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# **SIAPS End of Project Report: Dominican Republic**

**September 2017**



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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.

## **Recommended Citation**

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## ACRONYMS

AIDS	acquired immunodeficiency syndrome
ARV	antiretroviral
CONAVIHSIDA	Consejo Nacional de VIH/SIDA
DCP	disease control programs
DTC	Drug and Therapeutic Committee
HF	health facility
HIV	human immunodeficiency virus
IR	intermediate result
MOH	Ministry of Public Health
NEML	National Essential Medicines List
NHS	National Health Service
PEPFAR	US President's Emergency Fund for AIDS Relief
PMIS	Pharmaceutical Management Information System
PROMESE/CAL	Programa de Medicamentos Esenciales y Central de Abastecimiento Logístico
RHS	Regional Health Services
SIAPS	Systems for Improved Access to Pharmaceuticals and Services [Program]
SOP	standard operating procedure
SPS	Strengthening Pharmaceutical Systems (Program) [MSH]
SUGEMI	Sistema Unico de Gestión de Suministro de Medicamentos
TB	tuberculosis
UNGM	Unidad Nacional de Gestión de Medicamentos
URGM	Unidad Regional de Gestión de Medicamentos
USAID	US Agency for International Development
USD	US dollar

## OVERVIEW OF SIAPS PROGRAM IN DOMINICAN REPUBLIC

### Background

A study conducted by the Strengthening Pharmaceutical Systems (SPS) Program in 2009 determined that the primary cause of inefficiencies and stock-outs at all levels was the fragmentation of the supply process into multiple vertical systems organized around disease control programs (DCPs), such as tuberculosis (TB) and HIV and AIDS.<sup>1</sup> Based on this evidence, the Ministry of Public Health (MOH) asked the US Agency for International Development (USAID) for technical assistance from its pharmaceutical supply management partners to implement what would subsequently be known as the Integrated System for Medicine and Supply Management (*Sistema Único de Gestión de Medicamentos e Insumos*; SUGEMI). In 2010, a ministerial decree to establish SUGEMI as the institutional mechanism for organizing the pharmaceutical supply system in the public network of health care facilities was issued.

In 2012, the availability of adult antiretrovirals (ARVs) in health facilities (HFs) was 71%.<sup>2</sup> This level of availability resulted in the government frequently requesting financial assistance from USAID to cover unanticipated shortfalls. To address this issue, the MOH requested technical assistance for the integration of HIV and AIDS pharmaceutical supply management into SUGEMI as an efficient and sustainable strategy to confront the problem.<sup>3</sup>

### Program Objectives and Results Framework

SIAPS is supporting USAID's goal of reforming the country's health sector. This includes expanding access to quality health care, improving HIV and AIDS treatment and prevention services, detecting and treating TB, and implementing a health component under the social security system.<sup>4</sup> The SIAPS systemic approach is embedded in USAID's 2015–2019 vision for health systems strengthening.<sup>5</sup> Program accomplishments have contributed toward achieving an AIDS-free generation and to universal health coverage, particularly access to medicines.

#### List of funding (Source: PEPFAR)

Program year	Obligated amount (USD)
PY1	403,000
PY2	350,000
PY3	950,000
PY4	900,000
PY5	1,150,000
PY6	600,000
Total	4,353,000

