



GETTING CONTRACEPTIVES TO WOMEN WHO NEED THEM

Senegal's Informed Push Model

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THE PROBLEM

In 2012, the Government of Senegal committed to more than double its modern contraceptive prevalence rate (mCPR), which was a little above 20%, to 45% by 2020, recognizing that reliable access to family planning would also contribute to reducing the country's high maternal mortality rate. However, public health facilities, where most consumers obtain contraceptives, reported shortages in inventory, or stockouts, more than a quarter of the time.

These facilities traditionally had to resupply their inventories using a paper-based "pull" system that left gaps in stocks. The National Supply Pharmacy (PNA) delivered commodities to its 11 regional supply pharmacies from its central warehouse in Dakar but had no oversight on the last-mile delivery to health facilities. Facility staff had to travel to district warehouses to purchase contraceptives and other medical commodities and bring them back to their clinics. With this old distribution model, there was no harmony between clinics' needs and the district warehouses, making it common for products to be in stock at the national level but absent from the shelves of facilities.

Another drawback of the pull-based inventory system was that clinic health workers, who typically aren't trained in supply chain management and who have competing demands on their time, were also asked to track and forecast needs for commodities. Clinics were required to pay for health products up-front using their own working capital, which created incentives for some facilities to prioritize stocking commodities that earned higher margins, making family planning products, which typically do not earn high revenues, a low priority.

OUR INNOVATION

In 2012, Senegal's Ministry of Health and Social Action and the PNA began working with IntraHealth International, Merck for Mothers, and the Bill & Melinda Gates Foundation to develop a nationwide Informed Push Model (IPM), a supply distribution approach that relies on private, third-party logistics providers (3PLs) to capture real-time data to proactively predict and manage stock at the facility level.

Logisticians make monthly deliveries of health products directly to facilities, where they evaluate current stock and enter data into a tablet-based electronic logistics management information system (eLMIS) to track consumption trends and forecast future needs. The logistics team generally consists of a driver, logistician, and sometimes an assistant logistician, trained in IPM technical procedures.

Over two years, IntraHealth partnered with Dimagi to support transfer of technology to the PNA. This included training of trainers on the eLMIS application; management of the back-end application creation platform, CommCareHQ, in which new hierarchies and location products can be added; and assisting the PNA to define standard processes for deployment, troubleshooting, and data management. After Senegal's national digital health strategy was established, Dimagi and the PNA created a local server within the PNA, based on PNA-defined capabilities and infrastructure

requirements, where the CommCare solution and data are hosted and managed independently by the PNA.

The instant transfer of data from districts and regions helps ensure that information captured from facilities aligns with that recorded at the national level and can be used to regularly report on trends and track progress toward global and national targets.

The financial model was also changed. Facilities no longer purchase supplies up-front and are charged, using a consignment model, only for commodities consumed during the preceding month, which enables them to stock a wider array of products. Facilities pay a 25% margin redistribution, or percentage of net proceeds of sales, to PNA to cover sustainability of IPM.

The pilot phase of IPM was introduced in 2014, and the ministry decided to scale the model nationally starting in 2015. It now covers 1,460 facilities in all 14 regions of the country.

WHAT WORKED

Moving from paper to the eLMIS enabled stronger forecasting and tracking. Logisticians could now use historical data to estimate the amount of product each clinic needed and could adjust this amount based on a number of variables, including climate conditions, fluctuations in nationwide health trends, and regional or local factors. In one instance, the data allowed a district to see that declines in implant insertions were linked to a shortage of local anesthetic.

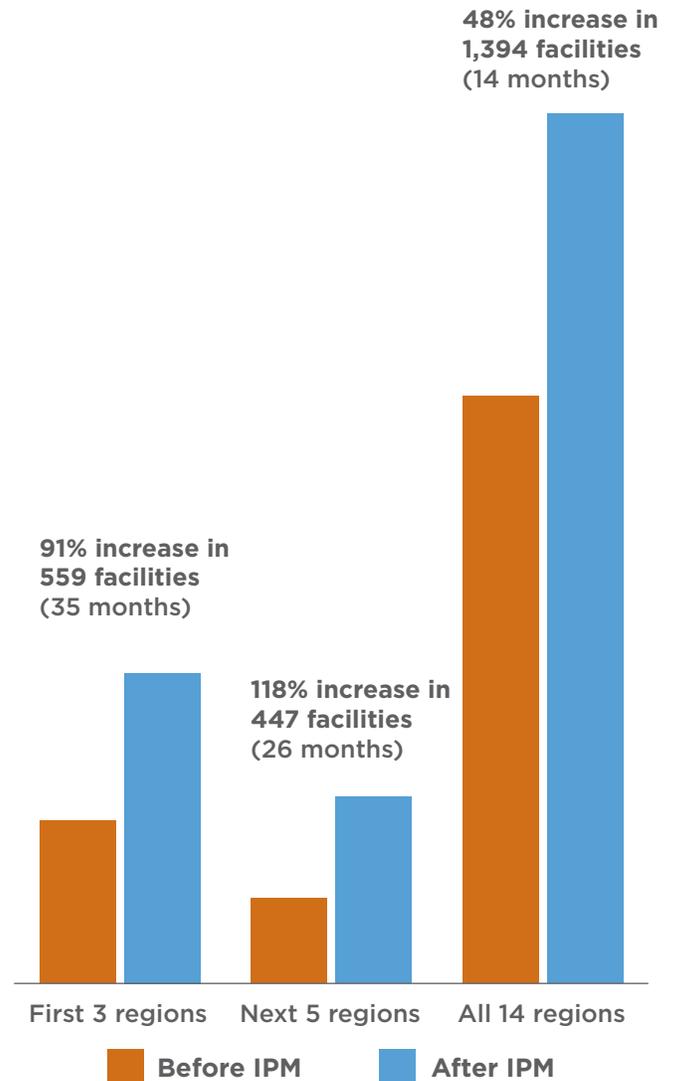
The pilot phase of IPM increased the use of modern contraceptives by more than 90% in some regions, influencing the ministry’s decision to scale the model nationally. Areas that were still experiencing stockouts attributed them mostly to unexpected spikes in consumption. Other shortages were linked to logistician errors, nonpayment from facilities, or contraceptive community outreach programs that spurred demand that was not communicated to logisticians.

