



Results and Impact of the Introduction of an Integrated Pharmaceutical Supply System in the Dominican Republic

September 2016
Translated November 2016



USAID
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SIAPS 
Systems for Improved Access
to Pharmaceuticals and Services

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The SIAPS logo consists of the word "SIAPS" in a bold, green, sans-serif font, followed by a stylized blue graphic of a person with arms raised in a 'V' shape.

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About SIAPS

The goal of the Systems for Improved Access to Pharmaceuticals and Services (SIAPS) Program is to assure the availability of quality pharmaceutical products and effective pharmaceutical services to achieve desired health outcomes. Toward this end, the SIAPS result areas include improving governance, building capacity for pharmaceutical management and services, addressing information needed for decision-making in the pharmaceutical sector, strengthening financing strategies and mechanisms to improve access to medicines, and increasing quality pharmaceutical services.

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Key Words

SUGEMI, results, impact

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ACRONYMS AND ABBREVIATIONS

ARV	antiretroviral
MSP	Ministry of Public Health (Ministerio de Salud Pública)
PEPFAR	US President's Emergency Plan for AIDS Relief
PROMESE/CAL	Essential Medicines Program and Center for Logistical Support (Programa de Medicamento Esenciales y Central de Apoyo Logístico)
SIAPS	Systems for Improved Access to Pharmaceuticals and Services
SNS	National Health Service (Servicio Nacional de Salud)
SPS	Strengthening Pharmaceutical Systems
SRS	Regional Health Service (Servicio Regional de Salud)
SUGEMI	Integrated Pharmaceutical Supply Management System (Sistema Único de Gestión de Medicamentos e Insumos)
UNAP	primary care unit (unidad de atención primaria)
UNGM	National Medicine and Supply Management Unit (Unidad Nacional de Gestión de Medicamentos e Insumos)
URGM	Regional Medicine and Supply Management Unit (Unidad Regional de Gestión de Medicamentos e Insumos)
USAID	US Agency for International Development

ACKNOWLEDGMENTS

The implementation of an integrated pharmaceutical supply system in the Dominican Republic was possible thanks to the trust invested by health officials of USAID who recognized that the sustainability of antiretroviral supply depended on strengthening the whole pharmaceutical management system. All of the Ministers of Health and National Health Service Directors since 2009 politically backed this initiative and participated in lobbying actions with other public institutions. The technical teams of the National Medicine Management Unit and the nine Regional Units are the true authors of the results presented in this report. Their commitment and strength made it possible for the Dominican Republic to organize a pharmaceutical supply system for the public sector, which now serves as an example in the region.

BACKGROUND

With the financial backing of the US Agency for International Development (USAID), the Strengthening Pharmaceutical Systems (SPS) and Systems for Improved Access to Pharmaceuticals and Services (SIAPS) programs have supported the implementation of the Integrated Pharmaceutical Supply Management System (Sistema Único de Gestión de Medicamentos e Insumos, or SUGEMI) in the Dominican Republic since 2009. Because this initiative has been financed principally with resources from the US President's Emergency Plan for AIDS Relief (PEPFAR), the challenge set by the donor was to achieve improvements in the supply of antiretrovirals (ARVs) through the integral strengthening of the pharmaceutical system.

Since 2009, the referenced USAID projects supported the Ministry of Public Health (Ministerio de Salud Pública, or MSP), the Regional and National Pharmaceutical Supply Management Units (Unidades Regionales de Gestión de Medicamentos e Insumos, or URGM, and Unidad Nacional de Gestión de Medicamentos e Insumos, or UNGM, respectively) of the National Health Service (Servicio Nacional de Salud, or SNS), the Essential Medicines Program and Center for Logistical Support (Programa de Medicamento Esenciales y Central de Apoyo Logístico, or PROMESE/CAL), and public and private universities in developing the following processes that would contribute to SUGEMI's organization:

- Seven baseline studies and operational investigations that would serve as the foundation for documenting the situation and the impact of the interventions^{1, 2, 3, 4, 5, 6, 7}
- Eighteen manuals and operating procedures for the implementation of SUGEMI in primary care units⁸ and hospitals⁹
- Six operating procedures for transport logistics of biological samples and their results¹⁰
- One-hundred twenty national and regional workshops for the training of 6,000 specialists responsible for the implementation of SUGEMI operating procedures
- Six national workshops for the estimation and programming of the procurement of medicines and supplies for HIV, tuberculosis, hospitals, and primary care units
- Three certificate courses in Pharmaceutical Management¹¹ and one certificate course in Rational Use
- Six financial gap studies for political management lobbying of financial resources for the procurement of ARVs and medicines for general use^{12, 13, 14, 15, 16, 17, 18}
- Three studies and proposals for the improvement of conditions of medicine and commodities warehouses¹⁹

