msh
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PERFORMANCE-BASED FINANCING IMPROVES QUANTITY AND QUALITY OF HEALTH SERVICES IN HAITI

Photo by Colin Gilmartin

Performance-based financing (PBF) has been used increasingly to improve the quantity and quality of health services by directly rewarding providers with financial incentives based on achieved results.[1,2] By aligning the interests and goals of the purchaser and health care providers, PBF has been shown to increase the efficiency of service provision while addressing common challenges among health care providers, including low motivation, attrition, insufficient empowerment, and a lack of accountability for results.[3,4]

Since 1999, Haiti's Ministry of Public Health and Population (MSPP) has used PBF to improve the availability, accessibility, and quality of primary health services.[5,6] Recognizing the success of this approach, in 2012, the MSPP officially adopted PBF in its National Health Policy's health sector financing strategy.[7]

To ensure coordination and reduce potential conflicts of interest, Haiti's PBF policy has separated the key stakeholder functions of the program. For example, separate entities within the MSPP carry out the work of program financiers, regulators, and purchasers while an external verification agency ensures the accuracy of all results reported by health facilities.[8]

Figure 1. Map of Haiti

Background

Beginning in August 2014, the MSPP, through funding from the World Bank, launched the first phase of its PASSMISSI PBF pilot program, establishing performance contracts with seven health facilities in the Nord-Est Health Department.[9] PASSMISSI's objective is to increase the quality and equity of maternal and child health services for more than 100,000 people while improving the overall management of health services.

Each quarter, the MSPP and Management Sciences for Health (MSH) evaluated the Departmental Health Directorate (*Direction Départementale de la Santé*, or DDS), the Drug Medical Store (*Centre Départemental d'Approvisionnement en Intrants*, or CDAI), and the seven health facilities in two departments according to a series of defined performance criteria. The facilities included two clinics, four health centers, and the Trou du Nord community referral hospital, all covering a population of 100,627 in the Terrier Rouge and Trou du Nord communes of the Nord-Est Health Department.

PASSMISSI assessed the performance of the DDS according to 11 indicators related to its role in regulating and administering the PBF pilot program, including ongoing support to health facilities through regular supervision visits, developing action plans, ensuring the availability of essential medicines and commodities, and establishing a functioning referral system, among other activities.

Based on its performance, the DDS could receive a maximum payment of 835,984 Haitian Gourdes (HTG) per quarter.[10] If any fraudulent activities were identified during the performance evaluation, the DDS would face disciplinary measures, including the possibility of forfeiting its performance-based payments.

Recognizing the integral role of the CDAI in storing and distributing medicines and commodities, PASSMISSI assessed the CDAI on a pilot basis, beginning in the third quarter, according to five indicators ensuring that commodities were available, of high quality, and consistently priced according to MSPP standards.[11] Because this assessment was conducted on a pilot basis, the CDAI did not receive any incentive payments.

PASSMISSI assessed the seven health facilities according to the numbers of health services provided and an overall quality score based on a technical quality assessment and client satisfaction surveys, as described below. Each of the indicators was weighted according to its priority, as determined by the MSPP, and varied depending on the type of health facility.

Quantitative Assessment

All six health centers (two outpatient clinics and four health centers) were assessed according to 18 indicators. The overall quality score was weighted as the highest priority indicator (24%) followed by institutional deliveries, children under 12 months of age who were fully vaccinated, screening for pulmonary tuberculosis (TB) with microscopy, etc.

The Trou du Nord community referral hospital was assessed according to six performance indicators. The overall quality score was weighted as the highest priority (85%) followed by caesarian sections, institutional deliveries, new clinical consultations referred by a lower-level facility (and provided care), counter-referrals, and clients referred by a lower-level facility (and hospitalized).

Photo by Jean Jacques Augustin

Qualitative Assessment

At all seven health facilities, the MSH-led external verification team assessed the technical quality of service provision and facility management based on a comprehensive checklist corresponding to a defined list of indicators. Categories included laboratory, family planning, management of medicines, hygiene and sterilization, workplans, etc.

MSH also conducted community client satisfaction surveys in collaboration with two local nongovernmental organizations (NGOs).[12] Samples of 50 and 100 patients were randomly selected for the surveys from each health center and the community referral hospital, respectively. To determine the level of patient satisfaction and confirm that the patients actually received services, MSH and NGO personnel interviewed clients either by telephone or in person.