### Key Interventions

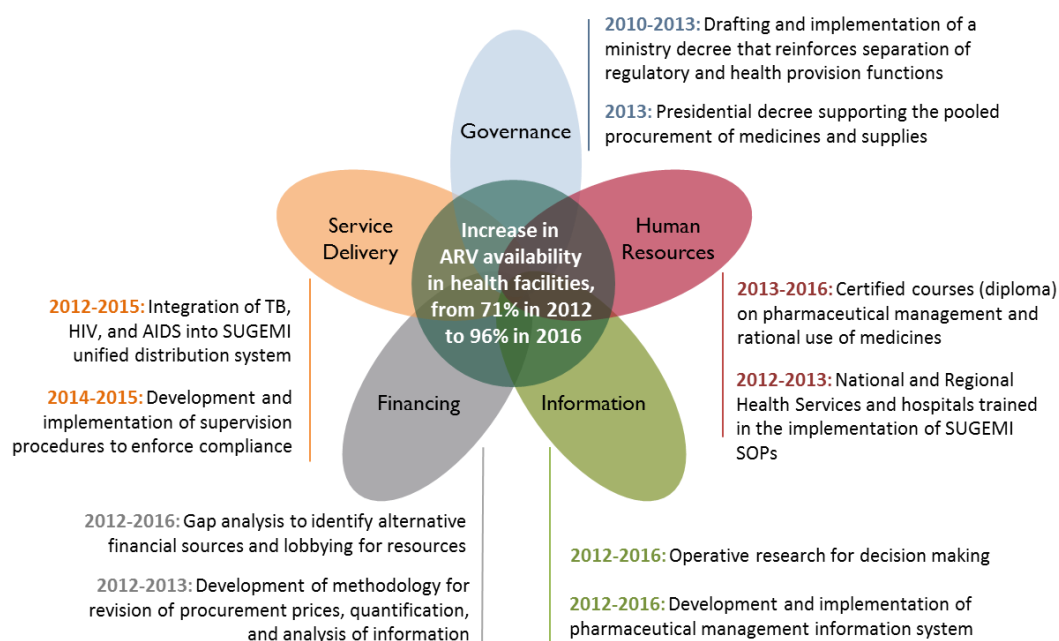
Since 2012, the pharmaceutical supply system has been substantially reorganized. This was accomplished with a systemic approach that considered all health system functions contributing

to access to medicines (governance, human resources, information, financing, and service delivery),<sup>6</sup> as well as local determinants, such as ongoing health sector reform and decentralization. Key milestones, associated with the public health functions are described below and summarized in figure 1.

**1) Organization of a unified pharmaceutical system within health sector reform:**

Before 2012, the pharmaceutical system was fragmented, with the MOH exercising regulatory and service provision roles in pharmaceutical management. After 2012, the system was integrated, with MOH maintaining a regulatory role and service provision transferred to the newly created National Health Service (NHS) and Regional Health Services (RHS). To support this, the following technical assistance strategies were used by SIAPS:

- *Governance*: Drafting and implementation of a ministry decree reinforced the separation of functions between regulatory and health provision units (2010–2015)
- *Service delivery*: Integration of DCPs (TB/HIV and AIDS) into SUGEMI unified the distribution system through RHS (2012–2015); development and implementation of supervision procedures enforced compliance (2014–2015)
- *Human resources*: NHS/RHS staff trained in the implementation of SUGEMI standard operating procedures (SOPs) (2012). Certified courses (diploma) in pharmaceutical management (2013–2015) and rational use of medicines (2016) instituted at the Universidad Central del Este. Most of the students of these courses were MoH staff. Both courses strengthened the implementation of SUGEMI in health facilities.