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- The update of the Essential Medicines List,²⁰ the high-cost medicines list,²¹ the over-the-counter medicines list, the Primary Care Unit Diagnostic Guide, and the First-Level Care Therapeutic Formulary

In 2012, the previously mentioned baseline studies made it possible to identify that problems with availability of ARVs derived from insufficient national financing to cover the annual increase in the number of patients in ARV therapy and the financial deficit that was being left by the progressive reduction of resources from the Global Fund to Fight AIDS, Tuberculosis and Malaria.²² Coordinated political lobbying actions were able to close the referenced financial gap and maintain a virtually uninterrupted stock of ARVs to date (figure 1).

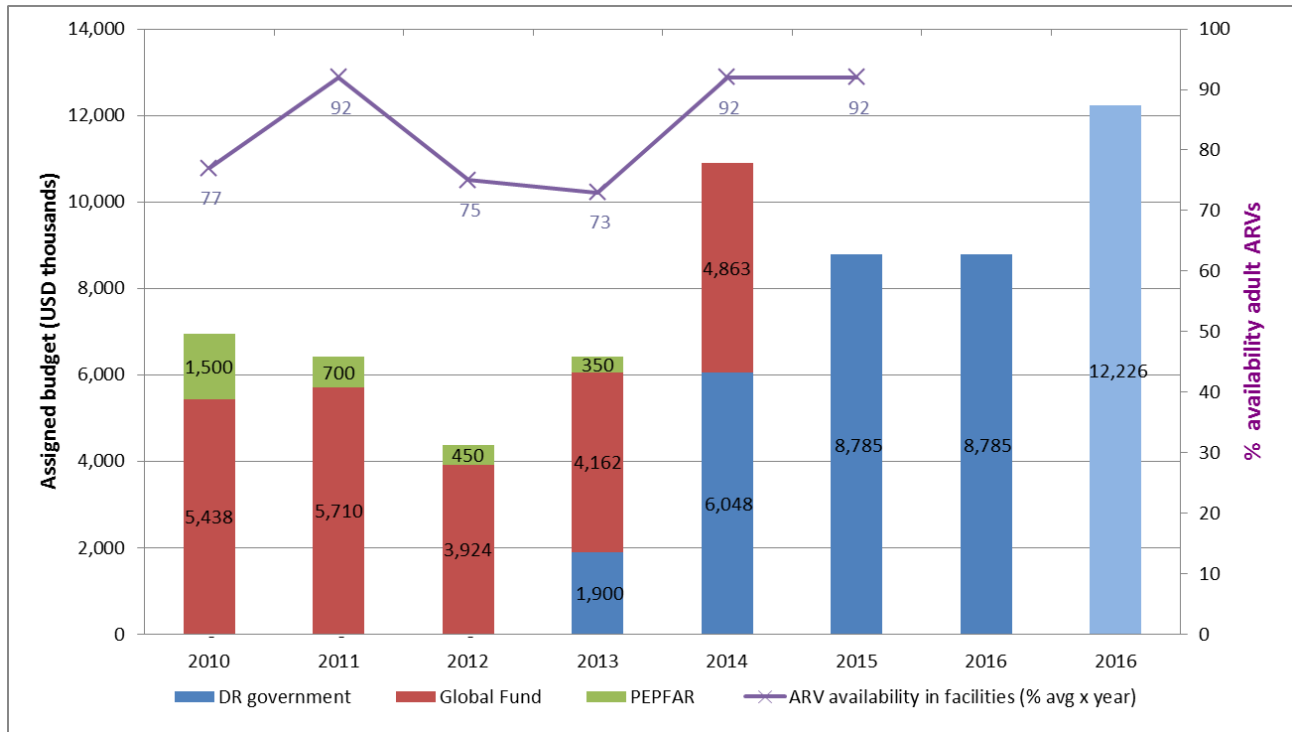


Figure 1: Procurement Financing and Availability of ARVs

The referenced activities also allowed the mobilization of national and international resources to improve the infrastructure of regional warehouses and the achievement of significant savings in the purchase of general-use and high-cost medicines. Toward the end of 2014, the investments by USAID in the SIAPS project were having a positive financial return: for each dollar that USAID invested, the Dominican government could save or mobilize USD 601.²³