Verification of Results

In conjunction with the quarterly technical quality assessments and community satisfaction surveys, MSH, the MSPP, and local NGOs conducted a comprehensive verification process at each health facility through site visits, a review of health facility registers, and community client satisfaction surveys.

On average, the quarterly external verification process for the seven health facilities lasted 20 days and included a comprehensive review of health facility registers followed by the technical quality assessment and the community satisfaction survey (as described below). Upon completion, MSPP staff validated the results and disbursed payments based on performance scores to all seven health facilities and the DDS.

Quantity of Health Services

Prior to the external verification, all health facilities conducted an internal evaluation based on agreed-upon performance indicators. Health facilities tallied the quantity of services provided and estimated their own performance scores while identifying both strengths and weaknesses.

On the first day of the verification visit, the verification team compared the total number of services it counted against those declared by the health facility. Any difference between the reported and verified quantity of services could result in a reduced score for the particular indicator (Table 1).

Quality of Health Services and Facilities

On the second day of the verification visit, the team evaluated the technical quality of the health facility, using a checklist of 14 key indicators to come up with an overall technical quality score. At the end of the visit, the team presented the head of the health facility with a copy of the checklist with recommendations for improvement.

Community Verification

The community client satisfaction surveys served to confirm that the information included in the health facility registers (e.g. patient names and services provided) was valid. MSH contracted two local NGOs to conduct the surveys. Representative samples of the 50 patients per health center and 100 patients for the community referral hospital were drawn from patients who received services in these health facilities during the previous quarter. The surveys were conducted by phone and in person. If it was not possible to conduct the survey by telephone, MSH investigators submitted the patient's contact information to the local NGO.

Table 1. Penalty criteria due to differences between reported and verified quantity of services[13]

Difference between quantity declared and verified	Penalty
< 5%	No penalty
Between 5 and 10%	5% reduction of the concerned indicator score
Between 10 and 20%	10% reduction of the concerned indicator score
>20%	No payment for the concerned indicator

Table 2. Accuracy of reported and verified data indicators, by percentage (2014-2015)

Indicators	Q1	Q2	Q3	Q4	Q5	Q6
Diarrhea cases treated	67%	67%	83%	67%	83%	83%
Referrals	67%	67%	83%	83%	83%	100%
Nutritional screening for child 6-59 months	0	0	50%	67%	50%	67%
De-worming of children 12-59 months	0	33%	17%	33%	50%	67%
Vitamin A supplementation for children 6-59 months	33%	33%	67%	17%	33%	83%
Screening for pulmonary TB with microscopy	83%	100%	100%	100%	83%	100%
Children (<12 months) fully vaccinated	0	50%	50%	67%	50%	83%
Institutional delivery	83%	100%	100%	100%	83%	100%
First antenatal consultation	17%	67%	67%	67%	50%	83%
Fourth antenatal consultation	67%	67%	67%	67%	67%	100%
Pregnant women who received VAT2+ (anti-tetanus vaccination)	0	17%	33%	33%	67%	33%
Pregnant women tested for HIV	100%	100%	100%	83%	100%	100%
HIV-positive pregnant women provided with care	100%	100%	100%	100%	100%	100%
Postnatal home visits within three days of birth	17%	17%	83%	83%	83%	67%
Modern family planning users	0	34%	33%	33%	17%	17%
Average	42%	57%	71%	69%	69%	80%

To ensure the credibility of the community satisfaction survey results obtained by the local NGOs, MSH inserted the names and contact information of three ghost patients (i.e. fake patients) per health facility on the patient lists. If any responses from the three ghost patients were reported, the NGOs would be penalized with a reduction in their contractual payment.

Results

The following results are based on 17 months (six quarters) of PBF implementation (August 2014 – December 2015).

Improvements

Overall, data accuracy increased considerably between the first and sixth quarters of PBF implementation – from 42% to 80%. The number of institutional deliveries and services for TB and HIV were consistently reported in the majority of quarters; however, indicators for VAT2+ (anti-tetanus vaccination) and family planning were inconsistently reported and required further improvements in reporting by health facility staff.

Among the six health centers, the verification team identified a number of discrepancies when comparing the reported and verified data. However, between quarters one and six of PBF implementation, health facilities demonstrated improvements in the accuracy of their reporting from -57% to -1% (as indicated by the deviation from the actual services provided).