**Figure 1. SIAPS intermediate results contributing to SUGEMI implementation**

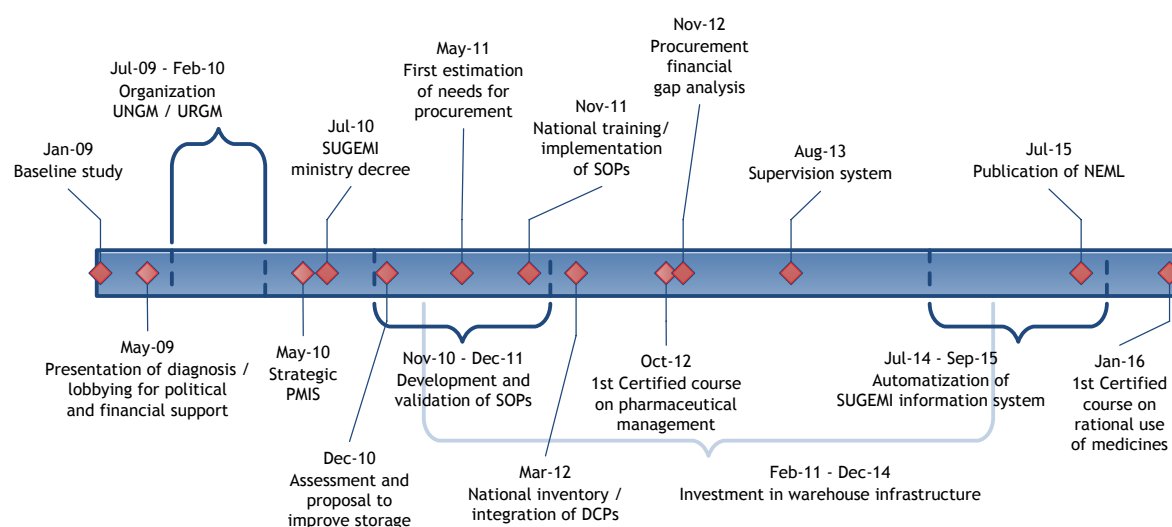
**2) Improving quantification and procurement processes:** Before 2012, the estimation of needs for procurement was conducted independently by HFs and DCPs, resulting in fragmented procurement with no financial analysis. Since 2012, SIAPS assisted in implementing a coordinated national exercise for the estimation of needs, using standardized methodology. National pooled procurement is currently implemented by the national logistics operator (PROMESE/CAL) and planning for procurement exercises is followed by financial analysis. To support this, SIAPS used the following technical assistance strategies:

- *Governance:* Development of a presidential decree supporting the pooled procurement of medicines and supplies (2013)
- *Finance:* Development of standardized methodology for the revision of procurement prices, quantification, consolidation, and analysis of information (2012–2013); gap analyses identified alternative financial sources and was followed by lobbying for additional MOH resources (2012–2016)

**3) Using information systems in pharmaceutical management:** Prior to 2012, there was no information for decision making on pharmaceutical management. Currently, decisions are based on the SUGEMI Pharmaceutical Management Information System (PMIS), evaluations, and operative research. To support this, the following technical assistance strategy was used by SIAPS:

- *Information:* Development and implementation of a PMIS (2012–2016) and operative research (2012–2016). The PMIS feeds a quarterly bulletin which is distributed to decision makers at central and regional levels. The results of operative research are presented and discussed with health authorities for strategic decision making.

The following timeline presents key milestones in chronological order (Figure 2).



**Figure 2. Key milestones in the improvement of pharmaceutical management in DR**

## **National Partners**

The systemic approach used in the design and implementation of SUGEMI facilitated the involvement of the following actors, all of whom shared the view that strengthening health service facilities is the best strategy for sustaining their interventions.

- The TB Control Program of the MOH/Global Fund to Fight AIDS, Tuberculosis and Malaria; the Inter-American Development Bank; and the Health Sector Reform Project of the World Bank have invested approximately USD 780,000 to improve the structural conditions of regional warehouses.<sup>7</sup>
- The National Council on HIV and AIDS (CONAVIHSIDA), the primary beneficiary of the Global Fund, has used SUGEMI-designed information and methodologies to manage financial resources and monitor the implementation of the activities supported by those resources.
- PROMESE/CAL implemented a pooled national procurement program, a process mandated by presidential decree, using the SUGEMI-designed methodology for estimating needs and programming.
- Other USAID partners (the Centers of Excellence Program and the CapacityPlus Project) used procedures developed by SUGEMI in their training activities. In addition, they financed the enrollment of participants in the certification course (diploma) on pharmaceutical supply management.
- Civil society organizations have used information generated by SUGEMI for their political advocacy and lobbying efforts.<sup>8</sup>
- Public and private universities now have SUGEMI-developed educational modules and learning methodologies that will enable them to organize both basic and specialized courses.