Toward the end of 2015, SUGEMI had the political backing of one ministerial order (00019-2010) and two presidential decrees (608-12 and 168-13), which facilitated the institutional strengthening of the URGMs and the UNGM and the consolidation of the system for procurement programming and distribution of medicines, with documented impacts on the supply of ARV medicines. The need then arose to determine whether the theoretical advantages of an integrated supply system could be demonstrated by operational efficiency and the supply of general-use medicines at the primary care level.

METHODOLOGY

The objective of this study was to determine, through secondary sources, the impact of SUGEMI on the operational efficiency of the supply system and the availability of general-use medicines in the primary care units (unidades de atención primaria, or UNAP), where SUGEMI is fully implemented. With these ends, interviews were held with 122 personnel responsible for supplies in an equal number of UNAPs and nine URGM coordinators with more than six years' experience in their respective positions, by means of a structured interview (closed answers), to establish the situation before (2010) and after (2016) implementation of SUGEMI. The sample ensured that the nine Regional Health Services (Servicios Regionales de Salud, or SRSs) were proportionately represented.

To determine the impact of SUGEMI on the availability of medicines for use at the primary care level, the SUGEMI information system database was consulted. This database records the consumption and availability of medicines in the health care facilities, regional warehouses, and central warehouses. On this basis, the availability of 25 “tracer” medicines for primary care use were periodically reported. To establish a relationship between the availability of medicines and particular SUGEMI interventions, other databases were used: the procurement programming exercises allowed the identification of product acquisition prices, and the budgetary allocations were provided by the MSP. The information provided by PROMESE/CAL allowed identification of the number of units acquired and dispatched from 2012 to 2015.

RESULTS

The SRSs were created in 2005. In 2011, stemming from implementation of SUGEMI, nine URGMs were established, following on the separation of functions established by the health sector reform and the process of decentralization of the Dominican State. The URGMs went from having 26 assigned professionals in 2010 to 89 in 2016. The personnel responsible for medicine supply in the health care facilities, however, did not increase in a corresponding manner in the same period.

A rapid study conducted by SPS in 2011 established that health care facilities needed to complete 450 medicine management forms and multiple monthly dispatches, and 21 electronic tools were used for consolidating and analyzing supply information at higher levels.²⁴ Therefore, the following indicators were able to demonstrate the operational efficiency that SUGEMI introduced: the reduction in (a) the number of forms, (b) the time dedicated to complete them, (c) the number of dispatches to be sent each month, and (d) the number of electronic tools that need to be used for consolidation and analysis.

In June 2016, the 122 randomly selected personnel responsible for supplying medicines in an equal number of primary care health facilities were interviewed to get to know the changes that SUGEMI had introduced in their work routines. Of the interviewees, 75% stated that before 2010 they needed to complete and send off more than two monthly forms for management of medicines and commodities; 91% responded that in 2016 only one form was required of them per month. One-third of the interviewees (33%) declared that in 2016 they devoted one hour or less per month to completing forms. Before 2010, 87% of the interviewees stated that they devoted two hours or more to completing forms for supply management of medicines and commodities.

The form “SUGEMI 1” is now used in the health care facilities to report consumption and stock availability and to make monthly restocking requisitions. The form “SUGEMI 2” (in its manual and electronic versions) is now used to consolidate this information at the regional level and make requisitions to the central warehouses. SUGEMI has only one electronic tool for consolidation, analysis, and reporting of supply information. The objective of SUGEMI is that health facilities make only one requisition and receive only one dispatch per month.

However, at the time this study was being carried out, not all of the disease control programs were integrated into SUGEMI, and PROMESE/CAL was making supplementary deliveries for medicines with insufficient stocks in the central warehouses. On this note, 72% (88/122) of the interviewees stated that in 2010 they received two or more dispatches per month, whereas in 2016, 55% (67/122) stated that they receive only one.