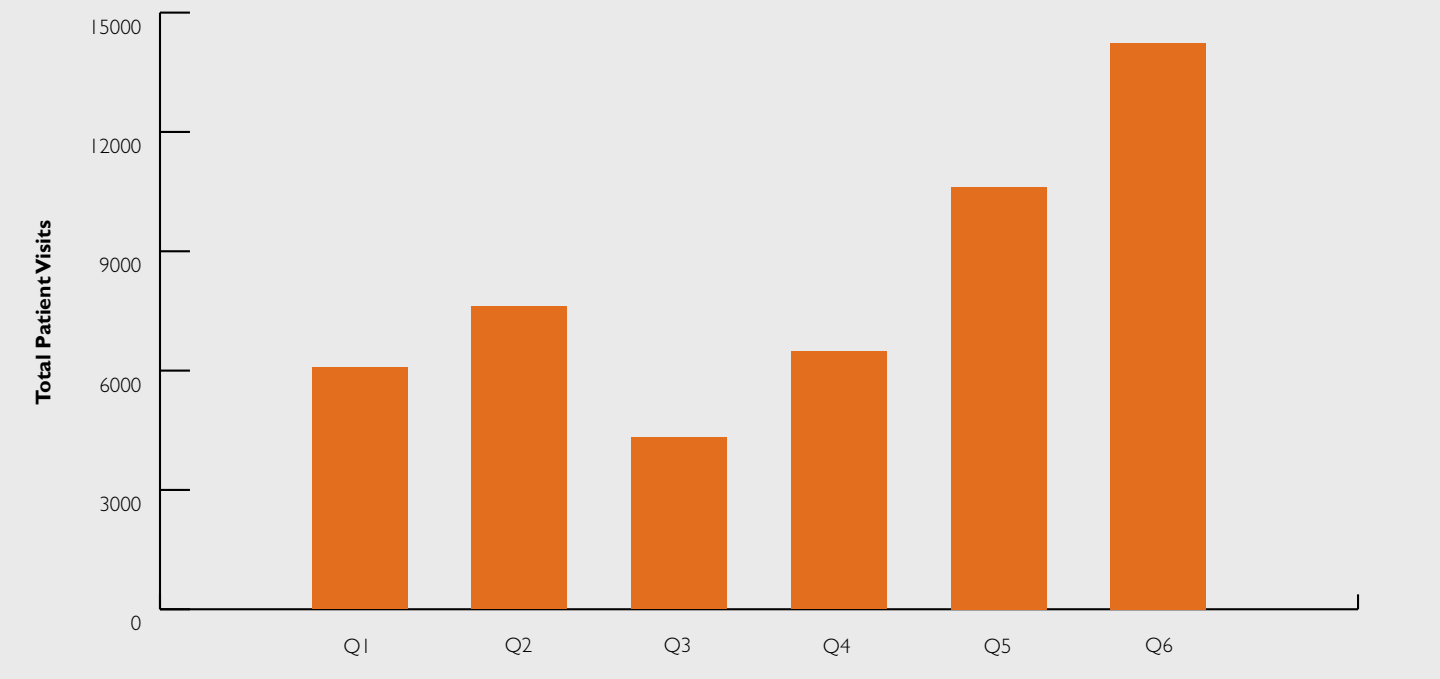
DDS and CDAI teams demonstrated continuous marked improvements over the six quarters, with the overall performance scores increasing from 86% to 98%, and from 70% to 92%, respectively. Key areas such as workplan development, supportive supervision, reductions of stock-outs, and timely Health Information System (HIS) reporting improved remarkably.

According to the verified results, the quantity of health services provided at both the Trou du Nord community referral hospital and the six health centers increased significantly.[14]

The availability of transparent and accurate data will allow the MSPP and health care providers to improve the allocation of scarce financial resources, identify priority health areas, and adjust PBF targets.

- Patient visits (new and subsequent) to health facilities nearly doubled from 12,850 to 23,213 visits.
- Family planning users at health centers increased by 21%, from 5,030 to 6,103.
- Children (<12 months) who were fully vaccinated at health centers also increased substantially – from 77 to 136 children.
- At the maternity wards at Grand Bassin and Trou du Nord, institutional deliveries increased 89% – from 12 to 344.

Figure 2. Total patient visits to the Trou du Nord Hospital (2014-2015)



The overall technical quality of health facilities increased from 66% in quarter one to 90% in quarter six. Other improvements included an increase in on-time reporting (29% to 100%) as well as marked improvements in data accuracy (42% to 80%), as explained in the previous section. In quarter one, all seven health facilities had reported stock-outs of essential medicines and none reported stock-outs in quarter six.