## SIAPS PROGRAM ACHIEVEMENTS - RESULTS BY PROGRAM OBJECTIVE/IR AREA

Using SIAPS IRs, the following table shows the contribution to program indicators from the DR portfolio.

	Baseline		End of PY indicator values						End of project target
	Value	Year	PY1	PY2	PY3	PY4	PY5	PY 6	
IR 1:Pharmaceutical Sector Governance Strengthened									
# of civil society organizations that participated in and/or monitored pharmaceutical management decision making and operations in past year	0	2011		8	8	8	8	8	8
# of pharmaceutical sector legislations (or regulations) developed or updated and submitted for adoption	0	2011		0	1	2	2	2	1
# of pharmaceutical management guidelines, lists, and SOPs developed (or updated) and submitted for adoption	0	2011		1	8	9	9	9	2
% of medicine procurements implemented through competitive process	40%	2011		56%	67%	88%	83%	83%	80%
Score on WHO transparency indices: selection	20	2012		22	22	25	30	30	30
Score on WHO transparency indices: procurement	39	2012		40	43	45	50	50	50
# of SUGEMI components operating in agreement with SOPs	3	2011			4	4	4	4	4
# of public institutions participating in pooled procurement	0	2011			5	5	5	5	5
# of MOH appointed personnel supporting the National Pharmaceutical Management Unit	4	2011			8	9	9	9	8
IR 2: Capacity for pharmaceutical supply management and services increased and enhanced									
# of pharmaceutical management training programs accredited by a relevant governing body	0	2011		1	1	1	2	2	1

	Baseline		End of PY indicator values						End of project target
	Value	Year	PY1	PY2	PY3	PY4	PY5	PY 6	
# of in-service health professional training curricula developed or reformed to address pharmaceutical management topics	0	2011		0	1	1	2	2	1
# of SIAPS-supported local institutions or organizations providing training or technical assistance in pharmaceutical management	0	2011		158	171	181	193	193	178
# of trainings or technical assistance assignments completed by local partners	0	2011		176	184	199	212	289	200
# of persons trained in pharmaceutical management	0	2011		1900	2103	2207	2319	2846	2223
% of MOH personnel in HFs with minimal knowledge and abilities to sustain SUGEMI operations	0	2011			76%	98%	100%	100%	100%
% of personnel in regional services trained in SUGEMI SOPs and PM tools	0	2011			76%	98%	100%	100%	100%
<b>IR 3: Utilization of information for decision making increased</b>									
% of HFs that received feedback on previously submitted report or data	0	2011		56%	87%	99%	100%	99%	95%
% of HFs that completed and submitted an LMIS report for the most recent reporting period	0	2011		87%	94%	99%	100%	99%	95%
% of HFs that used consumption data to inform ordering at last assessment	0	2011		87%	94%	99%	100%	99%	95%
# of established and functioning PMISs	0	2011		1	1	1	1	1	1
# of HFs that have implemented electronic or mobile technology systems to document and report on specific component(s) of the pharmaceutical system	0	2011		9	9	9	9	9	9
Date of last submission of report on a standard set of pharmaceutical indicators	8-Oct-2011	2011		8-Aug-13	15-Jul-14	1-Jun-15	8-Sep-16	8-Jul-17	8-Oct-16
% of HFs submitting their SUGEMI reports	0	2011			94%	99%	100%	99%	95%
% of personnel using SUGEMI PMIS for decision making	0	2011			80%	85%	100%	100%	95%

