

Panama Country Profile: Health Care Waste Management (HCWM) in the Context of COVID-19

September 2020

Background Information on HCWM

Population	4,246,439 ¹
National entity in charge of HCWM	Ministry of Health
Municipal solid waste (MSW) generation	1,472,262 tonnes/year ¹
Health care waste (HCW) generation	11,470 tonnes/year ²
On-site vs. off-site treatment	On-site and off-site
Health care waste exports?	Yes (some pharmaceutical waste is treated outside the country)
National solid waste management law and policy	National Environmental Law ³ Executive Decree No. 34, 26 February 2007 ⁴ Law 51, 29 September 2010 ⁵
National solid waste strategy	National Plan for Integrated Waste Management 2017-2027, AAU ⁶
National HCW management law and policy	Executive Decree No.111,23/07/1999 ⁷ Resolution No.11, 1/01/2013 Resolution No.455 9/07/2009 ⁸ Resolution No. 510 28/06/2019 ⁹ Panama is also committed to the below international conventions: Stockholm Convention; Basel Convention; Rotterdam Convention and Minamata Convention
National HCW management strategy	No separate strategy in place, although references are made in National SW Strategy and National Health Policy and Strategic Guidelines 2016–2025 ¹⁰
National guidelines or standard operating procedures (SOPs) for HCWM	Not available. International guidelines being followed (WHO)

Policy and Planning Environment

A National Plan for an Integrated Waste Management System 2017–2027 was developed by the Authority for Urban and Household Waste (AAU) in order to: (1) Study, evaluate and diagnose the current situation of waste management in the country; (2) Evaluate and improve the current legal and institutional framework; and (3) Establish and implement a road map based on the best technologies available, waste prevention policies, better recycling and disposal management systems, and stronger social engagement and awareness.

Health care waste management was considered within the aforementioned plan, and major improvements proposed were: (1) Adopt the use of a specific container to identify infectious healthcare waste to promote its segregation from other general waste; (2) Improve the accreditation of service providers using an unified accreditation standard; (3) Create dedicated disposal cells for treated healthcare waste in the existent and future landfills; and (4) Promote private services for healthcare waste incineration treatments.

The National Health Policy and Strategic Guidelines 2016–2025, developed by the MoH, also provides important guidance on the proper segregation of waste at source and the use of accredited service providers to collect, transport, treat and dispose of treated waste.

Legal Framework

Executive Decree No. 111, 23/07/1999 regulates the management of solid waste from healthcare facilities, defining the roles and responsibilities of the entities involved in the health care waste management system, from the production of waste to its treatment and safe disposal. Resolution No.11, 1/01/2013 establishes the MoH as the authority in charge of regulating, promoting, evaluating and monitoring the management of solid waste from health care, and defines its direct responsibilities for the collection, transportation, treatment and final disposal of health-care waste.

Another important document is Resolution No. 455 (9/7/2009) which requires the mandatory registration of companies that collect and transport health care waste from health care facilities.

Panama is also committed to many relevant international conventions, such as the Stockholm Convention, the Basel Convention on the Control

1 The World Bank

2 National Health Policy and strategic guidelines 2016–2020, MINSA http://aaud.gob.pa/plangestion/Docs/ANEXOS/20170731_E%201.3.3.3.5_Propuesta%20Nuevo%20Modelo%20de%20Gestion_v3.pdf

3 Law 41 1 July 1998—National Environmental Law, <http://extwprlegs1.fao.org/docs/pdf/pan14803-1998.pdf>

4 Executive Decree N° 34, 26 February 2007, <https://docs.panama.justia.com/federales/decretos-ejecutivos/34-de-2007-apr-4-2007.pdf>

5 Law 51, 29 September of 2010 <http://www.aaud.gob.pa/docs/Articulo9/Ley%2051%20del%2029%20de%20septiembre%20de%202010.pdf>

6 National Plan for Integrated Waste Management 2017–2020, AAUD http://aaud.gob.pa/plangestion/Docs/ANEXOS/20170731_E%201.3.3.3.5_Propuesta%20Nuevo%20Modelo%20de%20Gestion_v3.pdf

7 Executive Decree N° 111, 23/07/1999 <https://docs.panama.justia.com/federales/decretos-ejecutivos/111-de-1999-jun-29-1999.pdf>

8 Resolution 455 9/07/2009, http://www.vertic.org/media/National%20Legislation/Panama/PA_Resolucion%20455%20de%202009.pdf

9 Resolución N° 510 28/06/2019, https://www.gacetaoficial.gob.pa/pdfTemp/28859/GacetaNo_28859_20190912.pdf

10 National Health Policy and strategic guidelines 2016–2020, MINSA http://www.minsa.gob.pa/sites/default/files/transparencia/politicas_de_salud_del_minsa.pdf

of Trans-Boundary Movements of Hazardous Wastes and their Disposal, the Rotterdam Convention and the Minamata Convention on Mercury. Although there appear to be no country-specific technical guidelines, one of the respondents mentioned adhering to guidelines provided by Health Care Without Harm, through their Global Green and Healthy Hospitals project/platform.