According to the community satisfaction surveys conducted, the perception of the quality of services improved from the inception of the PASSMISSI project, with the most considerable improvements being for the cleanliness of the facility, the reception of patients by staff, and the lack of bias towards the poor and women.

Figure 3. Total patient visits to health centers (2014-2015)

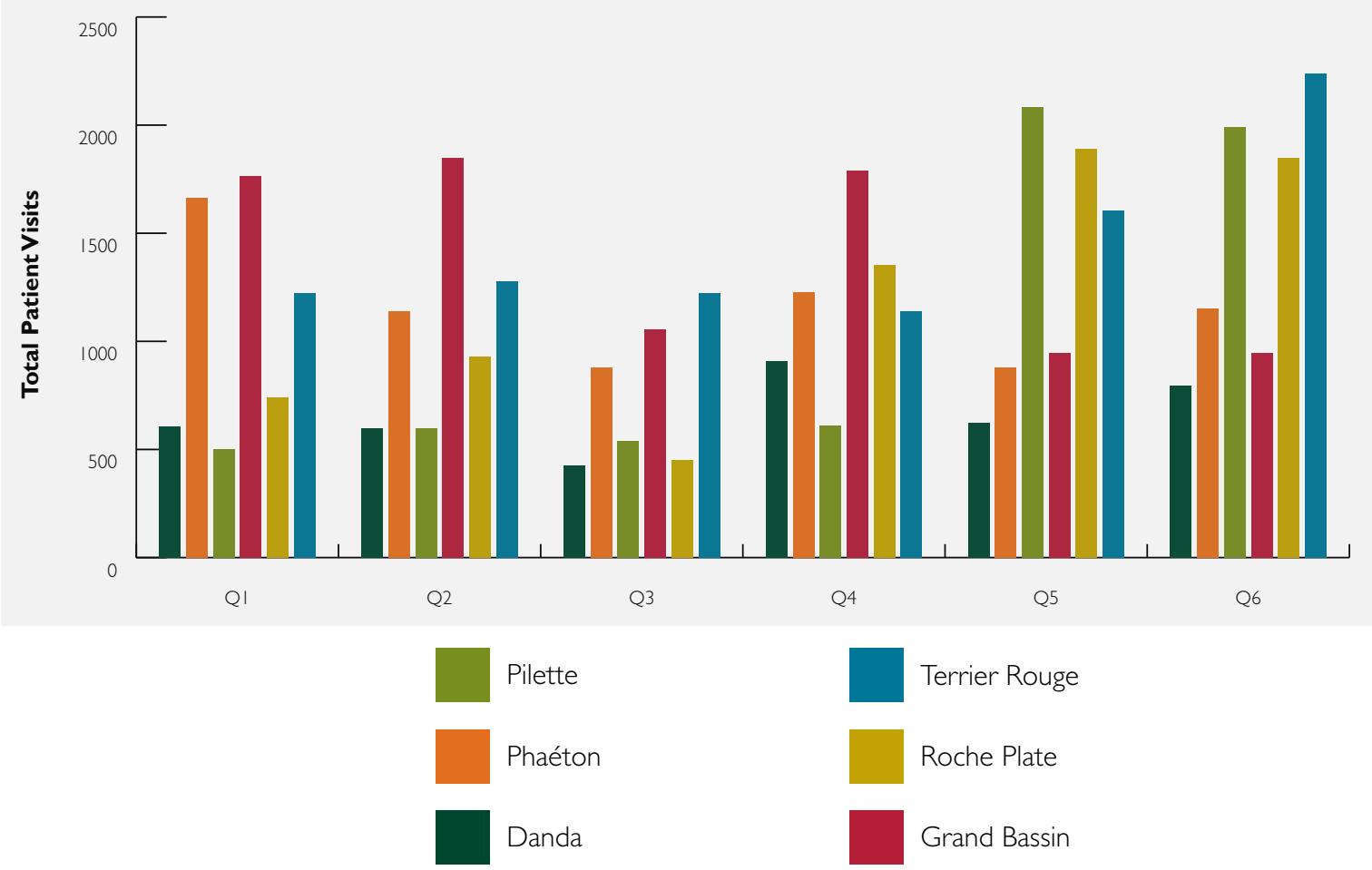
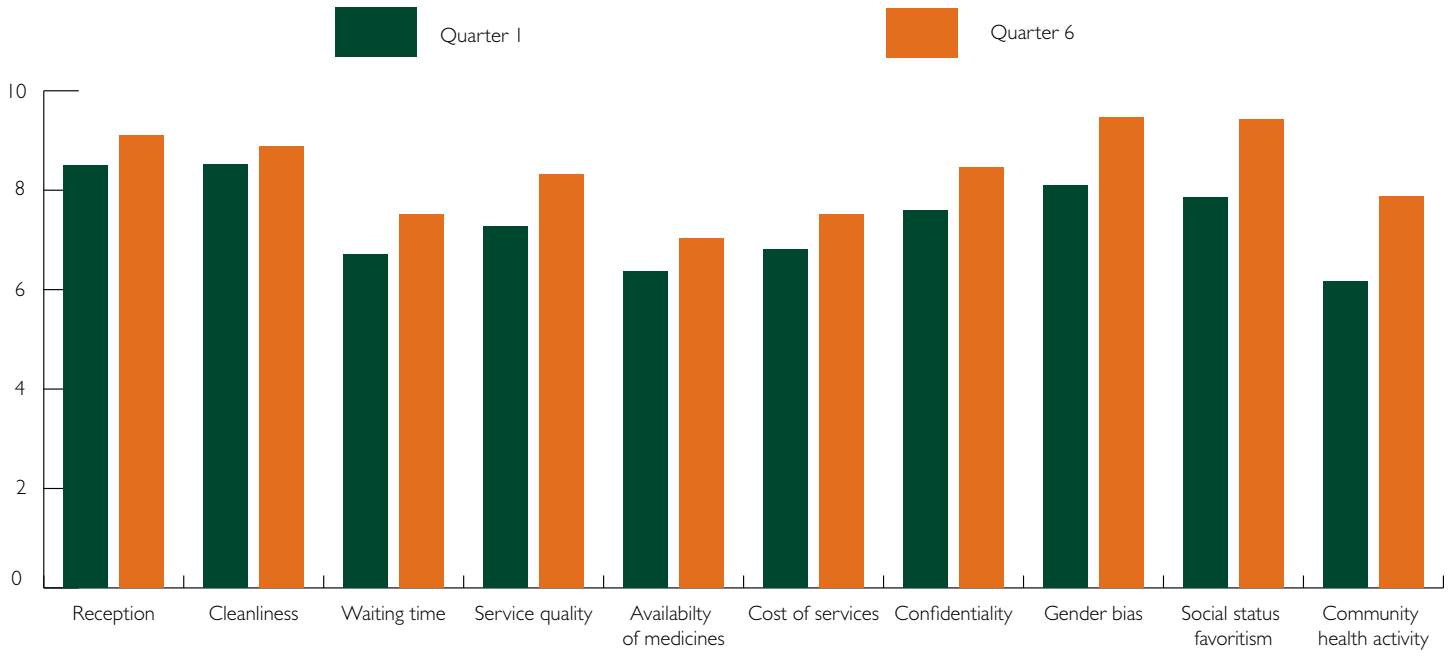