*SIAPS Program Achievements – Results by Program Objective/IR Area*

	Baseline		End of PY indicator values						End of project target
	Value	Year	PY1	PY2	PY3	PY4	PY5	PY 6	
IR 4: Utilization of information for decision-making increased									
% of average price of a set of indicator medicines procured relative to an established international benchmark price	71%	2011	57%	-52%	-54%	-41%	-31%	-31%	100%
# of health/disease areas for which a funding gap analysis was completed (in the past 12 months)	0	2011		1	5	5	6	6	3
# of Global Fund proposals/grants developed and submitted with technical assistance from SIAPS	0	2011		1	2	3	4	4	4
Value (in USD) of Global Fund grants receiving technical assistance from SIAPS	0	2011		5.8m	12.2 m	19.1m	19.1m	19.1m	19.1m
# of DCPs with budgets matching estimation of needs costs	0	2011			4	6	6	7	5
# of DCPs with a financial analysis of their procurement plans	0	2011			3	5	5	6	5
IR 5: Pharmaceutical services to achieve desired health outcomes improved									
% of medicines procured in the public sector that are listed on the NEML	59%	2011		73%	73%	100%	90%	96%	85%
% of HFs receiving medicines and supplies according to program procedures	37%	2011			87%	82%	85%	91%	90%
% availability of medicines in HF	70%	2011			94%	92%	94%	96%	95%
# of DCPs incorporated to SUGEMI	0	2011			2	2	3	3	5

## SIAPS PROGRAM ACHIEVEMENTS – STRENGTHENING THE PHARMACEUTICAL SYSTEM IN DOMINICAN REPUBLIC

### Key Achievements

Since 2012, the pharmaceutical supply system has been substantially reorganized using a systemic approach that took into consideration all health system functions contributing to access to medicines (governance, human resources, information, financing, and service delivery)<sup>9,10</sup> and local determinants, such as ongoing health sector reform and decentralization.

Simultaneous interventions in different health system functions contributed to an increase in ARV availability in HFs, from 77% in 2012 to 92% in 2016.<sup>11</sup>

This systemic approach demonstrated impact, not only on ARV availability, but also in other areas:

- National and international resources were mobilized for renewal or construction of six regional medicine stores.<sup>12</sup>
- Pooled procurement of medicines, facilitated by SIAPS, saved USD 53 million in 2014.<sup>13</sup>
- The revision of the high-cost medicines list in 2014 saved USD 62 million in 2015, which was then invested in the procurement of ARVs and other essential medicines.<sup>14</sup>

### Sustainability and Country Ownership

A combination of political, legal, institutional, technical, and financial factors have been taken to ensure the sustainability of SUGEMI and, therefore, its impact on the availability of the HIV program's medicines and supplies:

- **Political and legal:** SUGEMI is supported by ministry and presidential decrees and is a key strategy in MOH's extension of health sector reform and decentralization.
- **Institutional:** SUGEMI's ongoing operational viability has benefited from the institutional strengthening of the principal implementing entities (the UNGM and the *Unidad Regional de Gestión de Medicamentos*; URGMs), the training of a critical mass of professionals with specialized knowledge of pharmaceutical supply management, and rational use of medicines. The MOH has appointed personnel at nine URGMs, and has created a National Coordinating Unit. All SUGEMI routine procedures are currently implemented through these units without the need of any technical assistance.
- **Technical:** All procedures for the routine operation of SUGEMI have been developed and are currently implemented by all MOH staff, without the need of technical assistance.

All technological resources (such as the electronic application for the information system) were locally developed and are being maintained by the MOH.

- **Financial:** The financial sustainability of SUGEMI at its present stage of development depends on the budgeting for key recurrent activities and the appointment of a few key staff at the central level, currently financed by USAID. The estimated USD 400,000 per year the MOH should program for these budget lines is a small fraction of the savings produced by SUGEMI.<sup>15,16</sup>

## **Lessons Learned**

The organization of a unified pharmaceutical system is a long-term endeavor, one that SIAPS has been supporting since the start of the program in 2011. After nearly five years of implementation, the major lesson learned is that a systemic approach, considering all health system functions and national driving forces, is an efficient and sustainable strategy to deliver immediate results (increased availability of ARVs) and strengthen the public pharmaceutical supply and health system.