By 2016, the unmet need for contraceptives had dropped from 88% to 53%. Nationwide consumption of contraceptives increased by 48% over the 14-month period from April 2015 to May 2016 after full IPM scale-up. The ministry and PNA expanded IPM to include other essential commodities beyond contraception, as part of a broader supply chain transformation, and rebranded the program as Yeksi Naa (“I have arrived” in Wolof).

By 2017, Yeksi Naa was able to consistently deliver over 100 essential health products to facilities around the country. That same year, it reduced contraceptive stockouts to an average of 2% of all health facilities nationwide, improving access to family planning for an estimated 3.2 million women. Consumption data from all health facilities is captured electronically and available for procurement and programmatic decision-making. Margin redistribution is estimated to cover 70% of the costs of administering Yeksi Naa.

Yeksi Naa has transformed the delivery of essential health products in Senegal. Health workers can remain at their facilities rather than having to travel to procure supplies. Clinics can be open longer and, when patients arrive, the commodities they need are much more likely to be in stock. The willingness of public-sector health facilities to partner with private-sector trained logisticians has reduced inefficiency and improved data quality by ensuring that those responsible for recording stock information and forecasting have the necessary expertise to complete those tasks. As communities see the value of a consistent supply chain, they are more willing to visit facilities for services and supplies and facilities are in turn more invested in contributing margin redistribution to PNA to support Yeksi Naa.

Figure 1: Contraceptive consumption rates before and after IPM implementation in 14 regions of Senegal, all methods combined (2013-2016)



WHAT WE LEARNED

The performance-based contract competitive bidding process used to select third-party logistics providers helps drive cost-effectiveness and quality control. If certain conditions are not met—if, for example, stock-out rates exceed 2% of facilities, based on data from the eLMIS—PNA can penalize the 3PL financially or even replace the 3PL with another company. This gives 3PLs an incentive to maintain high service levels at a competitive cost and develop innovative solutions to increase efficiencies. Beyond supply chain strengthening, utilizing 3PLs drives local business development, which enhances the local economy and creates jobs.

The final step in Yeksi Naa’s success is institutionalization to ensure that the program will thrive without outside funding. While a transition road map including prerequisite activities for PNA to operate the program was in place, it was particularly important to have strong



advocacy from high-level government officials at an early stage of implementation and their commitment to expend additional resources to maintain essential activities over the long term. Efforts to institutionalize the model did not fully start until the end of the expansion stage and technical assistance needed to be extended beyond the original timeline to complete the process.

To catalyze high-level support, the Yeksi Naa team deployed an intense advocacy and communication campaign, including certification ceremonies in regional capital cities, which were used to attract media coverage; advocacy workshops in all 14 regions; and consistent, direct dialogue with the Minister of Health and other decision-makers. Senegal's former Minister of Health, Awa Marie Coll-Seck, publicly advocated for supply chain reform and committed to making requisite policy changes. Senegal's President Macky Sall highlighted his commitment to the Yeksi Naa supply chain model in his 2017 New Year's address to the nation.

NEXT STEPS AND OPPORTUNITIES FOR REPLICATION AND SCALE-UP

The Yeksi Naa model has the potential for adaptation and adoption elsewhere, particularly in the West African context where supply chain systems experience similar challenges. Best practice elements of the approach can be applied individually to supply chain systems in other low- and middle-income countries to drive improved availability of products in health facilities.

IntraHealth played an important supportive role in leading the successful introduction of IPM-Yeksi Naa. In addition to helping develop and refine the model, IntraHealth provided extensive coaching and mentorship technical assistance to logisticians and supply chain actors to ensure operational efficiency. The architecture and cost of this type of support should be considered as other countries determine how to adapt similar approaches. As of August 2019, IntraHealth had fully transitioned the Yeksi Naa approach, including the eLMIS, to the MOHSA and the PNA.

This brief is part of a larger publication about IntraHealth's innovative approaches to global health—one output of a 2019 landscape analysis of innovation at IntraHealth commissioned by its chief technical officer, Dai Hozumi.

Read the full report at www.intrahealth.org/7-creative-approaches

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