Figure 4. Average Client Satisfaction Scores by Category (Quarter 1 & Quarter 6)



PBF Incentives

A total of 7.9 million GHT was budgeted to finance the PBF pilot program in the Nord-Est Department, and 72% of this amount was disbursed according to the performance of health facilities.[15] They demonstrated improved performance between quarters one and six and on average received higher sums of incentives while simultaneously forfeiting fewer incentives due to data discrepancies. In the first quarter, health facilities lost 56% of the money intended for them compared to just 1% in quarter six. The incentives earned by health facilities were allocated to staff (70%) and quality-improvement projects (30%) to improve infrastructure or purchase new equipment. Remaining funds were retained for the next year of PBF implementation.

Discussion

Successes

The seven health facilities demonstrated marked increases in the utilization of priority services as well as improved technical quality and community satisfaction. As a result, health facilities earned performance payments which contributed to personnel bonuses and facilitated a number of renovation projects.

As evidenced by the external verification visits, health facilities demonstrated an increase in accurate and on-time data reporting as well as improvements in the technical quality of health facilities. During these visits, facility personnel were coached on best practices and national health protocols while given recommendations to address facility weaknesses.

Innovations such as telephone surveys and the inclusion of ghost patients for the community satisfaction surveys helped to ensure both the efficiency and validity of the verification process. Also, the pilot performance assessment of the CDAI proved essential in ensuring the availability of quality medicines and supplies at health facilities.