The implementation of SUGEMI would not have been possible without the commitment of the USAID Mission to invest program-earmarked resources (PEPFAR) to a systemic intervention that would positively affect the availability of ARVs.

## THE FUTURE OF PHARMACEUTICAL SYSTEMS STRENGTHENING IN DOMINICAN REPUBLIC

The current implementation of SUGEMI provides solid ground for its extension and consolidation. As SIAPS finishes by October 2017, the USAID Mission should consider the integration of a pharmaceutical management partner to provide technical assistance in the following areas:

- 1) **Complete the integration of the public hospital network to SUGEMI:** Eight hospitals were integrated during the first quarter of 2016. In April 2016, SIAPS conducted a training-of-trainers workshop to scale up implementation of operational procedures to the rest of the hospitals. A complete and efficient integration demands monitoring, supervision, and targeted technical assistance to hospitals with poor performance.
- 2) **Complete the integration of DCPs into SUGEMI:** TB, HIV and AIDS, and maternal and child health are fully integrated. The rest of the DCPs (malaria, oral health, immunizations) must be integrated during the coming years, following the procedures developed by SUGEMI.<sup>17</sup>
- 3) **Transfer of procurement management to PROMESE/CAL:** Currently, PROMESE/CAL procures medicines and supplies exclusively through national tenders. To fully assume its role as the logistics agency for the public sector, PROMESE/CAL should manage other procurement modalities, such as direct procurement through international cooperation agencies (PAHO's strategic fund, UNPHA, Global Drug Facility), for the procurement of family planning commodities, TB medicines, and ARVs, among others. SIAPS supported the development of PROMESE/CAL SOPs, but not the adoption of additional procurement mechanisms.
- 4) **Strengthening of Drug and Therapeutic Committees (DTCs):** More than twenty DTCs were organized in RHS and major hospitals as an activity of the Certified Course on Rational Use of Medicines. The extension of rational use practices nationwide demands the organization of DTCs in all RHS and hospitals. Two additional certified courses in 2018 will cover all RHS and major hospitals. For the rest of the hospital network, a training-of-trainers workshop should be planned by the end of 2018.
- 5) **Integration of laboratory reagents and materials into SUGEMI supply chain:** The estimation of needs for the procurement of laboratory reagents and materials already follows SUGEMI procedures. During 2016, the laboratory networks started the implementation of SUGEMI procedures for requisition and dispatch. The accuracy in the completion of the SUGEMI formularies should be monitored during 2017. During the coming years, the MOH/NHS should also develop an essential list of laboratory reagents and materials and report on the availability and consumption by following SUGEMI procedures.

- 6) Revision of the National Essential Medicines List (NEML):** The NEML was published in 2015. A new revision should be scheduled for 2018. The procedures developed for the revision of the list, the organization of DTCs, and the training of professionals with knowledge of the methods to review the efficacy and safety of pharmaceutical products should shorten the time invested in this and later revisions.
- 7) Adoption of new strategies on HIV treatment:** The MOH is adopting the test and treat strategy in HIV programming to increase early diagnosis and provide treatment, which would decrease the risk of HIV transmission. SIAPS has supported the pharmaceutical management component of this strategy. If the MOH scales up the test and treat strategy, technical assistance will be needed for:
- a) Development of financial analysis to identify budget gaps and eventual returns for investment of this strategy
  - b) Implementation of education and regulatory measures to ensure adherence to treatment schemes
  - c) Implementation of a transportation system for laboratory samples and timely delivery of results