Despite the fact that allocated budget for the purchase of medicines in hospitals and UNAPs has not varied significantly since 2011, the quantities of medicines and medical commodities acquired have doubled for 2015. In the same period, the availability of medicines for first-level care use increased from 72% to 92%. The procurement prices were not reduced during this period. In fact, the average procurement prices of PROMESE/CAL were 57% lower than the median international prices in 2011 and 41% lower in 2014. A probable explanation for this

finding is the introduction by SUGEMI of a standardized methodology for the estimation of necessities and the programming of procurement beginning in 2011. The methodologies used allowed the SRSs to estimate the needed quantities more precisely and to concentrate their expenditures on vital products with a lower cost per unit (figure 2).

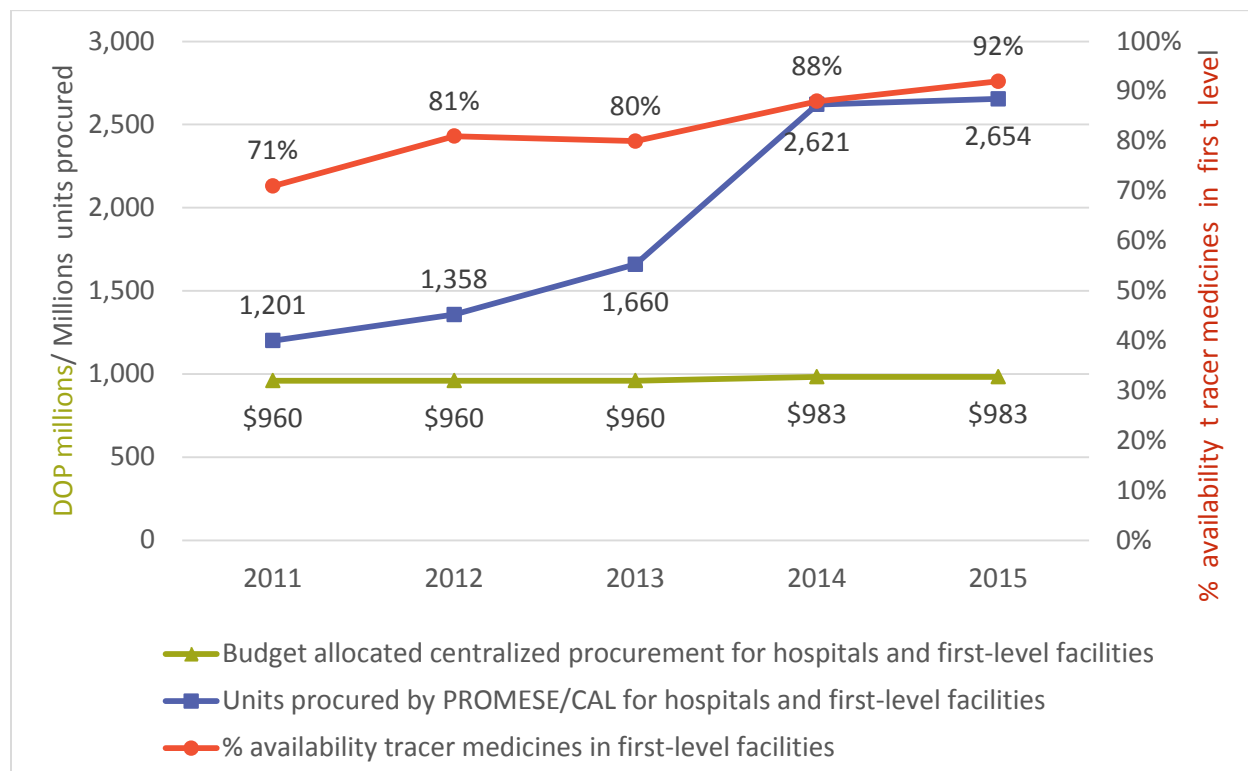


Figure 2: 2011–2015 Availability of General-Use Medicines in the First-Level Health Facilities in the Dominican Republic

Since the beginning of the implementation of SUGEMI in 2011, routines were put in place for the recording and submission of information on consumption, availability, and restocking requests on single forms. This information is analyzed and consolidated in the SRSs to carry out monthly regional restocking requisitions to PROMESE/CAL. This same information, and the information about the effective dispatches made by PROMESE/CAL, is contained in a quarterly bulletin that is distributed to all of the decision makers and at working meetings between the institutions involved in supplying.²⁵ The objective of the bulletin and the meetings is to reach an approximation between the procurement programming and the effective procurement, between procurement programming and periodic requisitions that are carried out by the health facilities, and between the periodic requisitions and dispatches of PROMESE/CAL. One would expect, therefore, that these routines will allow a progressive increase in the availability of medicines.

