethesda, MD 20814 | USA
E-mail: info@healthsystems2020.org
| www.healthsystems2020.org