## REFERENCES

- 
- <sup>1</sup> Barillas, E., y C. Valdez. 2009. *Informe técnico: Análisis de la gestión del suministro de medicamentos e insumos de salud del sector público en República Dominicana*. Presentado a la Agencia de los Estados Unidos para el Desarrollo Internacional por el Programa Strengthening Pharmaceutical Systems (SPS). Arlington, VA: Management Sciences for Health.
- <sup>2</sup> <http://siapsprogram.org/2015/09/14/financing-of-arvs-in-the-dominican-republic/>
- <sup>3</sup> <http://siapsprogram.org/publication/adoption-of-the-integrated-management-information-system-for-pharmaceuticals-and-medical-supplies-sugemi-to-optimize-arv-supply-in-the-dominican-republic/>
- <sup>4</sup> <http://www.usaid.gov/where-we-work/latin-american-and-caribbean/dominican-republic>
- <sup>5</sup> US Agency for International Development (2015). USAID's Vision for Health Systems Strengthening
- <sup>6</sup> WHO, Everybody's Business: Strengthening Health Systems to Improve Health Outcomes: WHO's Framework for Action (2007); WHO, The World Health Report 2000 – Improving Performance (2000)
- <sup>7</sup> Espinoza, H. 2013. *Avance en el mejoramiento de las condiciones de almacenamiento de medicamentos en los Servicios Regionales de Salud de República dominicano-versión revisada*. Presentado a la Agencia de los Estados Unidos para el Desarrollo Internacional por el Programa Systems for Improved Access to Pharmaceuticals and Services (SIAPS). Arlington, VA: Management Sciences for Health. <http://siapsprogram.org/publication/avance-en-el-mejoramiento-de-las-condiciones-de-almacenamiento-de-medicamentos-en-los-servicios-regionales-de-salud-de-republica-dominicana/>.
- <sup>8</sup> Iniciativa Participativa Anti-Corrupción (IPAC). 2014. *El Ojo Ciudadano*. Boletín del Comité de Seguimiento de la Mesa de Salud de la IPAC. República Dominicana, Enero.
- <sup>9</sup> WHO, Everybody's Business: Strengthening Health Systems to Improve Health Outcomes: WHO's Framework for Action (2007); WHO, The World Health Report 2000 – Improving Performance (2000)
- <sup>10</sup> US Agency for International Development (2015). USAID's Vision for Health Systems Strengthening
- <sup>11</sup> <http://siapsprogram.org/2015/09/14/financing-of-arvs-in-the-dominican-republic/>
- <sup>12</sup> <http://siapsprogram.org/publication/leveraging-local-resources-for-sustainable-pharmaceutical-management-interventions-in-dominican-republic/>
- <sup>13</sup> <http://siapsprogram.org/publication/leveraging-local-resources-for-sustainable-pharmaceutical-management-interventions-in-dominican-republic/>
- <sup>14</sup> Unidad Nacional de Gestión de Medicamentos e Insumos, Ministerio de Salud Pública [National Medicines and Supplies Management Unit, Ministry of Public Health]. 2015. *Procurement Planning for Medicines and Supplies in the Public Health System of the Dominican Republic*. Santo Domingo, Dominican Republic, September 2015. Presented to the US Agency for International Development by the Systems for Improved Access to Pharmaceuticals and Services Program (SIAPS). Arlington, VA: Management Sciences for Health
- <sup>15</sup> <http://siapsprogram.org/publication/leveraging-local-resources-for-sustainable-pharmaceutical-management-interventions-in-dominican-republic/>
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<sup>16</sup> The savings resulting from the revision made to the list of high-cost medicines has been estimated at USD 21 million. See Narváez E, Valdez C, Barillas E. 2014. *Review of the List of High-Cost Medicines Used by the Dominican Republic's Protected Diseases Program and Planning of Purchases for 2015*. Santo Domingo, Dominican Republic, July 2014. Presented to the US Agency for International Development by the Systems for Improved Access to Pharmaceuticals and Services (SIAPS) Program. Arlington, VA: Management Sciences for Health. <http://siapsprogram.org/publication/high-cost-medicines-dominican-republics-planning-of-purchases-2015/>.

<sup>17</sup> <http://siapsprogram.org/publication/guia-de-orientacion-administrativa-integracion-de-medicamentos-e-insumos-sanitarios-de-los-programas-de-control-de-enfermedades-al-sugemi/>