Figure 3 shows the relationship between the increase in health facilities that report with the SUGEMI 1 form, the correspondence between the requisitions and dispatches from PROMESE/CAL, and the availability of first-level use medicines. The availability of ARVs also increased significantly, but in this case as a product of a better system of distribution and greater availability of resources for procurement, as mentioned in the Background section.

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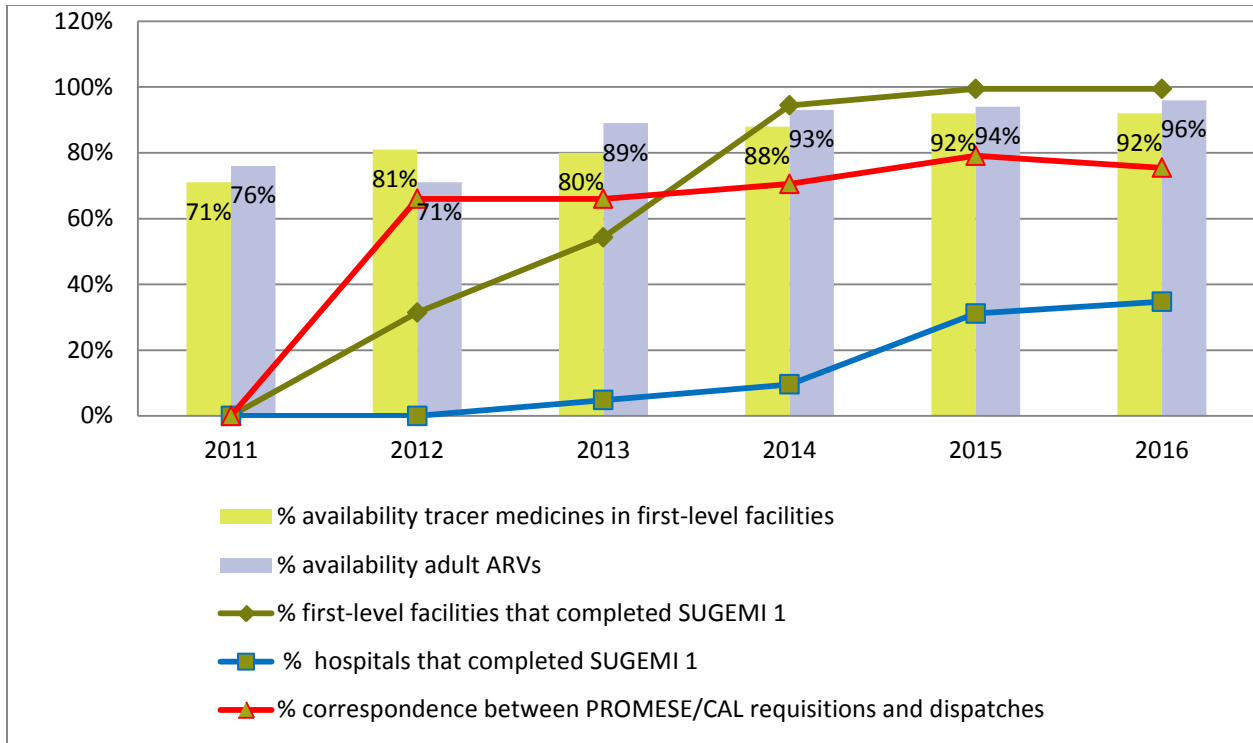


Figure 3: 2011–2016 Relationship between the Implementation of SUGEMI Activities and the Availability of Medicines

CONCLUSION

The transition from a vertical to an integrated supply system produced operational efficiencies in the Dominican Republic. The presented data suggests that SUGEMI has been a contributing factor to the increased availability of ARVs and essential medicines for first-level use and the generation of significant savings for the government.

The design and implementation of SUGEMI in the framework of national initiatives (the health sector reform and decentralization of the state) made possible its early institutionalization and predicts its sustainability in the absence of external technical and financial assistance.²⁶ The implementation of SUGEMI in the Dominican Republic not only assures the sustainability of an efficient supply system, but also establishes the conditions to take on possible demands from future epidemics in a nimble manner.

NOTES

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