Moving forward, the availability of transparent and accurate data will allow the MSPP and health care providers to improve the allocation of scarce financial resources, identify priority health areas, and adjust PBF targets. The recently launched Open RBF online platform has allowed the MSPP, implementing partners, and health facilities to have access to reliable data while improving the efficiency and communication of results.[16]

Photo by Jean Jacques Augustin

Challenges

Despite the successes of the pilot PBF program, there are several challenges that must be addressed in order to improve health services outcomes and the performance of health facilities. Based on feedback received from health facility personnel, the definitions of some quantitative health indicators remain ambiguous and more specification is needed to ensure targets are comparable and consistently met. For example, the indicator children (<12 months) fully vaccinated differs from the MSPP definition included in the PBF Operational Manual. Also, only four facilities had a defined catchment area and corresponding map, which complicates operational work planning and defining coverage targets. In addition, the quality indicators evaluated during the verification visits only provide a static perspective of the health facility and not necessarily a realistic day-to-day perspective of facility operations.

The continued support and scale-up of PBF in Haiti has the potential to improve health coverage and outcomes while strengthening the overall health system, thereby contributing to Haiti's National Health Policy objectives.

Recommendations and Conclusions

Based on the achievements of the PASSMISSI, through funding from the World Bank, USAID, and the Global Fund, the MSPP scaled up PBF implementation to 75 additional health facilities in eight health departments (Centre, Nord-Ouest, Nord-Est, Sud, Grand d'Anse, Nippes, Nord, and Artibonite) beginning in March 2016.[17] An impact evaluation is underway to determine the corresponding effects of the MSPP-led PBF program on the quantity and quality of health services compared to health control facilities without PBF contracts.

The continued support and scale-up of PBF in Haiti has the potential to improve health coverage and outcomes while strengthening the overall health system, thereby contributing to Haiti's National Health Policy objectives. Nevertheless, ongoing verification visits are needed to monitor data quality, reinforce best practices, institute corrective actions, and incorporate feedback received by patients in the community.

Endnotes

1. The AIDSTAR-Two Project. The PBF Handbook: Designing and Implementing Effective Performance-Based Financing Programs. Version 1.0. Cambridge: Management Sciences for Health, 2011.
2. The AIDSTAR-Two Project. The PBF Handbook: Designing and Implementing Effective Performance-Based Financing Programs. Version 1.0. Cambridge: Management Sciences for Health, 2011.
3. The *purchaser* refers to the party that sets performance targets and purchases the results achieved by *health care providers*.
4. The AIDSTAR-Two Project. The PBF Handbook: Designing and Implementing Effective Performance-Based Financing Programs. Version 1.0. Cambridge: Management Sciences for Health, 2011.
5. Eichler, Rena; Auxila, Paul; Pollock, John. 2001. Output-Based Health Care: Paying for Performance in Haiti. Viewpoint. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/11370 License: CC BY 3.0 Unported.
6. Zeng, W., Cros, M., Wright, K. D., and Shepard, D. S. (2012). Impact of performance-based financing on primary health care services in Haiti. Health Policy and Planning, czs099. https://doi.org/10.1093/heapol/czs099
7. Haiti *Ministère de la Santé et de la Population. Politique Nationale de Santé*. July 2012. Available at: http://mspp.gouv.ht/site/downloads/livret%20pns%20for%20web.pdf
8. Haiti *Ministère de la Santé et de la Population. Manuel opérationnel du financement basé sur les résultats en Haïti*. Available at: http://fbr.mspp.gouv.ht/cside/contents/docs/manuel_operationnel.pdf
9. Commonly referred to as *Projet d'Amélioration de la Santé Maternelle et Infantile à travers les Services Sociaux Intégrés (PASMISSI)*.
10. Currently this sum equates to ~ $12,000 USD (The exchange rate was 1$=43 GHT (in 2014), and now it is 1$=65 GHT).
11. No incentive payment was provided to the CDAI.
12. Local NGOs included *Fondation pour la Santé Reproductrice et l'Education Familiale (FOSREF)* and GroupIntellConsult.
13. Available at: http://fbr.mspp.gouv.ht/cside/contents/docs/manuel_operationnel.pdf
14. The third quarter of PBF implementation was shorter than others and only lasted two months (February to March 2015) to ensure alignment with the country's fiscal year.
15. Currently this sum equates to ~ $117,783.15 USD. The exchange rate was 1$=43 GHT in 2014 and now it is 1$=65 GHT.
16. Available at: fbr.mspp.gouv.ht/
17. Centre, Nord-Ouest, Nord-Est, Sud, Grand d'Anse, Nippes, Nord, and Artibonite Health Departments

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