Snapshot of COVID-19 Health Care Waste Situation

Declaration of the pandemic	January 28, 2020
Number of cumulative confirmed cases as of Sept 18, 2020	103,466
Number of governmental entities (G), HCFs (HCF) and service providers (SP) surveyed	1 (G), 1 (HCF), 4 (SP)
Pre COVID-19 HCW generated (among surveyed)	306 tonnes/month (total 4 SP), 2 kg/bed/day (HCF) ¹¹
HCW during COVID-19 (among surveyed)	325 tonnes/month (total 4 SP), 1 kg/bed/day (HCF) ¹²
Percent increase (approximate)	325 tonnes/month (total 4 SP),
Types of COVID-19 waste generated	PPE (gloves, masks, gowns), diagnostic samples, cultures, swabs and disposable medical devices
Changes to HCWM policy	Yes
Most common HCW treatment technology	Autoclave & incinerator
Service disruptions due to COVID-19 (among surveyed)	No
Emergency treatment/disposal procedures in place	No
Special COVID-19 training in place	Yes
Collection capacity surpassed?	Yes (25%), No (75%) [SP]
Treatment capacity surpassed?	Yes (33%), No (66%) [SP]
Disposal capacity surpassed?	Yes (illegal HCW dumping reported) [SP]

Institutional Framework

The Ministry of Health (MoH) is Panama's most important authority on non-hazardous and hazardous waste management, including HCW. The MoH regulates, promotes, evaluates and monitors all waste generated in the country.

For non-health care related waste, AAU was created under the MoH and is responsible for waste collection in Panama, as well as for implementing the nationwide strategic plan for integrated waste management, promoting waste reduction, waste recovery and waste diversion from landfill disposal. AAU is working towards decentralization of these services, in order to shift waste management responsibilities to municipalities. Decentralization of services is an ongoing process, with significant ambiguity between the roles of municipalities and the AAU.

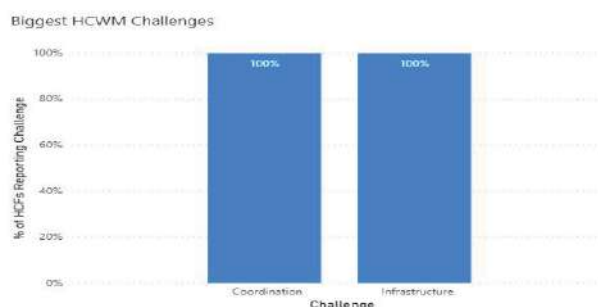
Beyond its role as the regulatory entity for healthcare waste management, the MoH is also responsible for the collection, transportation, treatment and final disposal of health care waste, using their own resources or subcontracting private service providers.

Programs and Actions in Place during COVID-19

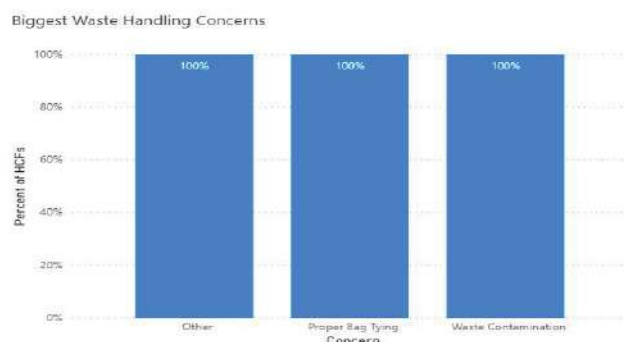
MoH developed its "National Operational Plan of the Health System for the Prevention and Control of the New Coronavirus (2019-vCoV)"¹³ and a series of plans, protocols and guidelines on how properly and safely handle and treat waste generated during the COVID-19 pandemic at the level of HCF and other services, in order to assist and guide health care facilities and other waste generators.¹⁴

HCWM Challenges during COVID-19

The HCF survey respondent identified the greatest challenges for HCWM as a **lack of infrastructure** for necessary operations and a **lack of coordination between departments and entities**:

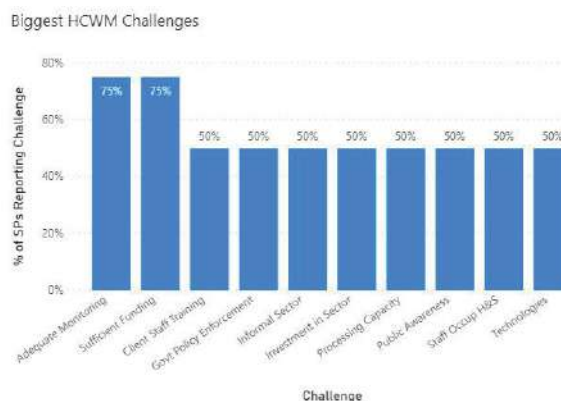


The HCF respondent also identified **waste contamination** and **proper bag tying and other (high personnel rotation)** as the major problems observed in waste handling during the COVID-19 response period:



The service provider survey respondents cited the greatest challenges for HCWM as **inadequate monitoring** and **insufficient funding**:

The SP respondents also identified the **legal framework, disposal, treatment and transportation capacity** and **late payment of services by client** as the major waste handling challenges observed during the COVID-19 response period.



Options for Improvement / Opportunities

- Promote a better communication policy and strategy between and among entities, unifying policies, procedures, standards and guidelines.
- Better define the roles and responsibilities of municipalities, MoH, AAU and HCF, including financing, budget allocation and payment responsibilities.
- Update national legislation, guidelines and plans to enforce and promote the use of best available technologies and HCWM practices.
- Secure private/public funding to increase healthcare collection, transportation, treatment, and disposal system capacities.
- Increase training and capacity for personnel at HCFs on proper waste storage, segregation and handling.

¹¹ Hospital del Niño Dr. José Renán Esquivel

¹² *Ibid*

¹³ Operational Plan of the Health System for the Prevention and Control of the new Coro-navirus (2019-vCoV), MINSA, 2020 http://www.minsa.gob.pa/sites/default/files/publicaciones/plan_coronavirus_0.pdf

¹⁴ Planes, Protocolos e Guías COVID-19, 2020 <http://www.minsa.gob.pa/informacion-salud/planes-protocolos-y-guias-covid-19-0>